Search history

Search 1: TAC=(palm and manicaria) (Results 0)

Search 2: matrix and acid and polilactico (Results 176)

Search 3: fiber and manicaria (Results 0)

Search 4: TAC=(palm and manicaria) and PN=(co15290268) (Results 0)

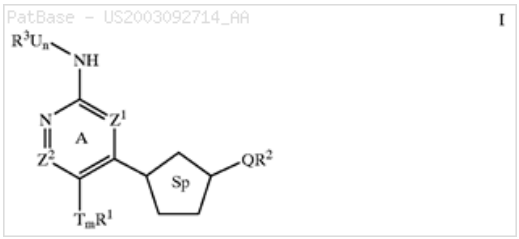
Search 5: polymeric and acid and polylactic (Results 1798)

Search 6: polymeric and acid and polylactic and fiber and natural (Results 93)

1) Family number: 23898257 (US2003092714A)

Title: Heterocyclic inhibitors of ERK2 and uses thereof

Abstract: Source: US2003092714A Described herein are compounds that are useful as protein kinase inhibitors having the formula: wherein Z1 and Z2 are each independently nitrogen or CH and Ring A, TmR1, QR2, UnR3, and Sp are as described in the specification. The compounds are especially useful as inhibitors of ERK2 and for treating diseases in mammals that are alleviated by a protein kinase inhibitor, particularly diseases such as cancer, inflammatory disorders, restenosis, diabetes, and cardiovascular disease.



Classifications:
International (IPC 8-9): A61K31/4427 A61K31/506 A61K31/517 A61K31/5375 A61K31/5377 A61K31/551 A61K45/00 A61P1/16 A61P11/00 A61P17/06 A61P19/00 A61P25/00 A61P25/08 A61P25/18 A61P25/28 A61P29/00 A61P3/10 A61P31/00 A61P31/04 A61P31/12 A61P35/00 A61P35/02 A61P37/02 A61P37/06 A61P37/08 A61P43/00 A61P5/00 A61P7/02 A61P9/00 A61P9/08 A61P9/10 C07D207/34 C07D239/42 C07D401/02 C07D401/04 C07D401/14 C07D403/02 C07D403/04 C07D403/14 C07D405/14
C07D413/14 (Advanced/Invention);
A61K31/506 (Advanced/Non-invention);
A61K31/506 (Core/Invention);
A61K A61P C07D (Subclass/Invention)
International (IPC 1-7): A61K31/4439 A61K31/497 A61K31/501 A61K31/506 A61K31/517 A61K31/53 A61K31/5377 A61K31/551 A61P1/16 A61P17/06 A61P19/00 A61P25/00 A61P25/28 A61P29/00 A61P3/10 A61P31/04 A61P31/12 A61P35/00 A61P37/06 A61P37/08 A61P43/00 A61P5/00 A61P7/02 A61P9/08 A61P9/10 C07D207/34 C07D213/40 C07D239/22 C07D243/08 C07D261/14 C07D307/22 C07D401/14 C07D403/04 C07D403/14 C07D405/14 C07D413/14 C07M7/00
CPC: C07D401/14 C07D403/04 C07D403/14 C07D405/14 C07D413/14
European: C07D401/14 C07D403/04 C07D403/14 C07D405/14 C07D413/14
US: 514/235.5 514/235.500P 514/235.8 514/235.800S 514/242 514/252.05 514/252.050S 514/252.19 514/252.190S 514/255.05 514/255.050S 514/256 514/256S 514/266.22 514/275 514/275S 514/336 514/34 514/340 514/340S 514/341 514/342 514/343 544/122 544/122S 544/284 544/295 544/295S 544/297 544/297S 544/331 546/270.4 546/271.1 546/271.4 546/272.1 546/272.4 546/274.1 546/275.4 546/279.1 546/280.4 546/284.7

Family:

Publication number	Publication date	Application number	Application date
AP200302853 A0	20030930	AP20030002853	20020208
AR049239 AA	20060712	AR2002P100427	20020208
AU2002255521 AA	20020828	AU20020255521	20020208
BRPI0207114 A	20040225	BR2002PI07114	20020208
CA2437767 AA	20030807	CA20022437767	20020208
CA2437767 C	20100504	CA20022437767	20020208
CL2002000228 A1	20030122	CL20020000228	20020208
CN100534991 C	20090902	CN20028005766	20020208
CN1494541 A	20040505	CN20028005766	20020208
DE60247315 D1	20150827	DE20026047315	20020208
ECSP034715 A	20031028	EC2003SP04715	20030807
EP1363906 A2	20031126	EP20020724922	20020208
EP1363906 B1	20150715	EP20020724922	20020208
ES2549677 T3	20151030	ES20020724922T	20020208
HK1062298 A1	20160226	HK20040103680	20040524
HK1062298 A3	20041029	HK20040103680	20040524
HU0304052 A0	20040128	HU20030004052	20020208
HU0304052 AB	20040428	HU20030004052	20020208
HU0304052 AC	20100628	HU20030004052	20020208
IL157131 A0	20040208	IL20020157131	20020208
IN00964KN2003 A	20050715	IN2003KN00964	20030729
IN233884 B	20090417	IN2003KN00964	20030729
JP2004520402 T2	20040708	JP20020564517T	20020208
JP2008163045 A2	20080717	JP20080070475	20080318
JP4173738 B2	20081029	JP20020564517T	20020208
KR100857732 B1	20080910	KR20037010503	20020208
KR20030074814 A	20030919	KR20037010503	20030808
MXPA03007049 A1	20031118	MX2003PA07049	20020208
NO20033491 A	20031008	NO20030003491	20030806
NO20033491 A0	20030806	NO20030003491	20030806
NZ527251 A	20060929	NZ20020527251	20020208
PE09712002 A1	20021029	PE20020000101	20020211
PL364565 A1	20041213	PL20020364565	20020208
RU2003127116 A	20050327	RU20030127116	20020208
RU2300377 C2	20070610	RU20030127116	20020208
TWI309650 B	20090511	TW20020102428	20020208
US2003092714 AA	20030515	US20020071699	20020208
US2004229875 AA	20041118	US20040770814	20040203
US2007265263 AA	20071115	US20070803878	20070516
US6743791 BB	20040601	US20020071699	20020208
US7253187 BB	20070807	US20040770814	20040203
WO02064586 A2	20020822	WO2002US03791	20020208
WO02064586 A3	20030206	WO2002US03791	20020208
ZA200305799 A	20040728	ZA20030005799	20030728

Priority:

EP20020724922 20020208 JP20020564517 20020208 US20020071699 20020208
US20010267818P 20010209 US20010328768P 20011012 JP20020564517T 20020208
US20040770814 20040203 US20070803878 20070516 WO2002US03791 20020208
WO2002US03791 20030808

Probable Assignee: VERTEX PHARMACEUTICALS INC

Assignee(s): (std): ARONOV ALEX ; CAO JINGRONG ; GREEN JEREMY ; HALE MICHAEL ; MALTAIS FRANCOIS ; VERTEX PHARMA ; STRAUB JUDY ; TANG QING ; VERTEX PHARMACEUTICALS INC ; VERTEKS FARMAS JUTIKALZ INKORP ; TANG OING ; VERTEX PHARMACEUTICALS INC CAMBRIDGE ; VERTEX PHARMACEUT INC

Assignee(s): VERTEX PHARMACEUTICALS INC BOSTON ; VERTEX PHARMACTUTICALS INC ; VERTEX PHARMACEUTICALS INCPATENT DEPARTMENT130 WAVERLY STREETCAMBRIDGEMA02139-4242US ; VERTEX PHARMACEUTICALS SAN DIEGO LLC11010 TORREYANA ROADSAN DIEGOCA92121US ; VERTEX PHARMACEUTICALS SAN DIEGO LLC ; VERTEKS FARMAS JUTIKALZ INKORPOREJTED ; TEX PHARMACEUTICALS INC VER ; TEX PHARMACTUTICALS INC VER ; MACQUARIE US TRADING LLC

Inventor(s): (std): ALEX ARONOV ; ARONOV ALEX ; FRANCOIS MALTAIS ; GREEN J ; GREEN JEREMY ; J GREEN ; JEREMY GREEN ; JINGRONG CAO ; JUDY STRAUB ; M HALE ; MALTAIS FRANCOIS ; HALE M ; HALE MICHAEL ; CAO JINGRONG ; MICHAEL HALE ; QING TANG ; TANG KVING ; STRAUB DZHUDI ; MAL TE FRANSUA ; KHEJL MAJKL ; KAO DZINGRONG ; JUDITH STRAUB ; GRIN DZHEREMI ; ARONOV ALEKS ; STRAUB JUDITH ; TANG OING ; TANG QING ; STRAUB JUDY

Inventor(s): STRAUB JUDY CAMBRIDGE ; STRAUB JUDYUS ; TANG QING WINCHESTER ; TANG QINGUS ; STRAUB JUDIT ; CAO JINGRONG NEWTON ; CAO JINGRONGUS ; HALE MICHAEL BEDFORD ; HALE MICHAELUS ; MALTAIS FRANCOIS TEWKSBURY ; MALTAIS FRANCOISUS ; MAL'TE FRANSUA ; GREEN JEREMY BURLINGTON ; GREEN JEREMYUS ; ARONOV ALEX WATERTOWN ; ARONOV ALEXUS

Agent(s): CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; SMART AND BIGGAR; VILLASECA; BOCKHORNI AND KOLLEGEN PATENT U RECHTSANWAELTE; CORNISH KRISTINA VICTORIA JOY; ISERN JORGE; VERTEX PHARMACEUTICALS INC; DANIEL A

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AR049239 AA	20060712	LSPB	+	published / reissued	
AR049239 AA	20120515	LSWD	-FB	SUSPENSION OF GRANTING PROCEDURE	
AU2002255521 AA	20020828	LSPB	+	published / reissued	
BRPI0207114 A	20040225	LSPB	+	published / reissued	
BRPI0207114 A	20120207	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	DESCRIPTION : REFERENTE A 10A ANUIDADE(S).
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CA2437767 AA	20030807	LSPB	+	published / reissued	
CA2437767 AA	20030807	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2437767 AA	20030827	LSES	+EEER	EXAMINATION REQUEST	
CA2437767 C	20100504	LSGT	+	granted / extensions (spc, cpc, pte)	
CL2002000228 A1	20030122	LSPB	+	published / reissued	
CN100534991 C	20090902	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1494541 A	20040505	LSPB	+	published / reissued	
CN1494541 A	20040505	LSPB	+C06	PUBLICATION	
CN1494541 A	20090902	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
ECSP034715 A	20031028	LSPB	+	published / reissued	
EP1363906 A2	20031126	LSPB	+	published / reissued	
EP1363906 A2	20031126	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20030828
EP1363906 A2	20040121	LSRE	RIN1	INVENTOR	PARTYTYPE : INVENTOR

				(CORRECTION)	INVENTOR : CAO, JINGRONG
EP1363906 A2	20040121	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : GREEN, JEREMY
EP1363906 A2	20040121	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : HALE, MICHAEL
EP1363906 A2	20040121	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : MALTAIS, FRANCOIS
EP1363906 A2	20040121	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : STRAUB, JUDY
EP1363906 A2	20040121	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : TANG, QING
EP1363906 A2	20040121	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : ARONOV, ALEX
EP1363906 A2	20071017	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20070918
EP1363906 A2	20140226	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : VERTEX PHARMACEUTICALS INC.
EP1363906 A2	20140827	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : VERTEX PHARMACEUTICALS INCORPORATED
EP1363906 A2	20141217	LSLI	111Z	REGISTERING OF LICENCES OR OTHER RIGHTS	TEXT : AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR EFFECTIVE DATE : 20141031
EP1363906 A2	20150325	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150224
EP1363906 A2	20150715	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP1363906 A2	20150812	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
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EP1363906 A2	20150827	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 60247315 COUNTRY OF REF DOCUMENT : DE
EP1363906 A2	20151030	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2549677 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20151030
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EP1363906 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20151207 YEAR OF FEE PAYMENT : 15
EP1363906 A2	20160223	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 15
EP1363906 A2	20160226	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : GR REF DOCUMENT NUMBER : 1062298 COUNTRY OF REF DOCUMENT : HK
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HU0304052 AB	20040428	LSPB	+	published / reissued	
HU0304052 AB	20110328	LSRE	-FA9A	LAPSE OF PROVISIONAL PATENT PROTECTION DUE TO RELINQUISHMENT OR PROTECTION CONSIDERED RELINQUISHED	
IN00964KN2003 A	20050715	LSPB	+	published / reissued	
IN233884 B	20090417	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2004520402 T2	20040708	LSPB	+	published / reissued	

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JP2008163045 A2	20110615	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110614
JP2008163045 A2	20111122	LSWD	-A761	WRITTEN WITHDRAWAL OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A761 EFFECTIVE DATE : 20111121
JP4173738 B2	20081029	LSGT	+	granted / extensions (spc, cpc, pte)	
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JP4173738 B2	20071120	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20071119
JP4173738 B2	20080319	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080318
JP4173738 B2	20080612	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080611
JP4173738 B2	20080705	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080704
JP4173738 B2	20080731	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4173738 B2	20080805	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080804
JP4173738 B2	20080807	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4173738 B2	20080821	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080814
JP4173738 B2	20080822	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4173738 B2	20080825	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110822 YEAR OF FEE PAYMENT : 3
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KR100857732 B1	20071214	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR100857732 B1	20080623	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF	

				PATENT RIGHT	
KR100857732 B1	20080903	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100857732 B1	20120822	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20120823 YEAR OF FEE PAYMENT : 5
KR100857732 B1	20130822	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20130823 YEAR OF FEE PAYMENT : 6
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KR100857732 B1	20150820	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20150821 YEAR OF FEE PAYMENT : 8
KR100857732 B1	20160824	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160825 YEAR OF FEE PAYMENT : 9
KR20030074814 A	20030919	LSPB	+	published / reissued	
MXPA03007049 A1	20031118	LSPB	+	published / reissued	
MXPA03007049 A1	20070223	LSGT	+FG	GRANT OR REGISTRATION	
NO20033491 A	20031008	LSPB	+	published / reissued	
NO20033491 A	20100705	LSRV	-FC2A	WITHDRAWAL, REJECTION OR DISMISSAL OF LAID OPEN PATENT APPLICATION	
NZ527251 A	20060929	LSPB	+	published / reissued	
NZ527251 A	20050729	LSWD	-AVOD	APPLICATION VOID	
NZ527251 A	20070126	LSGT	+PSEA	PATENT SEALED	
NZ527251 A	20090227	LSFE	+RENW	RENEWAL (RENEWAL FEES ACCEPTED)	
NZ527251 A	20150130	LSRE	ERR	ERROR OR CORRECTION	DESCRIPTION : THE OWNER HAS BEEN CORRECTED TO 3155030, VERTEX PHARMACEUTICALS INCORPORATED, 50 NORTHERN AVENUE, BOSTON, MASSACHUSETTS 02210, US EFFECTIVE DATE : 20150127
PE09712002 A1	20021029	LSPB	+	published / reissued	
PE09712002 A1	20060126	LSGT	+FG	GRANT, REGISTRATION	
PE09712002 A1	20081014	LSWD	-FD	APPLICATION DECLARED VOID OR LAPSED	
PL364565 A1	20041213	LSPB	+	published / reissued	
PL364565 A1	20100531	LSRV	-REFS	DECISIONS ON REFUSAL TO GRANT PATENTS (TAKEN AFTER THE PUBLICATION OF THE PARTICULARS OF THE APPLICATIONS)	
RU2003127116 A	20050327	LSPB	+	published / reissued	
RU2300377 C2	20070610	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2300377 C2	20111210	LSLE	-MM4A	THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES	EFFECTIVE DATE : 20110209
TWI309650 B	20090511	LSGT	+	granted / extensions (spc, cpc, pte)	
TWI309650 B	20120211	LSLE	-MM4A	ANNULMENT OR LAPSE OF PATENT DUE TO NON-PAYMENT OF FEES	

US2003092714 AA	20030515	LSPB	+	published / reissued	
US2004229875 AA	20041118	LSPB	+	published / reissued	
US2007265263 AA	20071115	LSPB	+	published / reissued	
US6743791 BB	20040601	LSGT	+	granted / extensions (spc, cpc, pte)	
US6743791 BB	20020208	LSAS	AS	ASSIGNMENT	OWNER NAME : VERTEX PHARMACEUTICALS INCORPORATED, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CAO, JINGRONG; HALE, MICHAEL; STRAUG, JUDY; AND OTHERS; REEL/FRAME:012597/0018 EFFECTIVE DATE : 20020208
US6743791 BB	20030811	LSAS	AS	ASSIGNMENT	OWNER NAME : VERTEX PHARMACTUTICALS INCORPORATED, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CAO, JINGROUNG; GREEN, JEREMY; HALE, MICHAEL R.; AND OTHERS; REEL/FRAME:013865/0129; SIGNING DATES FROM 20030716 TO 20030807
US6743791 BB	20071203	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6743791 BB	20111201	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6743791 BB	20140710	LSAS	AS	ASSIGNMENT	OWNER NAME : MACQUARIE US TRADING LLC, NEW YORK DESCRIPTION : SECURITY INTEREST; ASSIGNORS:VERTEX PHARMACEUTICALS INCORPORATED; VERTEX PHARMACEUTICALS (SAN DIEGO) LLC; REEL/FRAME:033292/0311 EFFECTIVE DATE : 20140709
US6743791 BB	20151201	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6743791 BB	20161014	LSAS	AS	ASSIGNMENT	OWNER NAME : VERTEX PHARMACEUTICALS (SAN DIEGO) LLC, CALIFORNIA DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:MACQUARIE US TRADING LLC; REEL/FRAME:040357/0001 EFFECTIVE DATE : 20161013
US6743791 BB	20161014	LSAS	AS	ASSIGNMENT	OWNER NAME : VERTEX PHARMACEUTICALS INCORPORATED, MASSACHUSETTS DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:MACQUARIE US TRADING LLC; REEL/FRAME:040357/0001 EFFECTIVE DATE : 20161013
US7253187 BB	20070807	LSGT	+	granted / extensions (spc, cpc, pte)	
US7253187 BB	20110207	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7253187 BB	20140710	LSAS	AS	ASSIGNMENT	OWNER NAME : MACQUARIE US TRADING LLC, NEW YORK DESCRIPTION : SECURITY INTEREST; ASSIGNORS:VERTEX PHARMACEUTICALS INCORPORATED; VERTEX PHARMACEUTICALS (SAN DIEGO) LLC; REEL/FRAME:033292/0311 EFFECTIVE DATE : 20140709
US7253187 BB	20150209	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7253187 BB	20161014	LSAS	AS	ASSIGNMENT	OWNER NAME : VERTEX PHARMACEUTICALS (SAN DIEGO) LLC, CALIFORNIA DESCRIPTION : RELEASE BY

					SECURED PARTY; ASSIGNOR:MACQUARIE US TRADING LLC; REEL/FRAME:040357/0001 EFFECTIVE DATE : 20161013
US7253187 BB	20161014	LSAS	AS	ASSIGNMENT	OWNER NAME : VERTEX PHARMACEUTICALS INCORPORATED, MASSACHUSETTS DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:MACQUARIE US TRADING LLC; REEL/FRAME:040357/0001 EFFECTIVE DATE : 20161013
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WO02064586 A3	20030723	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002255521 COUNTRY OF REF DOCUMENT : AU
WO02064586 A3	20030728	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200305799 COUNTRY OF REF DOCUMENT : ZA
WO02064586 A3	20030728	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003/05799 COUNTRY OF REF DOCUMENT : ZA
WO02064586 A3	20030728	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 157131 COUNTRY OF REF DOCUMENT : IL
WO02064586 A3	20030729	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 527251 COUNTRY OF REF DOCUMENT : NZ
WO02064586 A3	20030807	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2437767 COUNTRY OF REF DOCUMENT : CA
WO02064586 A3	20030807	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2003/007049 COUNTRY OF REF DOCUMENT : MX
WO02064586 A3	20030808	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002564517 COUNTRY OF REF DOCUMENT : JP
WO02064586 A3	20030808	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1020037010503 COUNTRY OF REF DOCUMENT : KR
WO02064586 A3	20030826	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002724922 COUNTRY OF REF DOCUMENT : EP
WO02064586 A3	20030829	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 02805766X COUNTRY OF REF DOCUMENT : CN
WO02064586 A3	20030901	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : AP/P/2003/002853 COUNTRY OF REF DOCUMENT : AP
WO02064586 A3	20030919	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1020037010503 COUNTRY OF REF DOCUMENT : KR
WO02064586 A3	20031126	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2002724922 COUNTRY OF REF DOCUMENT : EP
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ZA200305799 A	20040728	LSGT	+	granted / extensions (spc,	

cpc, pte)

2) Family number: 29757460 (US2003216496A)

Title: ENVIRONMENTALLY FRIENDLY POLYLACTIDE-BASED COMPOSITE FORMULATIONS

Abstract: Source: US2003216496A **Polymeric** materials and products, including sheet flooring materials prepared from the **polymeric** materials, and processes for preparing the **polymeric** materials, are disclosed. The **polymeric** materials include a **polylactic acid**-based polymer in combination with plasticizer and a compatibilizer, and optionally include a filler. The **polymeric** material can include between about 30 to about 50 percent by weight polyvinyl chloride, polyethylene glycol, polyglycolide, ethylene vinyl acetate, polycarbonate, polycaprolactone, polyhydroxyalkanoates, or polyolefins modified with polar groups, for example, ionomers. The plasticizer is typically an epoxidized vegetable oil or esterified and epoxidized vegetable oil and is typically present in an amount of between about 10 and about 50 percent by weight. In some embodiments, the compatibilizer is a polyolefin modified with one or more polar functional groups, and is typically present in an amount of between about 5 and about 10 percent by weight. The material can be used in decorative surface coverings, such as a floor coverings, particularly when it is in the form of a **polymeric** sheet. The **polymeric** material can be present in at least one layer of a floor covering, which floor covering can also include one or more additional layers such as wear layers, foamed or foamable layers, top coat layers and design layers. The additional layers can also include the **polymeric** material.

Classifications:

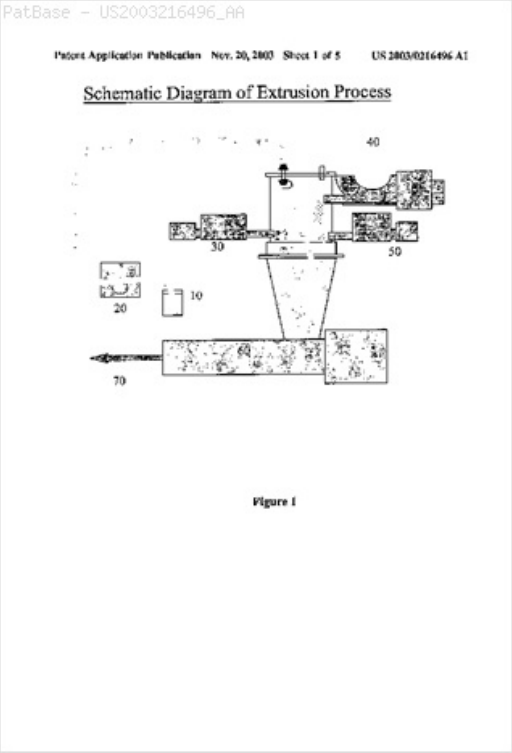
International (IPC 8-9): B29C67/24 B29D99/00 B32B27/36 C08J5/18 C08K5/1515 C08K5/156 C08K7/02 C08K7/14 C08L33/02 C08L67/04 E04F15/00 E04F15/10 E04F15/22 (Advanced/Invention); B29K67/00 C08L101/00 (Advanced/Non-invention); B29C67/24 B29D99/00 B32B27/36 C08J5/18 C08K5/00 C08K7/00 C08L67/00 E04F15/10 E04F15/22 (Core/Invention); C08L101/00 (Core/Non-invention)

International (IPC 1-7): B29C35/00 B29C67/24 B29D31/00 B29K67/00 B32B27/36 B32B33/00 C08G63/08 C08K5/09 C08K5/1515 C08K7/02 C08K7/14 C08L33/02 E04F15/00

CPC: C08J5/18 C08J2367/04 E04F15/22 B29C67/24 B29K2067/043 B29K2067/046 B29L2031/732 B32B27/36 C08L67/04 C08L101/00 E04F15/10 Y10T428/259 Y10T428/31 Y10T428/31938 C08K5/0016 C08K5/1515

European: B29C67/24 B32B27/36 C08J5/18 C08L67/04 E04F15/10 E04F15/22 L29K67/04B L29K67/04D L29L31/732 M08J367/04 M08L101/00

US: 264/638 264/638S 428/331 428/331P 428/409 428/409P 428/523 523/124 523/128 523/500 523/509 523/511 523/514 523/515 523/516 523/521 523/522 523/523 523/527 524/114 524/261 524/261S 524/270 524/271 524/272 524/273 524/274 524/284 524/287 524/296 524/297 524/308 524/310 524/314 524/315 524/35 524/599



Family:

Publication number	Publication date	Application number	Application date
AT336357 E	20060915	AT20030010178T	20030506
CA2427012 AA	20031110	CA20032427012	20030428
CA2427012 C	20120403	CA20032427012	20030428
DE60307536 D1	20060928	DE20036007536	20030506
DE60307536 T2	20070809	DE20036007536T	20030506
DK1361039 T3	20061227	DK20030010178T	20030506
EP1361039 A1	20031112	EP20030010178	20030506
EP1361039 B1	20060816	EP20030010178	20030506
PL360048 A1	20031117	PL20030360048	20030509
US2003216496 AA	20031120	US20020304816	20021126
US2005123744 AA	20050609	US20050032608	20050110
US2005136259 AA	20050623	US20050032609	20050110
US6869985 BB	20050322	US20020304816	20021126
US7256223 BB	20070814	US20050032608	20050110
US7354656 BB	20080408	US20050032609	20050110

Priority:

CA20032427012 20030428 US20020304816 20021126 US20020379440P 20020510
US20050032608 20050110 US20050032609 20050110

Probable Assignee: AFI LICENSING LLC

Assignee(s): (std): AWI LICENSING CO ; TRUSTEES OF MICHIGAN STATE UNI ; UNIV MICHIGAN STATE

Assignee(s): AFI LICENSING LLC ; AWI LICENSING COMPANY ; BOARD OF TRUSTEES OF MICHIGAN STATE UNIV ; BOARD OF TRUSTEES OF MICHIGAN STATE UNIV MICHIGAN ; BOARD OF TRUSTEES OF MICHIGAN STATE UNIV MICHIGAN STATE UNIV ; BOARD OF TRUSTEES OF MICHIGAN STATE UNIV OFFICE OF ; MICHIGAN BOARD OF TRUSTEES OF STATE UNIVERSITY ; MICHIGAN BOARD OF TRUSTEES OF STATE UNIV ; BOARD OF TRUSTEES OF MICHIGAN STATE UNIVERSITY ; THE BOARD OF TRUSTEES OF THE MICHIGAN STATE UNIVER ; BOARD OF TRUSTEES OF MICHIGAN STATE UNIVERSITY OFF ; MICHIGAN STATE UNIV BOARD OF TRUSTEES ; MICHIGAN STATE UNIVERSITY BOARD OF TRUSTEES ; DRZAL LAWRENCE T ; MOHANTY AMAR KUMAR ; ROOK BRIAN P ; MISRA MANJUSRI ; MOHANTY AMAR K ; THE BOARD OF TRUSTEES OF THE MICHIGAN STATE UNIVERSITY ; BOARD OF TRUSTEES OF MICHIGAN STATE UNIV OFFICE OF INTELLECTUAL PROPERTY

Inventor(s): (std): MOHANTY AMAR KUMAR ; ROOK BRIAN P ; MOHANTY AMAR K ; MISRA MANJUSRI ; DRZAL LAWRENCE T

Inventor(s): ROOK BRIAN ; DRZAL LAWRENCE ; MOHANTY AMAR
Agent(s): GOWLING LAFLEUR HENDERSON LLP; ARMSTRONG WORLD IND INC
Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AT336357 E	20060915	LSGT	+	granted / extensions (spc, cpc, pte)	
AT336357 E	20070215	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
CA2427012 AA	20031110	LSPB	+	published / reissued	
CA2427012 AA	20071026	LSES	+EEER	EXAMINATION REQUEST	
CA2427012 AA	20150609	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20150428
CA2427012 C	20120403	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60307536 D1	20070913	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60307536 T2	20070809	LSGT	+	granted / extensions (spc, cpc, pte)	
DK1361039 T3	20061227	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1361039 A1	20031112	LSPB	+	published / reissued	
EP1361039 A1	20040616	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20040414
EP1361039 A1	20040804	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR
EP1361039 A1	20050406	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20050221
EP1361039 A1	20060816	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CZ DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20060816
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EP1361039 A1	20060915	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP1361039 A1	20070116	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20070116
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EP1361039 A1	20090731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20090528 YEAR OF FEE PAYMENT : 07
EP1361039 A1	20090731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20090524 YEAR OF FEE PAYMENT : 07
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EP1361039 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090528 YEAR OF FEE PAYMENT : 07
EP1361039 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20100527 YEAR OF FEE PAYMENT : 08

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EP1361039 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20140529 YEAR OF FEE PAYMENT : 12

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EP1361039 A1	20150227	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20150130
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EP1361039 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20150527 YEAR OF FEE PAYMENT : 13
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EP1361039 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20150526 YEAR OF FEE PAYMENT : 13
EP1361039 A1	20160630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20160526 YEAR OF FEE PAYMENT : 14
EP1361039 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20160527 YEAR OF FEE PAYMENT : 14
EP1361039 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20160527 YEAR OF FEE PAYMENT : 14
EP1361039 B1	20060816	LSGT	+	granted / extensions (spc, cpc, pte)	
PL360048 A1	20031117	LSPB	+	published / reissued	
PL360048 A1	20130731	LSRV	-REFS	DECISIONS ON REFUSAL TO GRANT PATENTS (TAKEN AFTER THE PUBLICATION OF THE PARTICULARS OF THE APPLICATIONS)	
US2003216496 AA	20031120	LSPB	+	published / reissued	
US2005123744 AA	20050609	LSPB	+	published /	

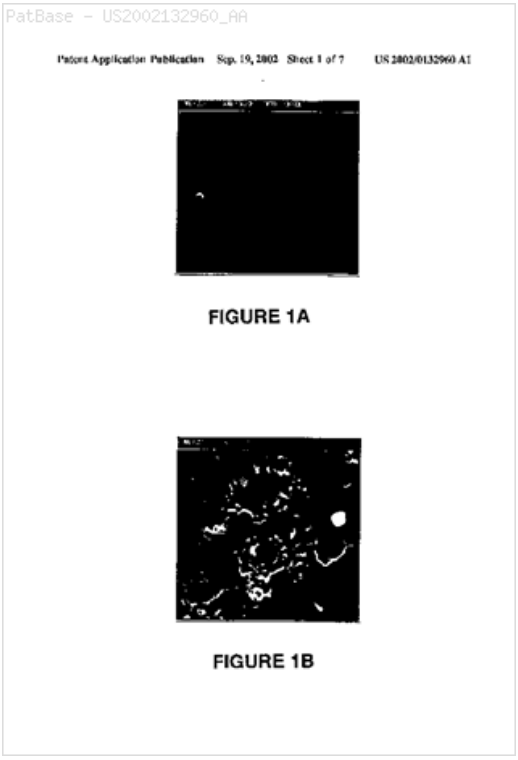
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US6869985 BB	20030422	LSAS	AS	ASSIGNMENT	OWNER NAME : MICHIGAN, BOARD OF TRUSTEES OF STATE UNIVERSITY, M DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MOHANTY, AMAR K.; DRZAL, LAWRENCE T.; ROOK, BRIAN P.; AND OTHERS; REEL/FRAME:014034/0072 EFFECTIVE DATE : 20030221
US6869985 BB	20050113	LSAS	AS	ASSIGNMENT	OWNER NAME : AWI LICENSING COMPANY, DELAWARE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ARMSTRONG WORLD INDUSTRIES, INC.; REEL/FRAME:015589/0479 EFFECTIVE DATE : 20050111
US6869985 BB	20080430	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6869985 BB	20101020	LSAS	AS	ASSIGNMENT	OWNER NAME : BOARD OF TRUSTEES OF MICHIGAN STATE UNIVERSITY MIC DESCRIPTION : CORRECTION BY DECLARATION OF INCORRECT ASSIGNEE AT REEL 015589 AND FRAME 0479; ASSIGNOR:BOARD OF TRUSTEES OF MICHIGAN STATE UNIVERSITY MICHIGAN STATE UNIVERSITY; REEL/FRAME:025169/0263 EFFECTIVE DATE : 20100917
US6869985 BB	20120620	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6869985 BB	20160728	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6869985 BB	20160914	LSAS	AS	ASSIGNMENT	OWNER NAME : AFI LICENSING LLC, PENNSYLVANIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ARMSTRONG FLOORING INC; REEL/FRAME:040028/0243 EFFECTIVE DATE : 20160824
US7256223 BB	20070814	LSGT	+	granted / extensions (spc, cpc, pte)	
US7256223 BB	20101116	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7256223 BB	20150209	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7256223 BB	20160914	LSAS	AS	ASSIGNMENT	OWNER NAME : AFI LICENSING LLC, PENNSYLVANIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ARMSTRONG FLOORING INC; REEL/FRAME:040028/0243 EFFECTIVE DATE : 20160824
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US7354656 BB	20111027	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7354656 BB	20150923	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7354656 BB	20160914	LSAS	AS	ASSIGNMENT	OWNER NAME : AFI LICENSING LLC, PENNSYLVANIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ARMSTRONG FLOORING INC; REEL/FRAME:040028/0243 EFFECTIVE DATE : 20160824

3) Family number: 29482288 (US2002132960A)

Title: Copolyesters and fibrous materials formed therefrom

Abstract: Source: US2002132960A This invention relates to binary blends of cellulose esters and aliphatic-aromatic copolyesters, cellulose esters and aliphatic polyesters as well as ternary blends of cellulose esters and/or aliphatic polyesters and/or aliphatic-aromatic copolyesters and/or **polymeric** compounds as well as **fibers**, nonwovens, molded objects, and films prepared therefrom.

Classifications:
International (IPC 8-9): A61L15/22 B29C55/02 C08G63/00 C08G63/02 C08G63/16 C08G63/18 C08G63/181 C08G63/672 C08G69/44 C08J5/00 C08J5/18 C08K5/10 C08L1/00 C08L1/02 C08L1/08 C08L1/10 C08L1/12 C08L1/14 C08L101/00 C08L101/16 C08L29/04 C08L3/02 C08L31/04 C08L33/00 C08L33/04 C08L33/12 C08L67/00 C08L67/02 C08L67/04 C08L69/00 C08L77/12 C08L91/08 D01F2/28 D01F6/82 D01F6/84 D01F6/92 D01F8/14 D02G1/00 D02G3/02 D03D15/00 D04H1/42 D04H1/435 (Advanced/Invention); B29C55/02 B29K67/00 B29L7/00 C08G63/00 C08J5/18 C08L1/00 C08L1/14 C08L101/00 C08L101/16 C08L33/00 C08L69/00 D01F6/84 D01F6/92 (Advanced/Non-invention); C08G63/00 C08J5/18 C08L1/00 C08L3/00 C08L67/00 (Core/Invention); C08L101/00 (Core/Non-invention); C08G C08L D01F (Subclass/Invention)
International (IPC 1-7): B29C55/02 B29K67/00 B29L7/00 B32B27/36 C08F265/04 C08F267/06 C08G63/00 C08G63/02 C08G63/16 C08G63/18 C08G63/181 C08G63/183 C08G63/672 C08G69/00 C08G69/44 C08J5/00 C08J5/18 C08K13/02 C08K3/26 C08K5/10 C08K5/11 C08L1/00 C08L1/02 C08L1/08 C08L1/10 C08L1/12 C08L1/14 C08L101/00 C08L101/16 C08L29/04 C08L3/02 C08L3/06 C08L31/04 C08L33/00 C08L33/12 C08L67/00 C08L67/02 C08L67/04 C08L69/00 C08L77/12 C08L91/08 C08S5/18 D01F2/28 D01F6/82 D01F6/84 D01F6/92 D01F8/14 D02G1/00 D02G3/02 D03D15/00 D04H1/42
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European: A61L15/22M C08G63/16 C08G63/672 C08L1/10 C08L1/14 C08L3/02 C08L67/00 C08L67/02 C08L67/04 D01F6/82 D01F6/84 D01F6/92 D01F8/14 M08L201/06 M08L67/02
US: 264/331.21 428/480 428/910 524/10 524/35 524/37 524/38 524/39 524/40 524/41 524/425 524/47 524/51 528/271 528/272 528/272P 528/301 528/302 528/308 528/308.6 528/308.7



Family:

Publication number	Publication date	Application number	Application date
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CN1183428 A	19980603	CN19971015356	19970725
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US5292783 A	19940308	US19910797512	19911121
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Priority:

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US19910736262	19910723	US19910797512	19911121	WO1991US08827	19911126

Probable Assignee: NOVAMONT SPA

Assignee(s): (std): EASTMAN CHEM CO ; EASTMAN CHEMICAL CO ; EASTMAN KODAK CO ; EASTMAN KODAK CO 343 STAT ; NOVAMONT SPA ; EASTMAN KODAK COMPANY 343 STATE STREET ROCHESTER N

Assignee(s): EASTMAN KODAK COMPANY ; EASTMAN KODAK COMPANY 343 STATE STREET ROCHESTER NEW YORK US ; GARDNER ROBERT M ; WHITE ALAN W ; GEDON STEVEN C ; WOOD MATTHEW D ; EASTMAN KODAK CO A CORP OF NEW JERSEY ; EASTMAN CHEMICAL CO KINGSPORT ; EASTMAN CHEMICAL CO KINGSPORT TENN US ; EASTMAN KODAK CO 343 STATE STREET ROCHESTER NEW YORK US ; NOVAMONT S P A ; EASTMAN CHEMICAL COMPANY ; BARLOW FRED D JR ; BUCHANAN CHARLES M

Inventor(s): (std): BARLOW FRED DEWEY JR HERITAGE ; BARLOW FREDDEWEY JR ; BARLOW FRES DEWEY ; BARLOW JR ; BARLOW JR FRED D ; BARLOW JR FRED DEWEY ; BM GARDNER ; BUCHANAN C M ; BUCHANAN CHARLES M ; BUCHANAN CHARLES MICHAEL ; BARLOW FRED D ; BARLOW FRED D JR ; BARLOW FRED DEWEY JR ; ALAN WAYNE WHITE ; BUKANNAN C M ; CHARLES MICHAEL BUCHANAN ; CM BUCHANAN ; CM BUKANNAN ; DEAN L R ; DEAN LERON R ; DEATON BETTY J ; FRED DEWEY BARLOW JR ; FRES DEWEY BARLOW ; GADNA R M ; GARDNER B M ; GARDNER R M ; GARDNER ROBERT M ; GARDNER ROBERT MARSHALL ; GEDON STEVEN C ; GEDON STEVEN CARL ; HAILE W A ; HAILE WILLIAM A ; LR DEAN ; M D WODE ; MATTHEW D WOOD ; MATTHEW DAVIE WOOD ; MCCONNELL R L ; MCCONNELL RICHARD L ; MD WODE ; MD WOOD ; RL MCCONNELL ; RM GADNA ; RM GARDNER ; ROBERT MARSHALL GARDNER ; ROBERTO MARSHALL GAARDNER ; STEVEN CARL GEDON ; TINCHER MARK E ; C M BUKANNAN ; R M GADNA ; WA HAILE ; WHITE ALAN W ; WHITE ALAN WAYNE ; WODE M D ; WOOD M D ; WOOD MADUDEBI ; WOOD MATTHEW D ; WOOD MATTHEW DAVIE

Inventor(s): WOOD MATTHEW DAVIE KINGSPORT TN 37663 US ; WOOD MATTHEWDAVIE ; WHITE ALAN WAYNE KINGSPORT TN 37664 US ; WHITE ALANWAYNE ; WILLIAM A HAILE ; R M GARDNER ; RICHARD L MCCONNELL ; CHARLES M BUCHANAN ; W A HAILE ; R L MCCONNELL ; M D WOOD ; MARK E TINCHER ; L R DEAN ; LERON R DEAN ; GEDON STEVEN CARL KINGSPORT TN 37660 US ; GEDON STEVENCARL ; GARDNER ROBERT MARSHALL GRAY TN 37615 US ; GARDNER ROBERTMARSHALL ; C M BUCHANAN ; B M GARDNER ; BARLOW FRED ; BARLOW FRED DEWEY JR 5337 HERITAGE LANE ; BARLOW FRED DEWEY

Agent(s):	JR 5337 HERITAGE LANE KINGSPORT ; BARLOW FRED DEWEY JR 5337 HERITAGE LANE KINGSPORT TN 37664 US ; BUCHANAN CHARLES MICHAEL BLUFF CITY TN 37618 US ; BUCHANAN CHARLESMICHAEL ; ALAN W WHITE PHILLIPS ORMONDE FITZPATRICK; GOWLING LAFLEUR HENDERSON LLP; TSURUTA JUNICHI; NISHIYAMA MASAYA; HIGUCHI SOTOJI; ISHIDA TAKASHI
Designated states:	AT AU BE BR CA CH CN CY DE DK ES FI FR GB GR IE IT JP KR LI LU MC MX NL NO PT SE TR

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT150058 E	19970315	LSGT	+	granted / extensions (spc, cpc, pte)	
AT150058 E	19970915	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT199383 E	20010315	LSGT	+	granted / extensions (spc, cpc, pte)	
AT199383 E	20010815	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT280252 E	20041115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT280252 E	20050415	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT349476 E	20070115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT349476 E	20070715	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	REF DOCUMENT NUMBER : 0950678 COUNTRY OF REF DOCUMENT : EP
AT349476 E	20120215	LSLE	-EELA	CANCELLED DUE TO LAPSE OF TIME	
AU199191050 A1	19920625	LSPB	+	published / reissued	
AU199645574 A1	19960606	LSPB	+	published / reissued	
AU664831 B2	19951207	LSGT	+	granted / extensions (spc, cpc, pte)	
AU696544 B2	19980910	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI9107138 A	19940405	LSPB	+	published / reissued	
BRPI9107138 A	19960521	LSAS	GB	TRANSFER	
BRPI9107138 A	20020611	LSGT	+FF	DECISION: INTENTION TO GRANT	
BRPI9107138 A	20021210	LSGT	+FG9A	PATENT OR CERTIFICATE OF ADDITION GRANTED	
BRPI9107138 A	20130618	LSLE	-B21A	EXPIRY ACC. ART. 78, ITEM I OF IPL- EXPIRY OF THE TERM OF PROTECTION	DESCRIPTION : PATENTE EXTINTE EM 10/12/2012
CA2095536 AA	19930504	LSPB	+	published / reissued	
CA2095536 AA	19930504	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2095536 AA	19930504	LSES	+EEER	EXAMINATION REQUEST	
CA2095536 AA	20111126	LSLE	-MKEX	EXPIRY	
CA2095536 C	19990216	LSGT	+	granted / extensions (spc, cpc, pte)	
CN100507101 C	20090701	LSGT	+	granted / extensions (spc, cpc, pte)	

CN1062740 A	19920715	LSPB	+	published / reissued	
CN1062740 A	19920715	LSPB	+C06	PUBLICATION	
CN1062740 A	19950111	LSRE	C53	CORRECTION OF PATENT FOR INVENTION OR PATENT APPLICATION	
CN1062740 A	19950111	LSRE	COR	CHANGE OF BIBLIOGRAPHIC DATA	DESCRIPTION : CORRECT: APPLICANT; FROM: EASTMAN KODAK CO. TO: YISIMAN CHEMICAL COMPANY
CN1062740 A	20010404	LSDW	-C01	DEEMED WITHDRAWAL OF PATENT APPLICATION (PATENT LAW 1993)	
CN1072245 C	20011003	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1072245 C	19980603	LSPB	+C06	PUBLICATION	
CN1072245 C	20011003	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1072245 C	20080618	LSAS	C56	CHANGE IN THE NAME OR ADDRESS OF THE PATENTEE	
CN1072245 C	20080618	LSAS	C56	CHANGE IN THE NAME OR ADDRESS OF THE PATENTEE	OWNER NAME : EASTMAN CHEMICAL COMPANY DESCRIPTION : FORMER NAME OR ADDRESS: YISIMAN CHEMICAL COMPANY
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CN1076358 C	20011219	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1076358 C	19980603	LSPB	+C06	PUBLICATION	
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CN1076358 C	20120111	LSLE	-C17	CESSATION OF PATENT RIGHT	
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CN1131281 C	20120111	LSLE	-C17	CESSATION OF PATENT RIGHT	
CN1183423 A	19980603	LSPB	+	published / reissued	
CN1183426 A	19980603	LSPB	+	published / reissued	
CN1183426 A	19980603	LSPB	+C06	PUBLICATION	
CN1183426 A	20020320	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
CN1183427 A	19980603	LSPB	+	published / reissued	

CN1183427 A	19980603	LSPB	+C06	PUBLICATION	
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CN1183428 A	19980603	LSPB	+	published / reissued	
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CN1183428 A	20020320	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
CN1183429 A	19980603	LSPB	+	published / reissued	
CN1183429 A	19980603	LSPB	+C06	PUBLICATION	
CN1183429 A	20020320	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
CN1183433 A	19980603	LSPB	+	published / reissued	
CN1324891 A	20011205	LSPB	+	published / reissued	
CN1429290 A	20030709	LSPB	+	published / reissued	
CN1429290 A	20030709	LSPB	+C06	PUBLICATION	
CN1429290 A	20090701	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
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DE60106596 T2	20050324	LSGT	+	granted / extensions (spc, cpc, pte)	
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DE69132548 T2	20010628	LSGT	+	granted / extensions (spc, cpc, pte)	
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DE69133554 T2	20071004	LSGT	+	granted / extensions (spc, cpc, pte)	
DK0950678 T3	20070507	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0559785 A1	19930915	LSPB	+	published / reissued	
EP0559785 A1	19930915	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19930607
EP0559785 A1	19940727	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : EASTMAN CHEMICAL COMPANY
EP0559785 A1	19950614	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19950426

EP0559785 A1	19970312	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 19970312
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EP0559785 A1	19970312	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 19970312
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EP0559785 A1	19970312	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH EFFECTIVE DATE : 19970312
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EP0559785 A1	19970612	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE EFFECTIVE DATE : 19970612
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EP0559785 A1	19970915	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0559785 A1	19971126	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 19971126
EP0559785 A1	19971126	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 19971126
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EP0559785 A1	19980715	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 19971126

EP0559785 A1	20031105	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20031105 YEAR OF FEE PAYMENT : 13
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EP0559785 A1	20050902	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST
EP0559785 A1	20051126	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20051126
EP0559785 B1	19970312	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0736557 A1	19961009	LSPB	+	published / reissued	
EP0736557 A1	19961009	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19960620
EP0736557 A1	19970226	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : GEDON, STEVEN CARL
EP0736557 A1	19970226	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : BARLOW, FRED DEWEY, JR.
EP0736557 A1	19970226	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : GARDNER, ROBERT MARSHALL
EP0736557 A1	19970226	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : WHITE, ALAN WAYNE
EP0736557 A1	19970226	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : DEATON, BETTY J.
EP0736557 A1	19970226	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : WOOD, MATTHEW DAVIE
EP0736557 A1	19970226	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : BUCHANAN, CHARLES MICHAEL, C/O EASTMAN CHEM. CO.
EP0736557 A1	19970416	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19970226
EP0736557 A1	20010228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : THE PATENT HAS BEEN ANNULLED BY A DECISION OF A NATIONAL AUTHORITY EFFECTIVE DATE : 20010228
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EP0736557 A1	20010831	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0736557 A1	20011126	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20011126
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EP0736557 A1	20050713	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20041126
EP0736557 A1	20060125	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : 728V
EP0736557 A1	20080131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20010228
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EP0736557 A1	20090529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL	REF COUNTRY CODE : DE PAYMENT DATE : 20081223 YEAR OF FEE PAYMENT : 18

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EP0736557 A1	20100129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20091127 YEAR OF FEE PAYMENT : 19
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EP0736557 A1	20110131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20101202 YEAR OF FEE PAYMENT : 20
EP0736557 A1	20110228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20101126 YEAR OF FEE PAYMENT : 20
EP0736557 A1	20110331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20101124 YEAR OF FEE PAYMENT : 20
EP0736557 A1	20111127	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R071 REF DOCUMENT NUMBER : 69132548 COUNTRY OF REF DOCUMENT : DE
EP0736557 A1	20111221	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : PE20 EXPIRY DATE : 20111125
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EP0950678 A1	19991020	LSPB	+	published / reissued	
EP0950678 A1	19991020	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19990615
EP0950678 A1	19991201	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : GEDON, STEVEN CARL C/O EASTMAN CHEMICAL COMPANY
EP0950678 A1	19991201	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : BUCHANAN, CHARLES MICHAEL
EP0950678 A1	19991201	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : WOOD, MATTHEW DAVIE
EP0950678 A1	19991201	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : WHITE, ALAN WAYNE
EP0950678 A1	19991201	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : GARDNER, ROBERT MARSHALL
EP0950678 A1	19991201	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : BARLOW, FRED DEWEY JR.
EP0950678 A1	19991201	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : DEATON, BETTY J.
EP0950678 A1	20030416	LSES	+17Q	FIRST EXAMINATION	EFFECTIVE DATE : 20030304

				REPORT	
EP0950678 A1	20050216	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : NOVAMONT S.P.A.
EP0950678 A1	20060705	LSRE	RTI1	TITLE (CORRECTION)	DESCRIPTION : ALIPHATIC-AROMATIC COPOLYESTERS
EP0950678 A1	20061227	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP0950678 A1	20070425	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20070400807 COUNTRY OF REF DOCUMENT : GR
EP0950678 A1	20070801	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2278424 KIND CODE OF REF DOCUMENT : T3
EP0950678 A1	20071205	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20070928
EP0950678 A1	20081128	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20080926 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20081124 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20081125 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20081125 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090227	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20081103 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090227	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20081126 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20081128 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20081117 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20081223 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20081127 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20081128 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20090128 YEAR OF FEE PAYMENT : 18
EP0950678 A1	20090831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20071126
EP0950678 A1	20100129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20091103 YEAR OF FEE PAYMENT : 19
EP0950678 A1	20100129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL	REF COUNTRY CODE : CH PAYMENT DATE : 20091124 YEAR OF FEE PAYMENT : 19

				OFFICE	
EP0950678 A1	20100129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20091127 YEAR OF FEE PAYMENT : 19
EP0950678 A1	20100129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20091126 YEAR OF FEE PAYMENT : 19
EP0950678 A1	20100129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20091126 YEAR OF FEE PAYMENT : 19
EP0950678 A1	20100129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20091127 YEAR OF FEE PAYMENT : 19
EP0950678 A1	20100226	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20091123 YEAR OF FEE PAYMENT : 19
EP0950678 A1	20100430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20091125 YEAR OF FEE PAYMENT : 19
EP0950678 A1	20100430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20091201 YEAR OF FEE PAYMENT : 19
EP0950678 A1	20100630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20091224 YEAR OF FEE PAYMENT : 19
EP0950678 A1	20100630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20091126 YEAR OF FEE PAYMENT : 19
EP0950678 A1	20110131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20101123 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20101031 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20101125 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20101202 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20101124 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20101126 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20091126
EP0950678 A1	20110331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20101126 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20101124 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20101129 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20101117 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20101125 YEAR OF FEE PAYMENT : 20

EP0950678 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20101102 YEAR OF FEE PAYMENT : 20
EP0950678 A1	20110729	LSRE	+PGRI	POSTGRANT: PATENT REINSTATED IN CONTRACTING STATE	REF COUNTRY CODE : IT EFFECTIVE DATE : 20110616
EP0950678 A1	20111127	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R071 REF DOCUMENT NUMBER : 69133554 COUNTRY OF REF DOCUMENT : DE
EP0950678 A1	20111130	LSLE	-BE20	BE: PATENT EXPIRED	OWNER NAME : NOVAMONT S.P.A. EFFECTIVE DATE : 20111126
EP0950678 A1	20111130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0950678 A1	20111207	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : V4 EFFECTIVE DATE : 20111126
EP0950678 A1	20111212	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EUP
EP0950678 A1	20111221	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : PE20 EXPIRY DATE : 20111125
EP0950678 A1	20120110	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : EUG
EP0950678 A1	20120131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20111126
EP0950678 A1	20120210	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : MA REF DOCUMENT NUMBER : 20070400807 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20111127
EP0950678 A1	20120215	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK07 REF DOCUMENT NUMBER : 349476 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20111126
EP0950678 A1	20120229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20111125
EP0950678 A1	20120509	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20120509
EP0950678 A1	20121130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20111127
EP0950678 A1	20130628	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20111127
EP0950678 B1	20061227	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1280948 A2	20030205	LSPB	+	published / reissued	
EP1280948 A2	20030205	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20021017

EP1280948 A2	20030813	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20030701
EP1280948 A2	20041020	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041020
EP1280948 A2	20041020	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041020
EP1280948 A2	20041020	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041020
EP1280948 A2	20041020	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041020
EP1280948 A2	20041020	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041020
EP1280948 A2	20041020	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : TR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041020
EP1280948 A2	20041020	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041020
EP1280948 A2	20041020	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1280948 A2	20041029	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1280948 A2	20041117	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1280948 A2	20050120	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20050120
EP1280948 A2	20050120	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20050120
EP1280948 A2	20050120	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE

				INFORM. FROM NAT. OFFICE TO EPO	DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20050120
EP1280948 A2	20050131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20050131
EP1280948 A2	20050216	LSAS	RAP2	TRANSFER OF RIGHTS OF AN EP GRANTED PATENT	OWNER NAME : NOVAMONT S.P.A.
EP1280948 A2	20050429	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1280948 A2	20050502	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT	
EP1280948 A2	20050511	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20050511
EP1280948 A2	20050511	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20050511
EP1280948 A2	20050511	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CY DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20050511
EP1280948 A2	20050531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20050531
EP1280948 A2	20051012	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20050721
EP1280948 A2	20060222	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1280948 A2	20080102	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20050320
EP1280948 A2	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20090402 YEAR OF FEE PAYMENT : 09
EP1280948 A2	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20090528 YEAR OF FEE PAYMENT : 09
EP1280948 A2	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090518 YEAR OF FEE PAYMENT : 09
EP1280948 A2	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090528 YEAR OF FEE PAYMENT : 09
EP1280948 A2	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100601 YEAR OF FEE PAYMENT : 10
EP1280948 A2	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100527 YEAR OF FEE PAYMENT : 10
EP1280948 A2	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID	REF COUNTRY CODE : GB PAYMENT DATE : 20100525

				TO NATIONAL OFFICE	YEAR OF FEE PAYMENT : 10
EP1280948 A2	20110331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20100511
EP1280948 A2	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110607 YEAR OF FEE PAYMENT : 11
EP1280948 A2	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20100426 YEAR OF FEE PAYMENT : 10
EP1280948 A2	20110729	LSRE	+PGRI	POSTGRANT: PATENT REINSTATED IN CONTRACTING STATE	REF COUNTRY CODE : IT EFFECTIVE DATE : 20110616
EP1280948 A2	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110525 YEAR OF FEE PAYMENT : 11
EP1280948 A2	20110930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20110330 YEAR OF FEE PAYMENT : 11
EP1280948 A2	20110930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110527 YEAR OF FEE PAYMENT : 11
EP1280948 A2	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120529 YEAR OF FEE PAYMENT : 12
EP1280948 A2	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120607 YEAR OF FEE PAYMENT : 12
EP1280948 A2	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120525 YEAR OF FEE PAYMENT : 12
EP1280948 A2	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120607 YEAR OF FEE PAYMENT : 12
EP1280948 A2	20120928	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20120502 YEAR OF FEE PAYMENT : 12
EP1280948 A2	20120928	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20120502 YEAR OF FEE PAYMENT : 12
EP1280948 A2	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130528 YEAR OF FEE PAYMENT : 13
EP1280948 A2	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130530 YEAR OF FEE PAYMENT : 13
EP1280948 A2	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130606 YEAR OF FEE PAYMENT : 13
EP1280948 A2	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20130419 YEAR OF FEE PAYMENT : 13
EP1280948 A2	20140731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20140527 YEAR OF FEE PAYMENT : 14
EP1280948 A2	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20140519 YEAR OF FEE PAYMENT : 14
EP1280948 A2	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20140526 YEAR OF FEE PAYMENT : 14
EP1280948 A2	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20140529 YEAR OF FEE PAYMENT : 14

EP1280948 A2	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20150527 YEAR OF FEE PAYMENT : 15
EP1280948 A2	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20150528 YEAR OF FEE PAYMENT : 15
EP1280948 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20150519 YEAR OF FEE PAYMENT : 15
EP1280948 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20150427 YEAR OF FEE PAYMENT : 15
EP1280948 A2	20160530	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 16
EP1280948 A2	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20160527 YEAR OF FEE PAYMENT : 16
EP1280948 A2	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20160527 YEAR OF FEE PAYMENT : 16
EP1280948 A2	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20160503 YEAR OF FEE PAYMENT : 16
EP1280948 A2	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20160530 YEAR OF FEE PAYMENT : 16
EP1280948 B1	20041020	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2278424 T3	20070801	LSGT	+	granted / extensions (spc, cpc, pte)	
FI20000496 A	20000303	LSPB	+	published / reissued	
FI932450 A	19930528	LSPB	+	published / reissued	
FI932450 A	19940908	LSAS	GB	TRANSFER OR ASSIGMENT OF APPLICATION	OWNER NAME : EASTMAN CHEMICAL COMPANY
HK1041708 A1	20041008	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1041708 A1	20041215	LSFE	+PF	PATENT IN FORCE	
HK1041708 A1	20111230	LSLE	-PE	PATENT EXPIRED	EFFECTIVE DATE : 20111129
HK1057241 A1	20091030	LSGT	+	granted / extensions (spc, cpc, pte)	
IE914155 A1	19920603	LSPB	+	published / reissued	
JP2001354802 A2	20011225	LSPB	+	published / reissued	
JP2003128768 A2	20030508	LSPB	+	published / reissued	
JP2003221464 A2	20030805	LSPB	+	published / reissued	
JP2003221464 A2	20040303	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20040302
JP2003221464 A2	20040331	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20040330
JP2003221464 A2	20040701	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20040630
JP2003221464 A2	20040728	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20040727

JP2003221464 A2	20041222	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20041221
JP2003532804 T2	20031105	LSPB	+	published / reissued	
JP2004084156 A2	20040318	LSPB	+	published / reissued	
JP2004084156 A2	20040317	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20040316
JP2004084156 A2	20040917	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20040916
JP2004084156 A2	20050427	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20050426
JP2004084156 A2	20060705	LSWD	-A761	WRITTEN WITHDRAWAL OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A761 EFFECTIVE DATE : 20060704
JP2006022472 A2	20060126	LSPB	+	published / reissued	
JP2006022472 A2	20060111	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20060110
JP2006022472 A2	20060711	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20060710
JP2006022472 A2	20060913	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20060912
JP2006022472 A2	20070111	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20070110
JP2006022472 A2	20070201	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20070131
JP2006022472 A2	20070214	LSWD	-A761	WRITTEN WITHDRAWAL OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A761 EFFECTIVE DATE : 20070213
JP2007138377 A2	20070607	LSPB	+	published / reissued	
JP2007138377 A2	20070509	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20070508
JP2007138377 A2	20071206	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20071108
JP2007138377 A2	20080116	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20080115
JP2007138377 A2	20080415	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080414
JP2007138377 A2	20080625	LSWD	-A761	WRITTEN WITHDRAWAL OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A761 EFFECTIVE DATE : 20080624
JP2008202212 A2	20080904	LSPB	+	published / reissued	
JP3362040 B2	20030107	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3362040 B2	20051011	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP3362040 B2	20071106	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20081018 YEAR OF FEE PAYMENT : 6

JP3362040 B2	20081104	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20091018 YEAR OF FEE PAYMENT : 7
JP3362040 B2	20091020	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20101018 YEAR OF FEE PAYMENT : 8
JP3362040 B2	20101007	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20101018 YEAR OF FEE PAYMENT : 8
JP3362040 B2	20101012	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20111018 YEAR OF FEE PAYMENT : 9
JP3362040 B2	20101012	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20111018 YEAR OF FEE PAYMENT : 9
JP3362040 B2	20111025	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20121018 YEAR OF FEE PAYMENT : 10
JP3362040 B2	20111126	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP3362040 B2	20120208	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20121018 YEAR OF FEE PAYMENT : 10
JP3393124 B2	20030407	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3393124 B2	20060110	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP3393124 B2	20080117	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20080124 YEAR OF FEE PAYMENT : 5
JP3393124 B2	20080122	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20090124 YEAR OF FEE PAYMENT : 6
JP3393124 B2	20090407	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20100124 YEAR OF FEE PAYMENT : 7
JP3393124 B2	20100126	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110124 YEAR OF FEE PAYMENT : 8
JP3393124 B2	20110118	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120124 YEAR OF FEE PAYMENT : 9
JP3393124 B2	20111126	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP3530178 B2	20040524	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3530178 B2	20040121	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP3530178 B2	20040128	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20040127
JP3530178 B2	20040304	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20040226
JP3530178 B2	20040305	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP3530178 B2	20070327	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP3530178 B2	20080325	LSFE	+FPAY	RENEWAL FEE	DESCRIPTION : PAYMENT

				PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	UNTIL: 20090305 YEAR OF FEE PAYMENT : 5
JP3530178 B2	20090310	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20100305 YEAR OF FEE PAYMENT : 6
JP3530178 B2	20100302	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110305 YEAR OF FEE PAYMENT : 7
JP3530178 B2	20111126	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP3530178 B2	20120208	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120305 YEAR OF FEE PAYMENT : 8
JP4295348 B2	20090715	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4295348 B2	20080613	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080612
JP4295348 B2	20080613	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20080612
JP4295348 B2	20080813	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080812
JP4295348 B2	20090213	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090212
JP4295348 B2	20090304	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4295348 B2	20090311	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20090310
JP4295348 B2	20090312	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4295348 B2	20090416	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20090409
JP4295348 B2	20090417	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120417 YEAR OF FEE PAYMENT : 3
JP4295348 B2	20090417	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4295348 B2	20111126	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP4885401 B2	20120229	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4885401 B2	20080318	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080317
JP4885401 B2	20080318	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20080317
JP4885401 B2	20110406	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110405
JP4885401 B2	20111006	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111005

JP4885401 B2	20111031	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4885401 B2	20111109	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20111108
JP4885401 B2	20111110	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP4885401 B2	20111215	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20111208
JP4885401 B2	20111216	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4885401 B2	20111216	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4885401 B2	20141216	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4885401 B2	20151215	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4885401 B2	20161220	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP6504558 T2	19940526	LSPB	+	published / reissued	
KR100220443 B1	19990915	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100233885 B1	20000315	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100233885 B1	19990227	LSES	A201	REQUEST FOR EXAMINATION	
KR100233885 B1	19990413	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR100233885 B1	19990728	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR100233885 B1	19990915	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100233885 B1	20021130	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20021202 YEAR OF FEE PAYMENT : 4
KR100233885 B1	20030916	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
KR100245905 B1	20000315	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100245905 B1	20000315	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100245905 B1	19990614	LSES	A201	REQUEST FOR EXAMINATION	
KR100245905 B1	19990614	LSES	A201	REQUEST FOR EXAMINATION	
KR100245905 B1	19990913	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR100245905 B1	19990913	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR100245905 B1	19991202	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100245905 B1	19991202	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100245905 B1	20040325	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20040326 YEAR OF FEE PAYMENT : 5
KR100245905 B1	20040325	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20040326 YEAR OF FEE PAYMENT : 5

KR100245905 B1	20041203	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
KR100245905 B1	20041203	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
KR100245906 B1	20000315	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100245906 B1	19990614	LSES	A201	REQUEST FOR EXAMINATION	
KR100245906 B1	19990913	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR100245906 B1	19991202	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100245906 B1	20040325	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20040326 YEAR OF FEE PAYMENT : 5
KR100245906 B1	20041203	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
MX9102312 A1	19940131	LSPB	+	published / reissued	
MX9102312 A1	19950425	LSGT	+FG	GRANT OR REGISTRATION	
MX9102312 A1	20131219	LSLE	-MM	ANNULMENT OR LAPSE DUE TO NON-PAYMENT OF FEES	
NO931920 A	19930716	LSPB	+	published / reissued	
NO931920 A	20010115	LSRV	-FC2A	WITHDRAWAL, REJECTION OR DISMISSAL OF LAID OPEN PATENT APPLICATION	
NZ240799 A	19940126	LSPB	+	published / reissued	
NZ240799 A	20050225	LSFE	+RENW	RENEWAL (RENEWAL FEES ACCEPTED)	
NZ240799 A	20111222	LSLE	-EXPY	PATENT EXPIRED	
SG47853 A1	19980417	LSPB	+	published / reissued	
TH29326 A	19980730	LSPB	+	published / reissued	
US2002132960 AA	20020919	LSPB	+	published / reissued	
US5292783 A	19940308	LSGT	+	granted / extensions (spc, cpc, pte)	
US5292783 A	19920109	LSAS	AS	ASSIGNMENT	OWNER NAME : EASTMAN KODAK COMPANY A CORP. OF NEW JERSEY, NEW DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNORS:BUCHANAN, CHARLES M.; GARDNER, ROBERT M.; WOOD, MATTHEW D.; AND OTHERS; REEL/FRAME:005964/0554 EFFECTIVE DATE : 19911121
US5292783 A	19940830	LSAS	AS	ASSIGNMENT	OWNER NAME : EASTMAN CHEMICAL COMPANY, TENNESSEE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:EASTMAN KODAK COMPANY; REEL/FRAME:007115/0776 EFFECTIVE DATE : 19940223
US5292783 A	19941115	LSRE	CC	CERTIFICATE OF CORRECTION	
US5292783 A	19971113	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5292783 A	20010828	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5292783 A	20050825	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5446079 A	19950829	LSGT	+	granted / extensions (spc, cpc, pte)	

US5446079 A	19940830	LSAS	AS	ASSIGNMENT	OWNER NAME : EASTMAN CHEMICAL COMPANY, TENNESSEE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:EASTMAN KODAK COMPANY; REEL/FRAME:007115/0754 EFFECTIVE DATE : 19940223
US5446079 A	19960910	LSRE	CC	CERTIFICATE OF CORRECTION	
US5446079 A	19990203	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5446079 A	20030130	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5446079 A	20070228	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5559171 A	19960924	LSGT	+	granted / extensions (spc, cpc, pte)	
US5559171 A	20000210	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5559171 A	20040226	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5559171 A	20080225	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5580911 A	19961203	LSGT	+	granted / extensions (spc, cpc, pte)	
US5580911 A	20000608	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5580911 A	20040517	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5580911 A	20080603	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5599858 A	19970204	LSGT	+	granted / extensions (spc, cpc, pte)	
US5599858 A	20000808	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5599858 A	20040727	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5599858 A	20080804	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5900322 A	19990504	LSGT	+	granted / extensions (spc, cpc, pte)	
US5900322 A	20020226	LSRE	CC	CERTIFICATE OF CORRECTION	
US5900322 A	20021101	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5900322 A	20061106	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5900322 A	20101104	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6342304 BA	20020129	LSGT	+	granted / extensions (spc, cpc, pte)	
US6342304 BA	20051026	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6342304 BA	20090729	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6342304 BA	20130729	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6495656 BA	20021217	LSGT	+	granted / extensions (spc, cpc, pte)	
US6495656 BA	20010302	LSAS	AS	ASSIGNMENT	OWNER NAME : EASTMAN CHEMICAL COMPANY, TENNESSEE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HAILE, WILLIAM A.; DEAN, LERON R.; MCCONNELL, RICHARD L.; AND OTHERS; REEL/FRAME:011563/0315 EFFECTIVE DATE : 20000516
US6495656 BA	20060619	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4

US6495656 BA	20100617	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6495656 BA	20140617	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6562938 BB	20030513	LSGT	+	granted / extensions (spc, cpc, pte)	
US6562938 BB	20061113	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6562938 BB	20101115	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6562938 BB	20141113	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO0185824 A2	20011115	LSPB	+	published / reissued	
WO0185824 A3	20021017	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2001933421 COUNTRY OF REF DOCUMENT : EP
WO0185824 A3	20021112	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 018094066 COUNTRY OF REF DOCUMENT : CN
WO0185824 A3	20030205	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001933421 COUNTRY OF REF DOCUMENT : EP
WO0185824 A3	20041020	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001933421 COUNTRY OF REF DOCUMENT : EP
WO9209654 A2	19920611	LSPB	+	published / reissued	
WO9209654 A2	19930504	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2095536 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO9209654 A3	19930504	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2095536 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO9209654 A3	19930504	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2095536 COUNTRY OF REF DOCUMENT : CA
WO9209654 A3	19930528	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 932450 COUNTRY OF REF DOCUMENT : FI
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WO9209654 A3	20000303	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 20000496 COUNTRY OF REF DOCUMENT : FI

4) Family number: 28435527 (US2003062160A)

Title: METHODS AND FLUID COMPOSITIONS DESIGNED TO CAUSE TIP SCREENOUTS

Abstract: Source: US2003062160A In stimulation treatments to increase the production of hydrocarbons from subterranean formations, especially in treatments including hydraulic fracturing followed by gravel packing, desirable short wide fractures are created and filled with proppant by deliberately including in the first fluid/proppant slurry pumped a sufficiently high concentration of a bridging-promoting material, such as **fibers**, that reduces the mobility of the slurry when it dewaters so that screenout at or near the tip occurs.

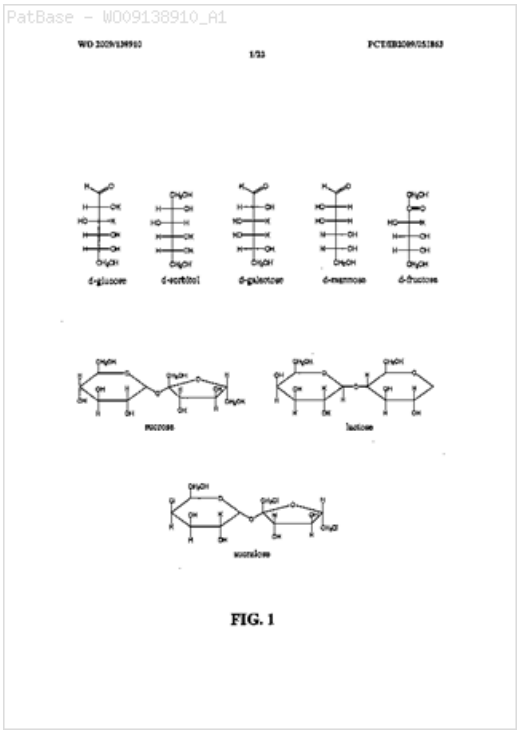


FIG. 1

Classifications:
International (IPC 8-9): C09K8/00 C09K8/02 C09K8/035 C09K8/04 C09K8/06 C09K8/08 C09K8/12 C09K8/50 C09K8/504 C09K8/506 C09K8/508 C09K8/512 C09K8/514 C09K8/52 C09K8/524 C09K8/528 C09K8/575 C09K8/584 C09K8/60 C09K8/62 C09K8/66 C09K8/68 C09K8/70 C09K8/72 C09K8/74 C09K8/76 C09K8/80 E21B21/00 E21B33/13 E21B33/138 E21B37/06 E21B43/02 E21B43/04 E21B43/22 E21B43/25 E21B43/26 E21B43/267
E21B43/27 (Advanced/Invention);
C09K8/035 C09K8/60 C09K8/68 C09K8/70 C09K8/76 C09K8/80 E21B43/00 (Advanced/Non-invention);
C09K8/00 C09K8/02 C09K8/50 C09K8/52 C09K8/56 C09K8/60 E21B21/00 E21B33/13 E21B33/138 E21B37/00 E21B43/02 E21B43/16 E21B43/25 (Core/Invention);
C09K8/02 C09K8/60 E21B43/00 (Core/Non-invention)
International (IPC 1-7): C09K7/00 C09K7/02 C09K8/506 C09K8/60 C09K8/62 C09K8/72 C09K8/74 E21B37/06 E21B43/26 E21B43/267 E21B43/269 E21B43/27
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Family:

Publication number	Publication date	Application number	Application date
AR058588 AA	20080213	AR2006P105655	20061220
AR071801 AA	20100714	AR2009P101752	20090515
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BRPI0512640 A	20080325	BR2005PI12640	20050701
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Priority:

CA20082635868 20080625	CA20082636523 20080627	US20010318764P 20010911
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Agent(s):	CURTIS L ; POPE TIMOTHY ; ANN M HOEFER ; BLANCO JUAN ; FREDD CHRISTOPHER ; HOEFER ANN ; HOEFER ANN MW ; MATTHEW J MILLER ; BROWN J ; BROWN J EMEST ; CURTIS L BONEY ; PIA ANGELA FRANCINI ; PHILLIP F SULLIVAN SMART AND BIGGAR; SULEIMAN I AL AMMAR LAW OFFICE; SCHLUMBERGER TECHNOLOGY CORP; SCHLUMBERGER TECHNOLOGY DAVID CATE CORP; THOMAS O; BRIGITTE L; ROBIN; CURINGTON TIM; NAVA ROBIN; MITCHELL THOMAS O; TIM; DAVID; DARLA; CATE DAVID; FOUDECA DARLA; DAVE; CHARLOTTE; JEFF; MARTIN; MARCIN; DARYL R; MATTHIEU; RACHEL; JEREMY D; JEFFREY R; FONSECA DARLA; RZANIAK MARTIN
Designated states:	AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AR058588 AA	20080213	LSPB	+	published / reissued	
AR058588 AA	20150930	LSGT	+FG	GRANT, REGISTRATION	
AR071801 AA	20100714	LSPB	+	published / reissued	
AR071801 AA	20120530	LSWD	-FB	SUSPENSION OF GRANTING PROCEDURE	
AU2002333819 AA	20030324	LSPB	+	published / reissued	
AU2002333819 AA	20040610	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
BRPI0416525 A	20070109	LSPB	+	published / reissued	
BRPI0416525 A	20160223	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BRPI0416525 A	20160816	LSRV	B09B	DECISION: REFUSAL	TEXT : INDEFIRO O PEDIDO DE ACORDO COM ART. 8O COMBINADO COM ART. 13 DA LPI
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BRPI0512640 A	20160322	LSAL	B12B	APPEAL: APPEAL AGAINST REFUSAL	
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BRPI0619204 A2	20160913	LSRV	B11E	DISMISSAL ACC. ART. 34 OF IPL - REQUIREMENTS FOR EXAMINATION INCOMPLETE	
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CN1639445 A	20081203	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	OWNER NAME : PETROLEUM RES AND DEV N. V. DESCRIPTION : FORMER OWNER: SOFITECH N.V. EFFECTIVE DATE : 20081031
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CN1639445 A	20081203	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
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US2004094300 AA	20040520	LSPB	+	published / reissued	
US2005252659 AA	20051117	LSPB	+	published / reissued	
US2006000609 AA	20060105	LSPB	+	published / reissued	
US2006157248 AA	20060720	LSPB	+	published / reissued	
US2007032386 AA	20070208	LSPB	+	published / reissued	
US2007032386 AA	20061027	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ABAD, CARLOS; LEE, JESSE C.; SULLIVAN, PHILIP F.; AND OTHERS; REEL/FRAME:018444/0719; SIGNING DATES FROM 20060927 TO 20061005
US2008066916 AA	20080320	LSPB	+	published / reissued	
US2008070806 AA	20080320	LSPB	+	published / reissued	
US2008070813 AA	20080320	LSPB	+	published / reissued	
US2008070813 AA	20061027	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIN, LIJUN; CHEN, YIYAN; SULLIVAN, PHILIP F.; AND OTHERS; REEL/FRAME:018444/0371; SIGNING DATES FROM 20060927 TO 20061002
US2008269081 AA	20081030	LSPB	+	published / reissued	
US2008269081 AA	20080715	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST;

					ASSIGNORS:LIN, LIJUN; LI, LEIMING; ABAD, CARLOS; REEL/FRAME:021240/0262; SIGNING DATES FROM 20080606 TO 20080623
US2010056402 AA	20100304	LSPB	+	published / reissued	
US2010163228 AA	20100701	LSPB	+	published / reissued	
US2014196897 AA	20140717	LSPB	+	published / reissued	
US6837309 BB	20050104	LSGT	+	granted / extensions (spc, cpc, pte)	
US6837309 BB	20020808	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BONEY, CURTIS; WILLBERG, DEAN; REEL/FRAME:013187/0121; SIGNING DATES FROM 20020807 TO 20020808
US6837309 BB	20080620	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6837309 BB	20120606	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6837309 BB	20160623	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6938693 BB	20050906	LSGT	+	granted / extensions (spc, cpc, pte)	
US6938693 BB	20021216	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BONEY, CURTIS; MILLER, MATTHEW; REEL/FRAME:013581/0849 EFFECTIVE DATE : 20020826
US6938693 BB	20090204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6938693 BB	20130206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
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US7066260 BB	20040223	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SULLIVAN, PHILIP F.; BONEY, CURTIS L.; REEL/FRAME:014503/0463 EFFECTIVE DATE : 20031114
US7066260 BB	20091125	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7066260 BB	20131127	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7219731 BB	20070522	LSGT	+	granted / extensions (spc, cpc, pte)	
US7219731 BB	20051111	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SULLIVAN, PHILIP F.; BROWN, J. ERNEST; LEE, JESSE C.; AND OTHERS; REEL/FRAME:016767/0945; SIGNING DATES FROM 20050624 TO 20050706
US7219731 BB	20101020	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7219731 BB	20141022	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7318475 BB	20080115	LSGT	+	granted / extensions (spc,	

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US7318475 BB	20110615	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7318475 BB	20150701	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
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US7398826 BB	20060328	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOEFER, ANN M.W.; SULLIVAN, PHILIP F.; SALAMAT, GOLCHEHREH; AND OTHERS; REEL/FRAME:017373/0622; SIGNING DATES FROM 20051230 TO 20060131
US7398826 BB	20111214	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7398826 BB	20151230	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7635028 BB	20091222	LSGT	+	granted / extensions (spc, cpc, pte)	
US7635028 BB	20070827	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LI, LEIMING; LIN, LIJUN; ABAD, CARLOS; AND OTHERS; REEL/FRAME:019750/0052; SIGNING DATES FROM 20070629 TO 20070705
US7635028 BB	20130311	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
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US7677311 BB	20061027	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION,TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ABAD, CARLOS; LEE, JESSE C.; SULLIVAN, PHILIP F. AND OTHERS; SIGNED BETWEEN 20060927 AND 20061005; US-ASSIGNMENT DATABASE UPDATED:20100316; REEL/FRAME:18444/719
US7677311 BB	20061027	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION,TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ABAD, CARLOS; LEE, JESSE C.; SULLIVAN, PHILIP F.; AND OTHERS; SIGNING DATES FROM 20060927 TO 20061005; REEL/FRAME:018444/0719
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US7879770 BB	20061027	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIN, LIJUN; CHEN, YIYAN; SULLIVAN, PHILIP F.; AND OTHERS; SIGNING DATES FROM 20060927 TO 20061002; REEL/FRAME:018444/0371
US7879770 BB	20140702	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8067342 BB	20111129	LSGT	+	granted / extensions (spc, cpc, pte)	
US8067342 BB	20080715	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIN, LIJUN; LI, LEIMING; ABAD, CARLOS; REEL/FRAME:021240/0262; SIGNING DATES FROM 20080606 TO 20080623
US8067342 BB	20080715	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIN, LIJUN; LI, LEIMING; ABAD, CARLOS; SIGNING DATES FROM 20080606 TO 20080623; REEL/FRAME:021240/0262
US8067342 BB	20151129	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8067342 BB	20160119	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151129
US8481462 BB	20130709	LSGT	+	granted / extensions (spc, cpc, pte)	
US8481462 BB	20070828	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIN, LIJUN; ABAD, CARLOS; BASER, BELGIN; AND OTHERS; REEL/FRAME:019752/0973; SIGNING DATES FROM 20070629 TO 20070709
US8481462 BB	20070828	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIN, LIJUN; ABAD, CARLOS; BASER, BELGIN; AND OTHERS; SIGNING DATES FROM 20070629 TO 20070709; REEL/FRAME:019752/0973

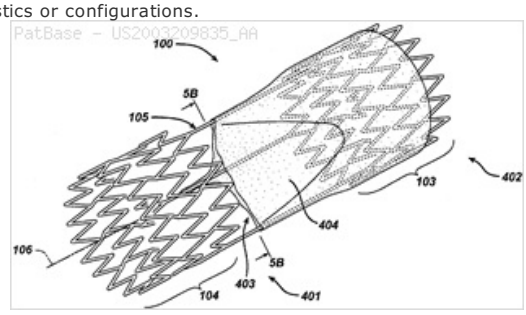
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US9006153 BB	20150414	LSGT	+	granted / extensions (spc, cpc, pte)	
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WO03023177 A3	20040427	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002821417X COUNTRY OF REF DOCUMENT : CN
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WO05047643 A1	20050526	LSPB	+	published / reissued	
WO05047643 A1	20060425	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 0608115 COUNTRY OF REF DOCUMENT : GB
WO05047643 A1	20060504	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2544834 COUNTRY OF REF DOCUMENT : CA
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WO06003637 A1	20060112	LSPB	+	published / reissued	
WO06003637 A1	20061215	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2570526 COUNTRY OF REF DOCUMENT : CA
WO06003637 A1	20061218	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2006/014861 COUNTRY OF REF DOCUMENT : MX
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WO07072401 A3	20080602	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : MX/A/2008/007057 COUNTRY OF REF DOCUMENT : MX
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				reissued	
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WO08035254 A3	20090302	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2662210 COUNTRY OF REF DOCUMENT : CA
WO08035254 A3	20090319	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
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WO09138910 A1	20101117	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09138910 A1	20110608	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 09746205 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

5) Family number: 30051958 (US2003209835A)

Title: METHOD OF FORMING A TUBULAR MEMBRANE ON A STRUCTURAL FRAME

Abstract: Source: US2003209835A The present invention relates to a medical device and method of forming the medical device. In particular, the present invention relates to a medical device having a tubular membrane structure over a radially expandable structural frame, and to a method of forming the tubular membrane on the radially expandable structural frame. In one aspect, a structural frame is placed over a spinning mandrel and a **fiber** is electro-statically spun over at least a portion of the structural frame forming a membrane. A transfer sheath may be used between the mandrel and structural frame to prevent the electro-statically spun **fiber** from adhering to the mandrel. In another aspect, a first membrane is spun over the mandrel before the structural frame is placed over the mandrel. In this aspect, at least a portion of the structural frame is sandwiched between the membranes. The membrane or membranes and structural frame form a **fiber** spun frame assembly. The **fiber** spun frame assembly may be coated with an elastic polymer. In addition, the membrane or membranes may go through some post processing to achieve desired characteristics or configurations.



Classifications:
International (IPC 8-9): A61F2/02 A61F2/06 A61F2/24 A61F2/84 A61F2/90 A61L27/00 A61L29/00 A61L31/00 B29C41/04 B29C41/30 B29C41/44 B29C47/02 B29D23/00 D06M10/00 H05B6/00 (Advanced/Invention); A61F2/82 (Advanced/Non-invention)
International (IPC 1-7): A61F2/02 A61F2/06 A61F2/24 A61L27/00 A61L29/00 A61L31/00 A61M29/02 B05D1/18 B29C53/60
CPC: A61F2220/005 A61F2220/0058 A61F2230/0054 A61F2230/0078 D04H3/07 A61F2/2412 A61F2/2415 A61F2/2418 A61F2/2475 A61F2/915 A61F2002/825 A61F2002/91533 A61F2002/91558 A61F2002/91575 A61F2002/91583 A61L27/18 A61L27/34 A61L27/54 A61L2300/00 D01D5/0084 D01F6/32 D01F6/84 A61F2210/0076
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US: 264/129 264/171.12 264/171.13 264/171.14 264/171.15 264/171.17 264/171.26 264/171.27 264/171.28 264/171.29 264/177.14 264/177.140P 264/229 264/229S 264/313 264/316 264/339 264/339P 264/465 427/2.25 427/2.250S 623/1.13 623/1.130P 623/1.15 623/1.150P 623/1.24 623/1.240P 623/1.240S 623/1.44 623/11.5 623/12.4 623/2.18 623/2.180S 623/2.38 623/2.380S 623/901 623/901S

Family:

Publication number	Publication date	Application number	Application date
AT470406 E	20100615	AT20030724532T	20030508
AU2003225291 AA	20031124	AU20030225291	20030506
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AU2003225296 BB	20081030	AU20030225296	20030506
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CA2512029 AA	20050628	CA20032512029	20030506
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US2003225447 AA	20031204	US20030430113	20030506
US2003236568 AA	20031225	US20030431967	20030508
US2004019374 AA	20040129	US20030434891	20030509

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US7758632 BB	20100720	US20030434891	20030509
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Priority:

AU20030225291	20030506	AU20030230363	20030508	AU20090200210	20090119
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Inventor(s): ROLLER MARK ; MAJERCAK DAVID CHRISTOPHER STEWARTSVILLE ; HOJEIBANE HIKMAT PRINCETON

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; GRIFFITH HACK; SIM AND MCBURNEY; MUELLER BORE AND PARTNER PATENTANWAELTE PARTG MBB; PROCK THOMAS; MERCER CHRISTOPHER PAUL; TUNSTALL CHRISTOPHER STEPHEN; PHILIP S JOHNSON JOHNSON AND JOHNSON; VINCENT; SERRAO VINCENT J; VINCENT J

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT470406 E	20100615	LSGT	+	granted / extensions (spc, cpc, pte)	
AT470406 E	20101215	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU2003225291 AA	20031124	LSPB	+	published / reissued	
AU2003225291 AA	20090212	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED	
AU2003225296 AA	20031124	LSPB	+	published / reissued	
AU2003225296 AA	20090226	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2003225296 BB	20081030	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2003228884 AA	20031124	LSPB	+	published / reissued	
AU2003228884 AA	20081127	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2003228884 BB	20080731	LSGT	+	granted / extensions (spc, cpc, pte)	

AU2003230363 AA	20031124	LSPB	+	published / reissued
AU2003230363 AA	20090212	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED
AU2003231302 AA	20031124	LSPB	+	published / reissued
AU2003231302 AA	20050127	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE
AU2003298515 AA	20040504	LSPB	+	published / reissued
AU2003298515 AA	20050721	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE
AU2009200209 AA	20090312	LSPB	+	published / reissued
AU2009200209 AA	20110602	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2009200209 BB	20110203	LSGT	+	granted / extensions (spc, cpc, pte)
AU2009200210 AA	20090219	LSPB	+	published / reissued
AU2009200210 AA	20090924	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD
CA2485285 AA	20041109	LSPB	+	published / reissued
CA2485285 AA	20041109	LSNP	+AFNE	NATIONAL PHASE ENTRY
CA2485285 AA	20060324	LSES	+EEER	EXAMINATION REQUEST
CA2485285 AA	20090811	LSLE	-FZDE	DEAD
CA2485290 AA	20041109	LSPB	+	published / reissued
CA2485290 AA	20041109	LSNP	+AFNE	NATIONAL PHASE ENTRY
CA2485290 AA	20050502	LSES	+EEER	EXAMINATION REQUEST
CA2485290 AA	20081201	LSLE	-FZDE	DEAD
CA2485292 AA	20041109	LSPB	+	published / reissued
CA2485292 AA	20041109	LSNP	+AFNE	NATIONAL PHASE ENTRY
CA2485292 AA	20050505	LSES	+EEER	EXAMINATION REQUEST
CA2485292 AA	20081201	LSLE	-FZDE	DEAD
CA2485293 AA	20041109	LSPB	+	published / reissued
CA2485293 AA	20041109	LSNP	+AFNE	NATIONAL PHASE ENTRY
CA2485293 AA	20050427	LSES	+EEER	EXAMINATION REQUEST
CA2485293 AA	20081201	LSLE	-FZDE	DEAD
CA2501712 AA	20050407	LSPB	+	published / reissued
CA2501712 AA	20050407	LSNP	+AFNE	NATIONAL PHASE ENTRY
CA2501712 AA	20060324	LSES	+EEER	EXAMINATION REQUEST

CA2501712 C	20100720	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2512029 AA	20050628	LSPB	+	published / reissued	
CA2512029 AA	20050628	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2512029 AA	20060325	LSES	+EEER	EXAMINATION REQUEST	
CA2512029 AA	20090811	LSLE	-FZDE	DEAD	
DE60332938 D1	20110601	LSOP	-8363	OPPOSITION AGAINST THE PATENT	
EP1507492 A1	20050223	LSPB	+	published / reissued	
EP1507492 A1	20050223	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20041219
EP1507492 A1	20050427	LSES	+R17P	REQUEST FOR EXAMINATION FILED (CORRECTION)	EFFECTIVE DATE : 20041209
EP1507492 A1	20070808	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20070704
EP1507492 A1	20091118	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20090527
EP1507493 A1	20050223	LSPB	+	published / reissued	
EP1507493 A1	20050223	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20041209
EP1507493 A1	20070808	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20070704
EP1507493 A1	20160608	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20160511
EP1507493 A1	20170215	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1507493 A1	20170215	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1507493 B1	20170215	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1509171 A1	20050302	LSPB	+	published / reissued	
EP1509171 A1	20050302	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20041209
EP1509171 A1	20070815	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20070713
EP1509171 A1	20100615	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1509171 A1	20100707	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1509171 A1	20100908	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3
EP1509171 A1	20101130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20101130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20101130	LSLE	-PG25	LAPSED IN A	REF COUNTRY CODE : SE

				CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20101130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20101231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CY DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20101231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100910
EP1509171 A1	20110131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : EE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20110228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CZ DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20110228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20101011
EP1509171 A1	20110228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : RO DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20110228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20110331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20110420	LSOP	-26	OPPOSITION FILED	OPPONENT NAME : HELBIG, CHRISTIAN, DR. EFFECTIVE DATE : 20110308
EP1509171 A1	20110429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE

				NAT. OFFICE TO EPO	FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20110601	LSOP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R026 REF DOCUMENT NUMBER : 60332938 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20110308
EP1509171 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20110511 YEAR OF FEE PAYMENT : 09
EP1509171 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110523 YEAR OF FEE PAYMENT : 09
EP1509171 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110504 YEAR OF FEE PAYMENT : 09
EP1509171 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20110526 YEAR OF FEE PAYMENT : 09
EP1509171 A1	20110930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20110519 YEAR OF FEE PAYMENT : 09
EP1509171 A1	20110930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110505 YEAR OF FEE PAYMENT : 09
EP1509171 A1	20111230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20110531
EP1509171 A1	20111230	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1509171 A1	20120131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20110531
EP1509171 A1	20120131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20110531
EP1509171 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120515 YEAR OF FEE PAYMENT : 10
EP1509171 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20120510 YEAR OF FEE PAYMENT : 10
EP1509171 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120502 YEAR OF FEE PAYMENT : 10
EP1509171 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120515 YEAR OF FEE PAYMENT : 10
EP1509171 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120608 YEAR OF FEE PAYMENT : 10
EP1509171 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120608 YEAR OF FEE PAYMENT : 10
EP1509171 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120502 YEAR OF FEE PAYMENT : 10
EP1509171 A1	20120928	LSFE	+PGFP	POSTGRANT:	REF COUNTRY CODE : IT

				ANNUAL FEES PAID TO NATIONAL OFFICE	PAYMENT DATE : 20120516 YEAR OF FEE PAYMENT : 10
EP1509171 A1	20120928	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20120516 YEAR OF FEE PAYMENT : 10
EP1509171 A1	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20110508
EP1509171 A1	20130721	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R064 REF DOCUMENT NUMBER : 60332938 COUNTRY OF REF DOCUMENT : DE
EP1509171 A1	20130721	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R103 REF DOCUMENT NUMBER : 60332938 COUNTRY OF REF DOCUMENT : DE
EP1509171 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20130510 YEAR OF FEE PAYMENT : 11
EP1509171 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130515 YEAR OF FEE PAYMENT : 11
EP1509171 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130508 YEAR OF FEE PAYMENT : 11
EP1509171 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20130517 YEAR OF FEE PAYMENT : 11
EP1509171 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130531 YEAR OF FEE PAYMENT : 11
EP1509171 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20130510 YEAR OF FEE PAYMENT : 11
EP1509171 A1	20130930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : TR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20130930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BG DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100909
EP1509171 A1	20131031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : HU DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100609
EP1509171 A1	20131031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100920
EP1509171 A1	20131204	LSRV	-27W	REVOKED	EFFECTIVE DATE : 20130721
EP1509171 A1	20131204	LSRV	-GBPR	GB: PATENT REVOKED UNDER ART. 102 OF THE	EFFECTIVE DATE : 20130721

				EP CONVENTION DESIGNATING THE UK AS CONTRACTING STATE	
EP1509171 A1	20140123	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R107 REF DOCUMENT NUMBER : 60332938 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20140123
EP1509171 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20140513 YEAR OF FEE PAYMENT : 12
EP1509171 B1	20100609	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1613241 A1	20060111	LSPB	+	published / reissued	
EP1613241 A1	20060111	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20050913
EP1613241 A1	20080514	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20080414
EP1613241 A1	20150617	LSRE	D18D	EP-APPLICATION DEEMED TO BE WITHDRAWN: (DELETED)	
EP1667603 A1	20060614	LSPB	+	published / reissued	
EP1667603 A1	20060614	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20050913
EP1667603 A1	20080702	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20080530
EP1667603 A1	20150617	LSRE	D18D	EP-APPLICATION DEEMED TO BE WITHDRAWN: (DELETED)	
EP1667604 A2	20060614	LSPB	+	published / reissued	
EP1667604 A2	20060614	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20050913
EP1667604 A2	20101229	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20101125
EP1667604 A2	20140409	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20140313
EP1667604 A2	20140604	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : CORDIS CORPORATION
EP1667604 A2	20140820	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1667604 A2	20140829	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1667604 A2	20140915	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 682989 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20140915
EP1667604 A2	20140924	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1667604 A2	20141002	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 60346664 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20141002
EP1667604 A2	20141105	LSNP	REG	REFERENCE TO A	REF COUNTRY CODE : NL

				NATIONAL CODE	REF LEGAL EVENT CODE : T3
EP1667604 A2	20150115	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 682989 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20140820
EP1667604 A2	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BG DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20141120
EP1667604 A2	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20141121
EP1667604 A2	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20150227	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : RO DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM	REF COUNTRY CODE : CZ DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE

				NAT. OFFICE TO EPO	FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : EE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20150521	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 60346664 COUNTRY OF REF DOCUMENT : DE
EP1667604 A2	20150729	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20150521
EP1667604 A2	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20150506 YEAR OF FEE PAYMENT : 13
EP1667604 A2	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20150506 YEAR OF FEE PAYMENT : 13
EP1667604 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20150508 YEAR OF FEE PAYMENT : 13
EP1667604 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20150510 YEAR OF FEE PAYMENT : 13
EP1667604 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20150512 YEAR OF FEE PAYMENT : 13
EP1667604 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20150508 YEAR OF FEE PAYMENT : 13
EP1667604 A2	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20151231	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1667604 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150509
EP1667604 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150531
EP1667604 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150531
EP1667604 A2	20160530	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP

					YEAR OF FEE PAYMENT : 14
EP1667604 A2	20160630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20160526 YEAR OF FEE PAYMENT : 14
EP1667604 A2	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20140820
EP1667604 A2	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20160527 YEAR OF FEE PAYMENT : 14
EP1667604 A2	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20160527 YEAR OF FEE PAYMENT : 14
EP1667604 A2	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20160527 YEAR OF FEE PAYMENT : 14
EP1667604 A2	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20160530 YEAR OF FEE PAYMENT : 14
EP1667604 A2	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20160520 YEAR OF FEE PAYMENT : 14
EP1667604 B1	20140820	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2149349 A2	20100203	LSPB	+	published / reissued	
EP2149349 A2	20100609	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/06 20060101AFI20100506BHEP
EP2149349 A2	20110119	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20101209
EP2149349 A2	20110216	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR
EP2149349 A2	20110511	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20110411
EP2149350 A2	20100203	LSPB	+	published / reissued	
EP2149350 A2	20100428	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/06 20060101AFI20100323BHEP
EP2149350 A2	20100428	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/24 20060101ALI20100323BHEP
EP2149350 A2	20101117	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20101005
EP2149350 A2	20101201	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20101026
EP2149350 A2	20110105	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR
EP2149350 A2	20111102	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20110506
JP2005525169 T2	20050825	LSPB	+	published / reissued	
JP2005525169 T2	20060502	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060501
JP2005525169 T2	20090107	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090106
JP2005525169 T2	20090610	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20090609

JP2005525170 T2	20050825	LSPB	+	published / reissued	
JP2005525170 T2	20060421	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060420
JP2005525170 T2	20090107	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090106
JP2005525170 T2	20090610	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20090609
JP2005525171 T2	20050825	LSPB	+	published / reissued	
JP2005525171 T2	20060421	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060420
JP2005525171 T2	20090107	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090106
JP2005525171 T2	20090610	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20090609
JP2005525172 T2	20050825	LSPB	+	published / reissued	
JP2005525172 T2	20060421	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060420
JP2005525172 T2	20090107	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090106
JP2005525172 T2	20090610	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20090609
MXPA04011144 A1	20050816	LSPB	+	published / reissued	
MXPA04011145 A1	20050701	LSPB	+	published / reissued	
MXPA04011145 A1	20120106	LSGT	+FG	GRANT OR REGISTRATION	
MXPA04011146 A1	20050701	LSPB	+	published / reissued	
MXPA04011146 A1	20100813	LSGT	+FG	GRANT OR REGISTRATION	
MXPA04011147 A1	20050701	LSPB	+	published / reissued	
MXPA04011147 A1	20101220	LSGT	+FG	GRANT OR REGISTRATION	
MXPA04011148 A1	20050816	LSPB	+	published / reissued	
MXPA04011148 A1	20101213	LSGT	+FG	GRANT OR REGISTRATION	
US2003209835 AA	20031113	LSPB	+	published / reissued	
US2003225447 AA	20031204	LSPB	+	published / reissued	
US2003225447 AA	20030729	LSAS	AS	ASSIGNMENT	OWNER NAME : CORDIS, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MAJERCAK, DAVID CHRISTOPHER; GREWE, DAVID; REEL/FRAME:013837/0292 EFFECTIVE DATE : 20030512
US2003236568 AA	20031225	LSPB	+	published / reissued	
US2003236568 AA	20030828	LSAS	AS	ASSIGNMENT	OWNER NAME : CORDIS CORPORATION, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOJEIBANE, HIKMAT; MAJERCAK, DAVID CHRISTOPHER;

					REEL/FRAME:013925/0108 EFFECTIVE DATE : 20030716
US2004019374 AA	20040129	LSPB	+	published / reissued	
US2004019374 AA	20030903	LSAS	AS	ASSIGNMENT	OWNER NAME : CORDIS CORPORATION, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOJEIBANE, HIKMAT; MAJERCAK, DAVID CHRISTOPHER; REEL/FRAME:013936/0476 EFFECTIVE DATE : 20030716
US2004034408 AA	20040219	LSPB	+	published / reissued	
US2004093070 AA	20040513	LSPB	+	published / reissued	
US2008036113 AA	20080214	LSPB	+	published / reissued	
US7270675 BB	20070918	LSGT	+	granted / extensions (spc, cpc, pte)	
US7270675 BB	20030702	LSAS	AS	ASSIGNMENT	OWNER NAME : CORDIS CORPORATION, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ETHICON, INC.; REEL/FRAME:014240/0936 EFFECTIVE DATE : 20030620
US7270675 BB	20030702	LSAS	AS	ASSIGNMENT	OWNER NAME : CORDIS CORPORATION, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MAJERCAK, DAVID CHRISTOPHER; REEL/FRAME:014245/0008 EFFECTIVE DATE : 20030508
US7270675 BB	20030702	LSAS	AS	ASSIGNMENT	OWNER NAME : ETHICON, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHUN, IKSOO; ROLLER, MARK B.; REEL/FRAME:014244/0984; SIGNING DATES FROM 20030508 TO 20030509
US7270675 BB	20110222	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7270675 BB	20150304	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7351256 BB	20080401	LSGT	+	granted / extensions (spc, cpc, pte)	
US7351256 BB	20030702	LSAS	AS	ASSIGNMENT	OWNER NAME : CORDIS CORPORATION, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOJEIBANE, HIKMAT; MAJERCAK, DAVID CHRISTOPHER; REEL/FRAME:014244/0877 EFFECTIVE DATE : 20030508
US7351256 BB	20110831	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7351256 BB	20150916	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7485141 BB	20090203	LSGT	+	granted / extensions (spc, cpc, pte)	
US7485141 BB	20030702	LSAS	AS	ASSIGNMENT	OWNER NAME : CORDIS CORPORATION, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ETHICON, INC.; REEL/FRAME:014244/0883 EFFECTIVE DATE : 20030620
US7485141 BB	20030702	LSAS	AS	ASSIGNMENT	OWNER NAME : CORDIS CORPORATION, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MAJERCAK, DAVID CHRISTOPHER; DAVE, VIPUL BHOPENDRA;

					REEL/FRAME:014244/0886 EFFECTIVE DATE : 20030508
US7485141 BB	20030702	LSAS	AS	ASSIGNMENT	OWNER NAME : ETHICON, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHUN, IKSOO; ROLLER, MARK B.; REEL/FRAME:014244/0928; SIGNING DATES FROM 20030508 TO 20030509
US7485141 BB	20120705	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7485141 BB	20160803	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7758632 BB	20100720	LSGT	+	granted / extensions (spc, cpc, pte)	
US7758632 BB	20030903	LSAS	AS	ASSIGNMENT	OWNER NAME : CORDIS CORPORATION, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOJEIBANE, HIKMAT; MAJERCAK, DAVID CHRISTOPHER; REEL/FRAME:013936/0476 EFFECTIVE DATE : 20030716
US7758632 BB	20030903	LSAS	AS	ASSIGNMENT	OWNER NAME : CORDIS CORPORATION,FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOJEIBANE, HIKMAT; MAJERCAK, DAVID CHRISTOPHER; REEL/FRAME:13936/476 EFFECTIVE DATE : 20030716
US7758632 BB	20131227	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8663541 BB	20140304	LSGT	+	granted / extensions (spc, cpc, pte)	
WO03094794 A1	20031120	LSPB	+	published / reissued	
WO03094794 A1	20050628	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2512029 COUNTRY OF REF DOCUMENT : CA
WO03094794 A1	20050913	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003724441 COUNTRY OF REF DOCUMENT : EP
WO03094794 A1	20060111	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003724441 COUNTRY OF REF DOCUMENT : EP
WO03094794 A1	20060705	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO03094794 A1	20060705	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : JP
WO03094795 A1	20031120	LSPB	+	published / reissued	
WO03094795 A1	20041109	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2485285 COUNTRY OF REF DOCUMENT : CA
WO03094795 A1	20041109	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004502885 COUNTRY OF REF DOCUMENT : JP
WO03094795 A1	20041110	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003225291 COUNTRY OF REF DOCUMENT : AU
WO03094795 A1	20041110	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2004/011144 COUNTRY OF REF DOCUMENT : MX

WO03094795 A1	20041209	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003722012 COUNTRY OF REF DOCUMENT : EP
WO03094795 A1	20050223	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003722012 COUNTRY OF REF DOCUMENT : EP
WO03094796 A1	20031120	LSPB	+	published / reissued	
WO03094796 A1	20041109	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004502886 COUNTRY OF REF DOCUMENT : JP
WO03094796 A1	20041109	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2485290 COUNTRY OF REF DOCUMENT : CA
WO03094796 A1	20041110	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2004/011145 COUNTRY OF REF DOCUMENT : MX
WO03094796 A1	20041110	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003225296 COUNTRY OF REF DOCUMENT : AU
WO03094796 A1	20041209	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003722018 COUNTRY OF REF DOCUMENT : EP
WO03094796 A1	20050223	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003722018 COUNTRY OF REF DOCUMENT : EP
WO03094797 A1	20031120	LSPB	+	published / reissued	
WO03094797 A1	20041109	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2485292 COUNTRY OF REF DOCUMENT : CA
WO03094797 A1	20041109	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004502887 COUNTRY OF REF DOCUMENT : JP
WO03094797 A1	20041110	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003228884 COUNTRY OF REF DOCUMENT : AU
WO03094797 A1	20041110	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2004/011146 COUNTRY OF REF DOCUMENT : MX
WO03094797 A1	20050913	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003726658 COUNTRY OF REF DOCUMENT : EP
WO03094797 A1	20060614	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003726658 COUNTRY OF REF DOCUMENT : EP
WO03094799 A1	20031120	LSPB	+	published / reissued	
WO03094799 A1	20041109	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2485293 COUNTRY OF REF DOCUMENT : CA
WO03094799 A1	20041109	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004502889 COUNTRY OF REF DOCUMENT : JP
WO03094799 A1	20041110	LSNP	+WWE	WIPO INFORMATION:	REF DOCUMENT NUMBER : PA/A/2004/011147

				ENTRY INTO NATIONAL PHASE	COUNTRY OF REF DOCUMENT : MX
WO03094799 A1	20041110	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003230363 COUNTRY OF REF DOCUMENT : AU
WO03094799 A1	20041209	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003724532 COUNTRY OF REF DOCUMENT : EP
WO03094799 A1	20050302	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003724532 COUNTRY OF REF DOCUMENT : EP
WO04034933 A2	20040429	LSPB	+	published / reissued	
WO04034933 A3	20041110	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2004/011148 COUNTRY OF REF DOCUMENT : MX
WO04034933 A3	20050407	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2501712 COUNTRY OF REF DOCUMENT : CA
WO04034933 A3	20050913	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003796268 COUNTRY OF REF DOCUMENT : EP
WO04034933 A3	20060614	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003796268 COUNTRY OF REF DOCUMENT : EP
WO04034933 A3	20060705	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO04034933 A3	20060705	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : JP

6) Family number: 28375420 (US2001039303A)

Title: Thermoplastic starch utilizing a biodegradable polymer as melting aid

Abstract: Source: US2001039303A Thermoplastic starch compositions formed by converting native starch or starch derivatives into thermoplastic starch by at least one hydrophobic biodegradable polymer that functions as a plasticizer for starch. The hydrophobic biodegradable polymer may be a polymer selected from the following list: an aliphatic polyester, a copolyester with aliphatic and aromatic blocks, a polyester amide, a polyester urethane, a polyethylene oxide polymer and/or a polyglycol, and/or mixtures of these. When the starch, such as in particular native starch or derivatives thereof, is mixed in the melt with the hydrophobic biodegradable polymer as a plasticizer or swelling agent, to homogenize the mixture, the water content is reduced to less than about 5 percent by weight based on the weight of the mixture.

Classifications:

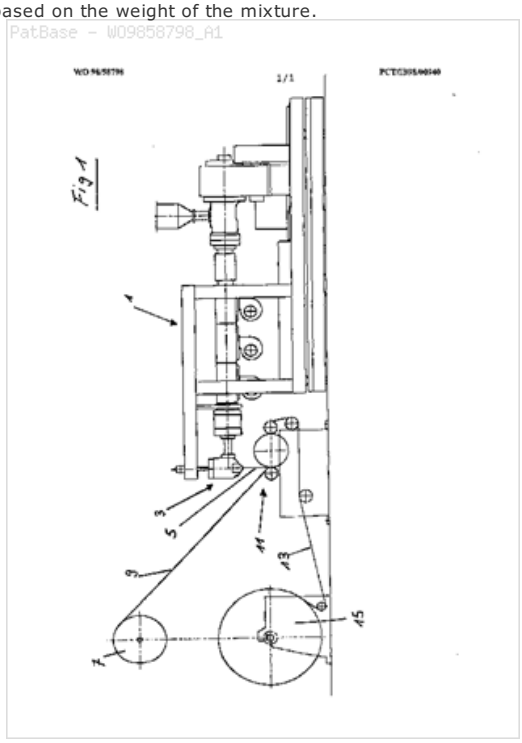
International (IPC 8-9): A61F13/15 B32B27/10 B32B9/02 B32B9/06 C08J3/00 C08J5/18 C08L1/00 C08L101/16 C08L29/04 C08L3/00 C08L3/02 C08L31/04 C08L33/08 C08L5/00 C08L67/00 C08L71/02 C08L75/06 C08L77/12 C08L89/00 C08L97/00 C09D103/02 C09J103/02 E01C9/08 F42B12/76 F42B5/30 (Advanced/Invention); B32B9/02 C08J5/18 C08L1/00 C08L3/02 C08L5/00 C08L67/00 C08L89/00 C08L97/00 (Advanced/Non-invention); B32B27/10 B32B9/04 (Core/Invention)

International (IPC 1-7): A61F13/15 B32B27/10 B32B29/00 B32B9/02 B32B9/06 B65D65/46 C08G64/00 C08J1/26 C08J3/18 C08J3/20 C08J5/00 C08J5/18 C08L C08L1/00 C08L1/08 C08L101/16 C08L29/04 C08L3/00 C08L3/02 C08L3/06 C08L31/04 C08L33/08 C08L5/00 C08L67/00 C08L69/00 C08L71/00 C08L71/02 C08L75/04 C08L75/06 C08L77/12 C08L89/00 C08L93/02 C08L97/00 C08L99/00 C09D103/00 C09D103/02 C09J103/00 C09J103/02 C12P7/62 D06N7/00 D21H27/20 E01C15/00 E01C9/08 F42B12/76 F42B39/00 F42B4/00

CPC: E01C9/086 F42B5/30 F42B12/76 C08L2201/06 C08L71/02 C08L3/00 C08J3/005 B32B27/10 B32B9/06 C08L3/02

European: B32B27/10 B32B9/06 C08J3/00B C08L3/00 C08L71/02 E01C9/08C F42B12/76 F42B5/30 M08L201/06

US: 524/47 524/47P 524/52 524/52S 524/53 524/53S 528/196 528/198



Family:

Publication number	Publication date	Application number	Application date
AT221559 E	20020815	AT19970925222T	19970620
AT237656 E	20030515	AT19980922988T	19980611
AU199730445 A1	19980107	AU19970030445	19970620
AU199875443 A1	19990104	AU19980075443	19980611
AU199875453 A1	19990104	AU19980075453	19980618
AU724636 B2	20000928	AU19970030445	19970620
CA2258843 AA	19981218	CA19972258843	19970620
CA2258843 C	20050419	CA19972258843	19970620
CN1091118 C	20020918	CN19971095663	19970620
CN1222171 A	19990707	CN19971095663	19970620
CN1260813 A	20000719	CN19988006241	19980611
DE19624641 A1	19980108	DE19961024641	19960620
DE29710825 U1	19980108	DE19972010825U	19970620
DE29710826 U1	19980108	DE19972010826U	19970620
DE29710829 U1	19971120	DE19972010829U	19970620
DE59707871 D1	20020905	DE19975007871	19970620
DE59807976 D1	20030522	DE19985007976	19980611
DK0906367 T3	20021125	DK19970925222T	19970620
EP0906367 A1	19990407	EP19970925222	19970620
EP0906367 B1	20020731	EP19970925222	19970620
EP0991520 A1	20000412	EP19980923024	19980618
EP0991713 A1	20000412	EP19980922988	19980611
EP0991713 B1	20030416	EP19980922988	19980611
ES2182087 T3	20030301	ES19970925222T	19970620
JP2000515566 T2	20001121	JP19980502605T	19970620
JP2002511896 T2	20020416	JP19990504031T	19980611
KR20000016673 A	20000325	KR19980710273	19981215
KR20010014036 A	20010226	KR19997012066	19980611
NO985609 A	19981201	NO19980005609	19981201
NO985609 A0	19981201	NO19980005609	19981201
PL337455 A1	20000814	PL19980337455	19980618
PT906367 T	20021231	PT19970925222T	19970620
US2001039303 AA	20011108	US20010846463	20010430
US6235815 BA	20010522	US19980215469	19981218
US6472497 BB	20021029	US20010846463	20010430
WO9748764 A1	19971224	WO1997IB00749	19970620
WO9858798 A1	19981230	WO1998IB00940	19980618
WO9858998 A1	19981230	WO1998IB00900	19980611

Priority:

DE19961024641	19960620	DE19972010825U	19970620	DE19972010826U	19970620
DE19972010829U	19970620	DE19975007871	19970620	WO1998IB00940	19980618
DE19985007976	19980611	WO1997IB00749	19970620	US20010846463	20010430
US19980215469	19981218	WO1998IB00900	19980611		

Probable Assignee: BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND

Assignee(s): (std): BAYER AG ; BIO TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH ; BIOTEC BIOLOG NATURVERPACK ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH ; BIOTEC BIOOGISCHE NATURVERPACK ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO K ; TIMMERMANN RALF ; GRIGAT ERNST ; SCHULZ SCHLITTE WOLFGANG ; POMMERANZ WINFRIED ; LOERCKS JUERGEN ; SCHMIDT HARALD ; NEUMANN FRANK ; TAPETENFABRIK GEB RASCH GMBH

Assignee(s): LOERCKS JURGEN ; TAPETENFABRIK GEB RASCH GMBH AND CO ; BIOTEC BIOOGISCHE NATURVERPACKUNGEN GMBH ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO KG ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH BLINDER ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH 46446 EM ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH 46446 EMMERICH DE ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN AND CO KG ; BIO TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO ; BIO TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO KG ; BAYER AG 51373 LEVERKUSEN DE ; BAYER AKTIENGESELLSCHAFT ; BIO TEC BIOLOGISCHE NATURVERPACKUNGEN AND CO KG

Inventor(s): (std): LOERCKS JUERGEN ; LOERCKS JURGEN ; LORCKS JURGEN ; NEUMANN FRANK ; POMMERANZ W ; POMMERANZ WINFRIED ; RALF TIMMERMANN ; SCHMIDT H ; SCHMIDT HARALD ; SCHULZ SCHLITTE WOLFGANG ; SCHULZ SCHLITTEF WOLFGANS ; SCHULZCYACHLITTE WOLFGANG ; TIMMERMANN RALF ; W POMMERANZ ; WINFRIED POMMERANZ ; WOLFGANG SCHULZ SCHLITTE ; ERNST GRIGAT ; FRANK NEUMANN ; GRIGAT ERNST ; H SCHMIDT ; HARALD SCHMIDT ; J LOERCK ; J LOERCKS ; JURGEN LOERCKS ; JURGEN LORCKS ; LOERCK J ; LOERCKS J ; LOERCKS J RGEN

Inventor(s): LOERCKS J³RGEN ; WOLFGANS SCHULZ SCHLITTEF

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; RIDOUT AND MAYBEE LLP

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GE GH GM GN GR GW HU ID IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT221559 E	20020815	LSGT	+	granted / extensions (spc, cpc, pte)	
AT221559 E	20040915	LSLE	-REN	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
AT237656 E	20030515	LSGT	+	granted / extensions (spc, cpc, pte)	
AT237656 E	20040915	LSLE	-REN	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
AU199730445 A1	19980107	LSPB	+	published / reissued	
AU199875443 A1	19990104	LSPB	+	published / reissued	
AU199875443 A1	20000302	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2) (F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
AU199875453 A1	19990104	LSPB	+	published / reissued	
AU199875453 A1	20000302	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2) (F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
AU724636 B2	20000928	LSGT	+	granted / extensions (spc, cpc, pte)	
AU724636 B2	20000601	LSAS	TC	CHANGE OF APPLICANT'S NAME (SEC. 104)	PARTYTYPE : OWNER OWNER : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO. OLDPARTY : FORMER NAME: BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH, BAYER AG
AU724636 B2	20010208	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
CA2258843 AA	19981218	LSPB	+	published / reissued	
CA2258843 AA	19981218	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2258843 AA	19981218	LSES	+EEER	EXAMINATION REQUEST	
CA2258843 C	20050419	LSGT	+	granted / extensions (spc, cpc, pte)	

CN1091118 C	20020918	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1091118 C	19990707	LSPB	+C06	PUBLICATION	
CN1091118 C	20020918	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1222171 A	19990707	LSPB	+	published / reissued	
CN1260813 A	20000719	LSPB	+	published / reissued	
CN1260813 A	20000719	LSPB	+C06	PUBLICATION	
CN1260813 A	20021211	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
DE19624641 A1	19980108	LSPB	+	published / reissued	
DE19624641 A1	19980108	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE19624641 A1	19991216	LSAS	8127	NEW PERSON/NAME/ADDRESS OF THE APPLICANT	OWNER NAME : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO.KG
DE19624641 A1	20050210	LSRV	-8131	REJECTION	
DE29710825 U1	19980108	LSGT	+	granted / extensions (spc, cpc, pte)	
DE29710825 U1	19980219	LSGT	R207	UTILITY MODEL SPECIFICATION	EFFECTIVE DATE : 19980219
DE29710825 U1	19991125	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	OWNER NAME : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND C, DE DESCRIPTION : FORMER OWNER: BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH, 46446 EMMERICH, DE EFFECTIVE DATE : 19990922
DE29710825 U1	20000824	LSGT	+R150	TERM OF PROTECTION EXTENDED TO 6 YEARS	EFFECTIVE DATE : 20000621
DE29710825 U1	20040415	LSLE	-R157	LAPSE OF IP RIGHT AFTER 6 YEARS	EFFECTIVE DATE : 20031231
DE29710826 U1	19980108	LSGT	+	granted / extensions (spc, cpc, pte)	
DE29710826 U1	19980219	LSGT	R207	UTILITY MODEL SPECIFICATION	EFFECTIVE DATE : 19980219
DE29710826 U1	19991125	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	OWNER NAME : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND C, DE DESCRIPTION : FORMER OWNER: BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH, 46446 EMMERICH, DE EFFECTIVE DATE : 19990922
DE29710826 U1	20000824	LSGT	+R150	TERM OF PROTECTION EXTENDED TO 6 YEARS	EFFECTIVE DATE : 20000621
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				DURING TERM OF OPPOSITION	
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DK0906367 T3	20021125	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0906367 A1	19990407	LSPB	+	published / reissued	
EP0906367 A1	19990407	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19981023
EP0906367 A1	19990922	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH & CO. K
EP0906367 A1	19990922	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : BAYER AG
EP0906367 A1	19991208	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19991022
EP0906367 A1	20010808	LSRE	RTI1	TITLE (CORRECTION)	TEXT : BIODEGRADABLE MATERIAL COMPRISING THERMOPLASTIC STARCH AND POLYESTERAMIDE
EP0906367 A1	20020515	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH & CO. K
EP0906367 A1	20020731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20020731
EP0906367 A1	20020731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20020731
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EP0906367 A1	20020731	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP0906367 A1	20020904	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D TEXT : GERMAN
EP0906367 A1	20030301	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2182087 COUNTRY OF REF DOCUMENT : ES

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EP0991520 A1	20000412	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19991026
EP0991520 A1	20030702	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20021231
EP0991713 A1	20000412	LSPB	+	published / reissued	
EP0991713 A1	20000412	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19991019

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EP0991713 A1	20030430	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP0991713 A1	20030611	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20030611
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EP0991713 A1	20031001	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT	
EP0991713 A1	20031015	LSWD	-GBV	GB: EP PATENT (UK) TREATED AS ALWAYS HAVING BEEN VOID IN ACCORDANCE WITH GB SECTION 77(7)/1977	EFFECTIVE DATE : 20030416
EP0991713 A1	20031030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF FAILURE TO

				POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20031030
EP0991713 A1	20031231	LSLE	-BERE	BE: LAPSED	OWNER NAME : *BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN G.M.B.H. AND EFFECTIVE DATE : 20030630
EP0991713 A1	20040213	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0991713 A1	20040407	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20040119
EP0991713 A1	20080331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20030416
EP0991713 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20090619 YEAR OF FEE PAYMENT : 12
EP0991713 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100622 YEAR OF FEE PAYMENT : 13
EP0991713 A1	20120426	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 59807976 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20120103
EP0991713 A1	20120531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120103
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ES2182087 T3	20030301	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2000515566 T2	20001121	LSPB	+	published / reissued	
JP2000515566 T2	20040513	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20040416
JP2000515566 T2	20070626	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20070626
JP2000515566 T2	20080228	LSRV	-A313	FINAL DECISION OF REJECTION WITHOUT A DISSENTING RESPONSE FROM THE APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A313 EFFECTIVE DATE : 20080207
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JP2002511896 T2	20020416	LSPB	+	published / reissued	
KR20000016673 A	20000325	LSPB	+	published / reissued	
KR20010014036 A	20010226	LSPB	+	published / reissued	
KR20010014036 A	20030612	LSDW	-WITN	WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION	
NO985609 A	19981201	LSPB	+	published / reissued	
NO985609 A	20051017	LSRV	-FC2A	WITHDRAWAL, REJECTION OR DISMISSAL OF LAID OPEN PATENT APPLICATION	
PL337455 A1	20000814	LSPB	+	published / reissued	
PT906367 T	20021231	LSGT	+	granted / extensions (spc, cpc, pte)	

US2001039303 AA	20011108	LSPB	+	published / reissued	
US6235815 BA	20010522	LSGT	+	granted / extensions (spc, cpc, pte)	
US6235815 BA	19990308	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LOERCKS, JURGEN; POMMERANZ, WINFRIED; SCHMIDT, HARALD; AND OTHERS; REEL/FRAME:009836/0687; SIGNING DATES FROM 19990118 TO 19990201
US6235815 BA	19990308	LSAS	AS	ASSIGNMENT	OWNER NAME : BAYER AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LOERCKS, JURGEN; POMMERANZ, WINFRIED; SCHMIDT, HARALD; AND OTHERS; REEL/FRAME:009836/0687; SIGNING DATES FROM 19990118 TO 19990201
US6235815 BA	19990816	LSAS	AS	ASSIGNMENT	OWNER NAME : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO. K DESCRIPTION : CHANGE OF FORM; ASSIGNOR:BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH; REEL/FRAME:010164/0632 EFFECTIVE DATE : 19980813
US6235815 BA	19990816	LSAS	AS	ASSIGNMENT	OWNER NAME : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO. K DESCRIPTION : CHANGE OF FORM; ASSIGNOR:BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH; REEL/FRAME:010175/0084 EFFECTIVE DATE : 19980813
US6235815 BA	20020430	LSRE	CC	CERTIFICATE OF CORRECTION	
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US6235815 BA	20081124	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6235815 BA	20121016	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6472497 BB	20021029	LSGT	+	granted / extensions (spc, cpc, pte)	
US6472497 BB	20021030	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND , GERMA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BAYER AG; REEL/FRAME:013429/0905 EFFECTIVE DATE : 20021021
US6472497 BB	20060501	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6472497 BB	20100421	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6472497 BB	20140422	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO9748764 A1	19971224	LSPB	+	published / reissued	
WO9748764 A1	19981023	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL	REF DOCUMENT NUMBER : 1997925222

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WO9748764 A1	19981215	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1019980710273 COUNTRY OF REF DOCUMENT : KR
WO9748764 A1	19981218	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2258843 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
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WO9748764 A1	20020731	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1997925222 COUNTRY OF REF DOCUMENT : EP
WO9748764 A1	20040910	LSRV	-WWR	WIPO INFORMATION: REFUSED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1019980710273 COUNTRY OF REF DOCUMENT : KR
WO9858798 A1	19981230	LSPB	+	published / reissued	
WO9858798 A1	19990311	LSRE	CR1	CORRECTION OF ENTRY IN SECTION I	
WO9858798 A1	19991026	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1998923024 COUNTRY OF REF DOCUMENT : EP
WO9858798 A1	20000303	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP REF DOCUMENT NUMBER : 1999504040 FORMAT OF REF DOCUMENT (F/P) : F
WO9858798 A1	20000412	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1998923024 COUNTRY OF REF DOCUMENT : EP
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WO9858798 A1	20021231	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1998923024 COUNTRY OF REF DOCUMENT : EP
WO9858998 A1	19981230	LSPB	+	published / reissued	
WO9858998 A1	19991019	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1998922988 COUNTRY OF REF DOCUMENT : EP
WO9858998 A1	19991220	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1019997012066 COUNTRY OF REF DOCUMENT : KR
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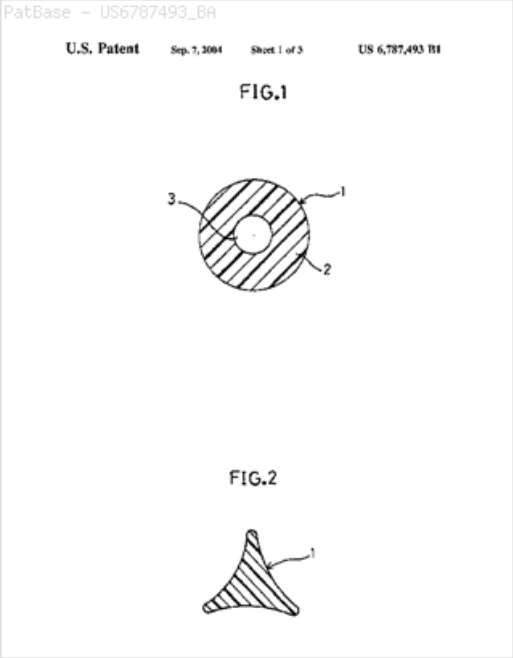
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WO9858998 A1	20030612	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1019997012066 COUNTRY OF REF DOCUMENT : KR

7) Family number: 29414040 (US2003148688A)

Title: BIODEGRADABLE FILAMENT NONWOVEN FABRIC AND METHOD OF PRODUCING THE SAME

Abstract: Source: US2003148688A A biodegradable filament nonwoven fabric is provided which is composed of filaments of a **polylactic acid** based polymer. The **polylactic acid** based polymer is selected from the group consisting of poly-D-lactic **acid**, poly-L-lactic **acid**, copolymers of D-lactic **acid** and L-lactic **acid**, copolymers of D-lactic **acid** and a hydroxycarboxylic **acid**, copolymers of L-lactic **acid** and a hydroxycarboxylic **acid**, and copolymers of D-lactic **acid**, L-lactic **acid** and a hydroxycarboxylic **acid**, which have melting points of not lower than 100 degrees centigrade, and blends of any of these polymers which have melting points of not lower than 100 degrees centigrade The filaments of the **polylactic acid** based polymer have a birefringence of 10x10-3 to 25x10-3, a degree of crystallinity of 12 to 30 wt percent, and a crystal size of not greater than 80 Sas measured axially of the filaments. The nonwoven fabric has a boiling water shrinkage percentage of not higher than 15 percent.

Classifications:
International (IPC 8-9): C08L101/16 D01D5/092 D01D5/098 D01F1/08 D01F1/10 D01F6/62 D01F6/84 D04H1/42 D04H1/435 D04H1/48 D04H1/54 D04H3/00 D04H3/011 D04H3/10 D04H3/105 D04H3/14 D04H3/147 D04H3/153 D04H3/16 D04H5/00 (Advanced/Invention);
D01D5/092 D01D5/098 D01F6/62 D04H3/00 (Advanced/Non-invention);
D04H1/42 D04H1/48 D04H1/54 (Core/Invention);
D01D5/08 D01D5/088 D01F6/62 (Core/Non-invention)
International (IPC 1-7): D01D5/092 D01D5/098 D01F1/08 D01F1/10 D01F6/62 D01F6/84 D04H1/00 D04H1/42 D04H1/48 D04H1/54 D04H13/00 D04H3/00 D04H3/10 D04H3/14 D04H3/16 D04H5/00 G06T1/60 H04N5/765 H04N5/781 H04N5/907 H04N5/91
CPC: Y10T442/60 Y10T442/608 Y10T442/637 Y10T442/696 Y10T442/699 D04H1/435 D04H1/4382 D04H1/4391 D04H1/4266 D04H3/14 D01D5/30 D01F6/625 D01F6/84 D01F8/14 D04H3/00 D04H3/16 D04H1/541 D04H1/55 D04H1/48
European: D01D5/30 D01F6/62B D01F6/84 D01F8/14 D04H1/42 D04H1/48 D04H1/54B D04H3/00 D04H3/14 D04H3/16
US: 442/327 442/327P 442/334 442/361 442/414 442/417



Family:

Publication number	Publication date	Application number	Application date
EP0765959 A1	19970402	EP19960114791	19960916
EP0765959 B1	20000119	EP19960114791	19960916
EP0949371 A2	19991013	EP19990108935	19960916
EP0949371 A3	20040512	EP19990108935	19960916
EP0949371 B1	20081105	EP19990108935	19960916
EP1612314 A2	20060104	EP20050022050	19960916
EP1612314 A3	20061122	EP20050022050	19960916
EP1612314 B1	20090909	EP20050022050	19960916
EP1612314 B2	20140108	EP20050022050	19960916
JP2000273750 A2	20001003	JP19990174773	19990622
JP3432340 B2	20030804	JP19950256083	19951003
JP3434628 B2	20030811	JP19950251679	19950929
JP3710175 B2	20051026	JP19950256080	19951003
JP3938950 B2	20070627	JP19950256079	19951003
JP9095848 A2	19970408	JP19950256083	19951003
JP9095849 A2	19970408	JP19950251679	19950929
JP9095850 A2	19970408	JP19950256079	19951003
JP9095851 A2	19970408	JP19950256080	19951003
KR100406244 B1	20040330	KR19960042661	19960925
KR19970021415 A	19970528	KR19960042661	19960925
US2003148688 AA	20030807	US19990351413	19990709
US6607996 BA	20030819	US19990351413	19990709
US6787493 BA	20040907	US19990324368	19990602

Priority:

EP19960114791 19960916
EP19990108935 19960916
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JP19990174773 19990622
JP19950256079 19951003
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JP19990009965 19990119
US19960715900 19960919
US19990324368 19990602
US19990351413 19990709

Probable Assignee: UNITIKA LTD

Assignee(s): (std): TOMOEGAWA PAPER CO LTD ; UNITIKA LTD

Assignee(s): UNITEKA LTD ; MATSUNAGA ATSUSHI ; MATSUNAGA MAMIKO ; NAGAOKA KOICHI ; TOMOEGAWA PAPER CO

Inventor(s): (std): ICHINOSE NAOJI ; ICHISE NAOJI ; MATSUNAGA ATSUSHI ; MATSUNAGA MAMIKO ; MATSUOKA FUMIO ; NAGAOKA KOICHI

Agent(s): KUEGELE BERNHARD ET AL; KUEGELE BERNHARD

Designated states: FR GB NL SE

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
EP0765959 A1	19970402	LSPB	+	published / reissued	
EP0765959 A1	19970730	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19970528
EP0765959 A1	19981125	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19981013
EP0765959 A1	20001213	LSOP	-26	OPPOSITION FILED	OPPONENT NAME : KIMBERLY-CLARK WORLDWIDE, INC EFFECTIVE DATE : 20001019
EP0765959 A1	20020904	LSOP	-R26	OPPOSITION FILED (CORRECTION)	OPPONENT NAME : KIMBERLY-CLARK WORLDWIDE, INC EFFECTIVE DATE : 20001019
EP0765959 A1	20021101	LSOP	-NLR1	NL: OPPOSITION HAS BEEN FILED WITH THE EPO	OPPONENT NAME : KIMBERLY-CLARK WORLDWIDE, INC
EP0765959 A1	20040905	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20040905 YEAR OF FEE PAYMENT : 09
EP0765959 A1	20040906	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20040906 YEAR OF FEE PAYMENT : 09
EP0765959 A1	20040908	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20040908 YEAR OF FEE PAYMENT : 09
EP0765959 A1	20040915	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20040915 YEAR OF FEE PAYMENT : 09
EP0765959 A1	20050706	LSRV	-27W	REVOKED	EFFECTIVE DATE : 20050412
EP0765959 A1	20050706	LSRV	-GBPR	GB: PATENT REVOKED UNDER ART. 102 OF THE EP CONVENTION DESIGNATING THE UK AS CONTRACTING STATE	DESCRIPTION : 20050412
EP0765959 A1	20050901	LSOP	NLR2	NL: DECISION OF OPPOSITION	EFFECTIVE DATE : 20050412
EP0765959 A1	20060110	LSWD	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : ECNC
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EP0949371 A2	19991013	LSPB	+	published / reissued	
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EP0949371 A2	20040506	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : 7D 04H 1/42 A
EP0949371 A2	20040506	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : 7D 04H 1/54 B
EP0949371 A2	20040506	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : 7D 04H 3/14 B
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EP0949371 A2	20041110	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20040908
EP0949371 A2	20050713	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20050531
EP0949371 A2	20081105	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
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EP0949371 A2	20090630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE

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EP0949371 A2	20090909	LSOP	-26	OPPOSITION FILED	OPPONENT NAME : KIMBERLY-CLARK CORPORATION EFFECTIVE DATE : 20090804
EP0949371 A2	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090916 YEAR OF FEE PAYMENT : 14
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EP0949371 A2	20100430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20091012 YEAR OF FEE PAYMENT : 14
EP0949371 A2	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100921 YEAR OF FEE PAYMENT : 15
EP0949371 A2	20101231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100916 YEAR OF FEE PAYMENT : 15
EP0949371 A2	20111130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110922 YEAR OF FEE PAYMENT : 16
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EP0949371 A2	20121031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120912 YEAR OF FEE PAYMENT : 17
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EP0949371 A2	20140326	LSRV	-27W	REVOKED	EFFECTIVE DATE : 20140217
EP0949371 A2	20140326	LSRV	-GBPR	GB: PATENT REVOKED UNDER ART. 102 OF THE EP CONVENTION DESIGNATING THE UK AS CONTRACTING STATE	EFFECTIVE DATE : 20140217
EP0949371 B1	20081105	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1612314 A2	20060104	LSPB	+	published / reissued	
EP1612314 A2	20060412	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : ICHISE, NAOJI
EP1612314 A2	20060412	LSRE	RIN1	INVENTOR	INVENTOR NAME : NAGAOKA,

				(CORRECTION)	KOICHI
EP1612314 A2	20060412	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : MATSUOKA, FUMIO
EP1612314 A2	20061122	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 3/10 20060101ALI20061019BHEP
EP1612314 A2	20061122	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 1/48 20060101ALI20061019BHEP
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EP1612314 A2	20061122	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 1/42 20060101AFI20051028BHEP
EP1612314 A2	20070718	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20070521
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EP1612314 A2	20100430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20091016 YEAR OF FEE PAYMENT : 14
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EP1612314 A2	20111130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110922 YEAR OF FEE PAYMENT : 16
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				FEES PAID TO NATIONAL OFFICE	PAYMENT DATE : 20120911 YEAR OF FEE PAYMENT : 17
EP1612314 A2	20121031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120912 YEAR OF FEE PAYMENT : 17
EP1612314 A2	20121231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120926 YEAR OF FEE PAYMENT : 17
EP1612314 A2	20121231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120926 YEAR OF FEE PAYMENT : 17
EP1612314 A2	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120919 YEAR OF FEE PAYMENT : 17
EP1612314 A2	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120919 YEAR OF FEE PAYMENT : 17
EP1612314 A2	20131031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20130810 YEAR OF FEE PAYMENT : 18
EP1612314 A2	20131031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20130911 YEAR OF FEE PAYMENT : 18
EP1612314 A2	20131129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130911 YEAR OF FEE PAYMENT : 18
EP1612314 A2	20131129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130910 YEAR OF FEE PAYMENT : 18
EP1612314 A2	20140108	LSRE	27A	MAINTAINED AS AMENDED	EFFECTIVE DATE : 20140108
EP1612314 A2	20140416	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3
EP1612314 A2	20140429	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : RPEO
EP1612314 A2	20141031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20140809 YEAR OF FEE PAYMENT : 19
EP1612314 A2	20141128	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20140911 YEAR OF FEE PAYMENT : 19
EP1612314 A2	20141128	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20140910 YEAR OF FEE PAYMENT : 19
EP1612314 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20140906 YEAR OF FEE PAYMENT : 19
EP1612314 A2	20150811	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 20
EP1612314 A2	20151030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20150916 YEAR OF FEE PAYMENT : 20
EP1612314 A2	20151130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20150911 YEAR OF FEE PAYMENT : 20
EP1612314 A2	20151130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20150811 YEAR OF FEE PAYMENT : 20
EP1612314 A2	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20151001
EP1612314 A2	20161005	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : PE20

					EXPIRY DATE : 20160915
EP1612314 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20160915
EP1612314 A2	20161101	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : EUG
EP1612314 B1	20090909	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1612314 B2	20140108	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2000273750 A2	20001003	LSPB	+	published / reissued	
JP2000273750 A2	20060608	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060607
JP2000273750 A2	20080305	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080304
JP2000273750 A2	20080702	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20080701
JP3432340 B2	20030804	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3432340 B2	20080520	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20090523 YEAR OF FEE PAYMENT : 6
JP3432340 B2	20090526	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20100523 YEAR OF FEE PAYMENT : 7
JP3432340 B2	20100525	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110523 YEAR OF FEE PAYMENT : 8
JP3432340 B2	20110524	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120523 YEAR OF FEE PAYMENT : 9
JP3432340 B2	20120515	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130523 YEAR OF FEE PAYMENT : 10
JP3432340 B2	20130430	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140523 YEAR OF FEE PAYMENT : 11
JP3432340 B2	20150523	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP3434628 B2	20030811	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3434628 B2	20080520	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20090530 YEAR OF FEE PAYMENT : 6
JP3434628 B2	20090526	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20100530 YEAR OF FEE PAYMENT : 7
JP3434628 B2	20100525	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110530 YEAR OF FEE PAYMENT : 8
JP3434628 B2	20110524	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120530 YEAR OF FEE PAYMENT : 9
JP3434628 B2	20120515	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130530 YEAR OF FEE PAYMENT : 10
JP3434628 B2	20130430	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140530 YEAR OF FEE PAYMENT : 11

JP3434628 B2	20150929	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP3710175 B2	20051026	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3710175 B2	20040908	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20040907
JP3710175 B2	20041109	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20041108
JP3710175 B2	20041215	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20041214
JP3710175 B2	20050215	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20050214
JP3710175 B2	20050301	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20050228
JP3710175 B2	20050427	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20050426
JP3710175 B2	20050627	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20050624
JP3710175 B2	20050706	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP3710175 B2	20050713	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20050712
JP3710175 B2	20050818	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20050809
JP3710175 B2	20050819	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP3710175 B2	20080520	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20090819 YEAR OF FEE PAYMENT : 4
JP3710175 B2	20090526	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20100819 YEAR OF FEE PAYMENT : 5
JP3710175 B2	20100525	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110819 YEAR OF FEE PAYMENT : 6
JP3710175 B2	20110524	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120819 YEAR OF FEE PAYMENT : 7
JP3710175 B2	20130502	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130819 YEAR OF FEE PAYMENT : 8
JP3710175 B2	20150819	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP3938950 B2	20070627	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3938950 B2	20061219	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20061218
JP3938950 B2	20070106	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20070105
JP3938950 B2	20070126	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20061222

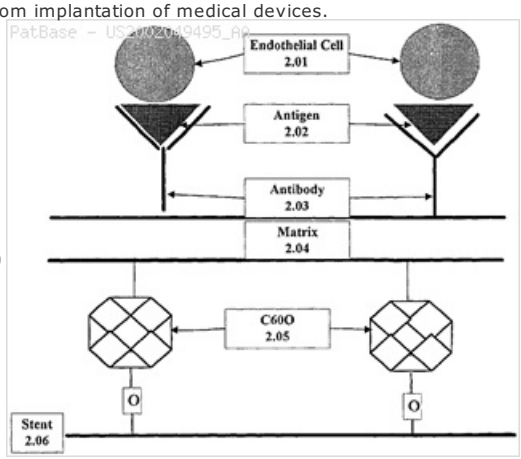
JP3938950 B2	20070405	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20070327
JP3938950 B2	20070406	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP3938950 B2	20101118	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110406 YEAR OF FEE PAYMENT : 4
JP3938950 B2	20101124	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120406 YEAR OF FEE PAYMENT : 5
JP3938950 B2	20111117	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120406 YEAR OF FEE PAYMENT : 5
JP3938950 B2	20111122	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130406 YEAR OF FEE PAYMENT : 6
JP3938950 B2	20121127	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140406 YEAR OF FEE PAYMENT : 7
JP3938950 B2	20151003	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP9095848 A2	19970408	LSPB	+	published / reissued	
JP9095849 A2	19970408	LSPB	+	published / reissued	
JP9095850 A2	19970408	LSPB	+	published / reissued	
JP9095851 A2	19970408	LSPB	+	published / reissued	
KR100406244 B1	20040330	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100406244 B1	20010924	LSES	A201	REQUEST FOR EXAMINATION	
KR100406244 B1	20030830	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR100406244 B1	20031106	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100406244 B1	20131022	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20131022 YEAR OF FEE PAYMENT : 11
KR100406244 B1	20141021	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20141021 YEAR OF FEE PAYMENT : 12
KR100406244 B1	20151107	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
KR19970021415 A	19970528	LSPB	+	published / reissued	
US2003148688 AA	20030807	LSPB	+	published / reissued	
US6607996 BA	20030819	LSGT	+	granted / extensions (spc, cpc, pte)	
US6607996 BA	19990709	LSAS	AS	ASSIGNMENT	OWNER NAME : UNITIKA LTD., JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MATSUNAGA, MAMIKO; MATSUNAGA, ATSUSHI; NAGAOKA, KOICHI; REEL/FRAME:010099/0797 EFFECTIVE DATE : 19990625
US6607996 BA	20040120	LSRE	CC	CERTIFICATE OF CORRECTION	
US6607996 BA	20070126	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6607996 BA	20110121	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6607996 BA	20150204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6787493 BA	20040907	LSGT	+	granted / extensions (spc, cpc, pte)	
US6787493 BA	19990717	LSAS	AS	ASSIGNMENT	OWNER NAME : UNITEKA LTD., JAPAN

					DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:NAGAOKA, KOICHI; MATSUOKA, FUMIO; ICHISE, NAOJI; REEL/FRAME:010096/0433 EFFECTIVE DATE : 19990625
US6787493 BA	20080208	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6787493 BA	20120208	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6787493 BA	20160907	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6787493 BA	20161025	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160907

8) Family number: 32396931 (US2002049495A)

Title: MEDICAL DEVICE WITH COATING THAT PROMOTES ENDOTHELIAL CELL ADHERENCE

Abstract: Source: US2002049495A This invention provides compositions and methods for producing a medical device coated with a matrix and an antibody which reacts with an endothelial cell antigen. The matrix coating the medical device may be composed of synthetic material, such as polyurethane, poly-L-lactic **acid**, cellulose ester or polyethylene glycol. In another embodiment, the matrix is composed of **naturally** occurring materials, such as collagen, fibrin, elastin, amorphous carbon. In a third embodiment, the matrix may be composed of fullerenes. The fullerenes range from about C60 to about C100. The medical device may be a stent or a synthetic graft. The antibodies promote adherence of endothelial cells on the medical device. The antibodies may be mixed with the matrix or covalently tethered through a linker molecule to the matrix. Following adherence to the medical device, the endothelial cells differentiate and proliferate on the medical device. The antibodies may be different types of monoclonal antibodies. Methods of preparing such composition and methods of treating a mammal with atherosclerosis or other types of vessel obstruction are disclosed. By facilitating adherence of endothelial cells to the surface of the medical device, the methods and compositions of this invention will decrease the incidence of restenosis as well as other thromboembolic complications resulting from implantation of medical devices.



Classifications:

International (IPC 8-9): A01N43/00 A01N63/00 A01N65/00 A61B17/00 A61F2/00 A61F2/02 A61F2/04 A61F2/06 A61F2/07 A61F2/24 A61F2/82 A61F2/84 A61F2/852 A61F2/86 A61F2/91 A61F2/915 A61K31/70 A61K31/721 A61K35/12 A61K35/44 A61K38/36 A61K38/39 A61K39/395 A61K47/48 A61K48/00 A61K9/00 A61L17/00 A61L17/06 A61L27/00 A61L27/08 A61L27/14 A61L27/22 A61L27/28 A61L27/30 A61L27/34 A61L27/38 A61L27/44 A61L27/54 A61L27/56 A61L27/58 A61L29/00 A61L29/04 A61L29/08 A61L29/10 A61L29/12 A61L29/14 A61L29/16 A61L31/00 A61L31/02 A61L31/04 A61L31/08 A61L31/10 A61L31/12 A61L31/14 A61L31/16 A61M1/14 A61M25/00 A61M29/00 A61M29/02 A61M31/00 A61M37/00 A61M39/00 A61N1/36 A61P13/08 A61P19/00 A61P35/00 A61P9/10 B82Y30/00 C07K16/28 C12N15/00 C12N15/85 C12N15/87 C12N5/00 C12N5/02 C12N5/071 C12N5/074 C12N5/08 C12N5/10 (Advanced/Invention);
A61F2/00 A61F2/02 A61F2/04 A61F2/06 A61F2/82 A61F2/852 A61F2/86 A61F2/91 A61K35/12 A61K39/39 A61K39/395 A61K39/44 A61K48/00 A61L29/04 A61M31/00 B82Y30/00 C07K16/28 C12N15/09 C12N5/10 (Advanced/Non-invention);
A01N43/00 A01N63/00 A61B17/00 A61F2/00 A61F2/04 A61F2/06 A61F2/24 A61F2/82 A61K31/70 A61K31/716 A61K39/395 A61K47/48 A61K48/00 A61K9/00 A61L17/00 A61L27/00 A61L29/00 A61L31/00 A61L31/02 A61L31/04 A61L31/08 A61L31/14 A61M1/14 A61M25/00 A61M29/02 A61M37/00 A61N1/36 A61P13/00 A61P19/00 C12N15/00 C12N15/85 C12N5/00 C12N5/02 C12N5/074 C12N5/08 (Core/Invention);
A61K35/12 A61K39/39 A61K39/395 C12N15/09 C12N5/10 (Core/Non-invention);
A61B A61F A61K A61L (Subclass/Invention)

International (IPC 1-7): A61B17/00 A61F2/00 A61F2/06 A61K31/00 A61K38/00 A61K39/395 A61K39/44 A61K48/00 A61K9/00 A61L17/00 A61L27/00 A61L27/08 A61L27/44 A61L27/54 A61L29/00 A61L29/10 A61L29/12 A61L29/16 A61L31/00 A61L31/08 A61L31/12 A61L31/16 A61M1/14 A61M25/00 A61M29/02 A61P35/00 A61P9/10 C07K16/28 C07K16/28 C12N15/11 C12N15/85 C12N5/08

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European: A61F2/06S A61F2/06S6 A61F2/82 A61F2/86 A61F2/91 A61F2/915 A61K31/721 A61K38/18C A61K38/18G A61K38/44 A61K47/48W26 A61K48/00D A61L27/08 A61L27/22R A61L27/30 A61L27/30A A61L27/30R A61L27/34 A61L27/38B2 A61L27/44 A61L27/54 A61L27/56 A61L27/58 A61L29/08B A61L29/10 A61L29/10A A61L29/10R A61L29/12D A61L29/14H A61L29/14K A61L29/16 A61L31/04F10 A61L31/08B A61L31/08B2 A61L31/08B6 A61L31/10 A61L31/12D A61L31/14H A61L31/14K A61L31/16 B82Y30/00 C12N5/06B28P K61F2/00L K61F2/06S6N2 K61F2/852 K61F2/86 K61F2/91 K61F2/915 K61F2/915B K61F2/915E K61F2/915F K61F210/00A K61F250/00N16 K61F250/00W2N K61F250/00W5 K61K35/12 K61L300/210 K61L300/256 K61L300/258 K61L300/412 K61L300/416 K61L300/422 K61L300/426 K61L300/428 K61L300/438 K61L300/450 K61L300/606 K61L300/640 K61L400/12 M12N510/00

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Patent	Date recorded	Event group	Code	Event	Details
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CN105078631 B	20170308	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1418115 A	20030514	LSPB	+	published / reissued	
CN1418115 A	20030514	LSPB	+C06	PUBLICATION	
CN1418115 A	20090701	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1418115 A	20130605	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	OWNER NAME : YEJU MEDICAL APPLIANCES (SHENZHEN) CO., LTD. DESCRIPTION : FORMER OWNER: ORBUS MEDICAL TECHNOLOGIES INC. EFFECTIVE DATE : 20130506
CN1418115 A	20130605	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
CN1418115 A	20130605	LSRE	COR	CHANGE OF BIBLIOGRAPHIC DATA	DESCRIPTION : CORRECT: ADDRESS; TO: 518038 SHENZHEN, GUANGDONG PROVINCE
CN1627924 A	20050615	LSPB	+	published / reissued	
CN1627924 A	20050615	LSPB	+C06	PUBLICATION	
CN1627924 A	20090128	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1627924 A	20110420	LSLE	-C17	CESSATION OF PATENT RIGHT	
CN1655738 A	20050817	LSPB	+	published / reissued	
CN1655738 A	20050817	LSPB	+C06	PUBLICATION	
CN1655738 A	20091202	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
DE60128451 D1	20080605	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60128451 T2	20070830	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1263484 A1	20021211	LSPB	+	published / reissued	
EP1263484 A1	20021211	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20021007
EP1263484 A1	20030528	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20030409
EP1263484 A1	20060906	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/16 20060101ALI20060801BHEP
EP1263484 A1	20060906	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 27/08 20060101AFI20060801BHEP
EP1263484 A1	20060906	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 29/10 20060101ALI20060801BHEP
EP1263484 A1	20060906	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 27/54 20060101ALI20060801BHEP
EP1263484 A1	20060906	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 29/16 20060101ALI20060801BHEP
EP1263484 A1	20060906	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/08 20060101ALI20060801BHEP
EP1263484 A1	20060906	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/12 20060101ALI20060801BHEP

EP1263484 A1	20060906	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 27/44 20060101ALI20060801BHEP
EP1263484 A1	20060906	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 29/12 20060101ALI20060801BHEP
EP1263484 A1	20061115	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : ORBUSNEICH MEDICAL, INC.
EP1263484 A1	20070516	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20070516
EP1263484 A1	20070516	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20070516
EP1263484 A1	20070516	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20070516
EP1263484 A1	20070516	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1263484 A1	20070615	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1263484 A1	20070627	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1263484 A1	20070816	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20070816
EP1263484 A1	20071101	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2283398 KIND CODE OF REF DOCUMENT : T3
EP1263484 A1	20071124	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20070516
EP1263484 A1	20071130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1263484 A1	20080131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20070516
EP1263484 A1	20080229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20071016
EP1263484 A1	20080423	LSGT	+26N	NO OPPOSITION	EFFECTIVE DATE : 20080219

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EP1263484 A1	20080430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20070817
EP1263484 A1	20080430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20080326 YEAR OF FEE PAYMENT : 08
EP1263484 A1	20080530	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20080326 YEAR OF FEE PAYMENT : 08
EP1263484 A1	20080930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20080410 YEAR OF FEE PAYMENT : 08
EP1263484 A1	20081031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20080331
EP1263484 A1	20090430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20090325 YEAR OF FEE PAYMENT : 09
EP1263484 A1	20090529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20090324 YEAR OF FEE PAYMENT : 09
EP1263484 A1	20090731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CY DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20070516
EP1263484 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20090327 YEAR OF FEE PAYMENT : 09
EP1263484 A1	20090930	LSLE	-BERE	BE: LAPSED	OWNER NAME : ORBUSNEICH MEDICAL, INC. EFFECTIVE DATE : 20090331
EP1263484 A1	20091030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090317 YEAR OF FEE PAYMENT : 09
EP1263484 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090403 YEAR OF FEE PAYMENT : 09
EP1263484 A1	20100226	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20090331
EP1263484 A1	20100430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20100325 YEAR OF FEE PAYMENT : 10
EP1263484 A1	20100527	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20090316
EP1263484 A1	20100531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100406 YEAR OF FEE PAYMENT : 10
EP1263484 A1	20100630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100326 YEAR OF FEE PAYMENT : 10
EP1263484 A1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20090316

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EP1263484 A1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20080315
EP1263484 A1	20100831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : TR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20070516
EP1263484 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20100324 YEAR OF FEE PAYMENT : 10
EP1263484 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100329 YEAR OF FEE PAYMENT : 10
EP1263484 A1	20110331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20090315
EP1263484 A1	20110429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20110325 YEAR OF FEE PAYMENT : 11
EP1263484 A1	20110531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110331 YEAR OF FEE PAYMENT : 11
EP1263484 A1	20110531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20110329 YEAR OF FEE PAYMENT : 11
EP1263484 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110329 YEAR OF FEE PAYMENT : 11
EP1263484 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110325 YEAR OF FEE PAYMENT : 11
EP1263484 A1	20120430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20120326 YEAR OF FEE PAYMENT : 12
EP1263484 A1	20120430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120406 YEAR OF FEE PAYMENT : 12
EP1263484 A1	20120629	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120326 YEAR OF FEE PAYMENT : 12
EP1263484 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120329 YEAR OF FEE PAYMENT : 12
EP1263484 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120328 YEAR OF FEE PAYMENT : 12
EP1263484 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120329 YEAR OF FEE PAYMENT : 12
EP1263484 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130327 YEAR OF FEE PAYMENT : 13
EP1263484 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130405 YEAR OF FEE PAYMENT : 13
EP1263484 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20130325 YEAR OF FEE PAYMENT : 13
EP1263484 A1	20130430	LSFE	+PGFP	POSTGRANT:	REF COUNTRY CODE : GB

				ANNUAL FEES PAID TO NATIONAL OFFICE	PAYMENT DATE : 20130327 YEAR OF FEE PAYMENT : 13
EP1263484 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130327 YEAR OF FEE PAYMENT : 13
EP1263484 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20130325 YEAR OF FEE PAYMENT : 13
EP1263484 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130405 YEAR OF FEE PAYMENT : 13
EP1263484 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20130326 YEAR OF FEE PAYMENT : 13
EP1263484 A1	20140430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20140326 YEAR OF FEE PAYMENT : 14
EP1263484 A1	20140430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20140327 YEAR OF FEE PAYMENT : 14
EP1263484 A1	20140530	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20140317 YEAR OF FEE PAYMENT : 14
EP1263484 A1	20140630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20140327 YEAR OF FEE PAYMENT : 14
EP1263484 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20140327 YEAR OF FEE PAYMENT : 14
EP1263484 A1	20150317	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 15
EP1263484 A1	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20150327 YEAR OF FEE PAYMENT : 15
EP1263484 A1	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20150326 YEAR OF FEE PAYMENT : 15
EP1263484 A1	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20150327 YEAR OF FEE PAYMENT : 15
EP1263484 A1	20150529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20150317 YEAR OF FEE PAYMENT : 15
EP1263484 A1	20150529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20150327 YEAR OF FEE PAYMENT : 15
EP1263484 A1	20160328	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 16
EP1263484 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20160326 YEAR OF FEE PAYMENT : 16
EP1263484 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20160331 YEAR OF FEE PAYMENT : 16
EP1263484 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20160329 YEAR OF FEE PAYMENT : 16
EP1263484 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20160328 YEAR OF FEE PAYMENT : 16
EP1263484 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20160331 YEAR OF FEE PAYMENT : 16

EP1263484 B1	20070516	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1471853 A2	20041103	LSPB	+	published / reissued	
EP1471853 A2	20041103	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20040804
EP1471853 A2	20061115	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : ORBUSNEICH MEDICAL, INC.
EP1471853 A2	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : COTTONE, ROBERT, J., JR.
EP1471853 A2	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : KULISZEWSKI, MICHAEL, A.
EP1471853 A2	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : ROWLAND, STEPHEN, M.
EP1471853 A2	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : KUTRYK, MICHAEL J.B.
EP1471853 A2	20100324	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20100223
EP1471853 A2	20101020	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20100915
EP1471853 A2	20161102	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20161004
EP1505931 A1	20050216	LSPB	+	published / reissued	
EP1505931 A1	20050216	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20041112
EP1505931 A1	20061115	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : ORBUSNEICH MEDICAL, INC.
EP1505931 A1	20100609	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20091201
EP1740219 A2	20070110	LSPB	+	published / reissued	
EP1740219 A2	20070110	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20060824
EP1740219 A2	20071017	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61K 39/395 20060101ALI20070910BHEP
EP1740219 A2	20071017	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01N 43/00 20060101AFI20070910BHEP
EP1740219 A2	20071017	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01N 63/00 20060101ALI20070910BHEP
EP1740219 A2	20071017	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C12N 5/00 20060101ALI20070910BHEP
EP1740219 A2	20071017	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C12N 15/00 20060101ALI20070910BHEP
EP1740219 A2	20071017	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61K 31/70 20060101ALI20070910BHEP
EP1740219 A2	20071017	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C12N 5/02 20060101ALI20070910BHEP
EP1740219 A2	20071017	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01N 65/00 20060101ALI20070910BHEP
EP1740219 A2	20090128	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20090105
EP1740219 A2	20090506	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090407
EP1740219 A2	20131122	LSWD	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : WD REF DOCUMENT NUMBER :

					1098968 COUNTRY OF REF DOCUMENT : HK
EP1740219 A2	20141029	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61K 48/00 20060101ALI20140919BHEP
EP1740219 A2	20141029	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01N 65/00 20090101ALI20140919BHEP
EP1740219 A2	20141029	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C12N 5/02 20060101ALI20140919BHEP
EP1740219 A2	20141029	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01N 43/00 20060101AFI20140919BHEP
EP1740219 A2	20141029	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C12N 5/00 20060101ALI20140919BHEP
EP1740219 A2	20141029	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C12N 15/00 20060101ALI20140919BHEP
EP1740219 A2	20141029	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01N 63/00 20060101ALI20140919BHEP
EP1740219 A2	20141029	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61K 31/70 20060101ALI20140919BHEP
EP1740219 A2	20141112	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20141014
EP1740219 A2	20150304	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1740219 A2	20150313	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1740219 A2	20150325	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1740219 A2	20150409	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602005045964 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20150409
EP1740219 A2	20150415	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 712972 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20150415
EP1740219 A2	20150624	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3
EP1740219 A2	20150630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20150426 YEAR OF FEE PAYMENT : 11
EP1740219 A2	20150715	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 712972 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20150304
EP1740219 A2	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO	REF COUNTRY CODE : FI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED

				EPO	TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20150427 YEAR OF FEE PAYMENT : 11
EP1740219 A2	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20150429 YEAR OF FEE PAYMENT : 11
EP1740219 A2	20150825	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP1740219 A2	20150831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20150831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150605
EP1740219 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20150430 YEAR OF FEE PAYMENT : 11
EP1740219 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20150427 YEAR OF FEE PAYMENT : 11
EP1740219 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20150417 YEAR OF FEE PAYMENT : 11
EP1740219 A2	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150706
EP1740219 A2	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : EE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : RO DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO	REF COUNTRY CODE : SK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED

				EPO	TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CZ DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IS DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150704
EP1740219 A2	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20151130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1740219 A2	20151207	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602005045964 COUNTRY OF REF DOCUMENT : DE
EP1740219 A2	20151231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150430
EP1740219 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150430
EP1740219 A2	20160210	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20151207
EP1740219 A2	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20150304
EP1740219 A2	20160425	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 12

EP1740219 A2	20160630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20160426 YEAR OF FEE PAYMENT : 12
EP1740219 A2	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20160427 YEAR OF FEE PAYMENT : 12
EP1740219 A2	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20160428 YEAR OF FEE PAYMENT : 12
EP1740219 A2	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20160427 YEAR OF FEE PAYMENT : 12
EP1740219 A2	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20160427 YEAR OF FEE PAYMENT : 12
EP1740219 A2	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20160425 YEAR OF FEE PAYMENT : 12
EP1740219 B1	20150304	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1753476 A2	20070221	LSPB	+	published / reissued	
EP1753476 A2	20070221	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20060822
EP1753476 A2	20070711	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61F 2/06 20060101AFI20070607BHEP
EP1753476 A2	20110309	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20110208
EP1753476 A2	20110921	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20110817
EP1753476 A2	20150304	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61L 31/16 20060101ALI20150127BHEP
EP1753476 A2	20150304	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61L 31/10 20060101AFI20150127BHEP
EP1753476 A2	20150304	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61F 2/852 20130101ALI20150127BHEP
EP1753476 A2	20150304	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61F 2/86 20130101ALI20150127BHEP
EP1753476 A2	20150304	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61L 31/14 20060101ALI20150127BHEP
EP1753476 A2	20150401	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150304
EP1753476 A2	20150729	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1753476 A2	20150731	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1753476 A2	20150815	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 738778 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150815

EP1753476 A2	20150826	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1753476 A2	20150910	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602005047102 COUNTRY OF REF DOCUMENT : DE
EP1753476 A2	20151215	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 738778 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150729
EP1753476 A2	20151228	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP1753476 A2	20160121	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : CP TEXT : PRODUCT NAME: RAPAMYCINE ET ANTICORPS ANTI-CD34; REGISTRATION NO/DATE: 345-01 U DE 20130524 SUPPLEMENTARY PROTECTION CERTIFICATE : 16C0002 FILING DATE : 20160121
EP1753476 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151030
EP1753476 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160224	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : CTFF TEXT : PRODUCT NAME: RAPAMYCIN (INN SIROLIMUS) AND AN ANTI-CD34 ANTIBODY.; REGISTERED: UK CE 354-01 U DE 20130524 SUPPLEMENTARY PROTECTION CERTIFICATE : SPC/GB16/003 FILING DATE : 20160127
EP1753476 A2	20160224	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : SPCF TEXT : PRODUCT NAME: RAPAMYCIN AND AN ANTI-CD34 ANTIBODY; REGISTRATION NO/DATE: 354-01 20130524 SUPPLEMENTARY PROTECTION CERTIFICATE : 2016/003 FILING DATE : 20160119
EP1753476 A2	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE

				EPO	FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151130
EP1753476 A2	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151129
EP1753476 A2	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160321	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LU REF LEGAL EVENT CODE : CCP TEXT : PRODUCT NAME: RAPAMYCINE ET ANTICORPS ANTI-CD34; FIRST REGISTRATION: 20150305 SUPPLEMENTARY PROTECTION CERTIFICATE : 92955 EXTENSION DATE : 20300305
EP1753476 A2	20160328	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 12
EP1753476 A2	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE

				STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IE PAYMENT DATE : 20160331 YEAR OF FEE PAYMENT : 12
EP1753476 A2	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20160326 YEAR OF FEE PAYMENT : 12
EP1753476 A2	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : LU PAYMENT DATE : 20160331 YEAR OF FEE PAYMENT : 12
EP1753476 A2	20160502	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602005047102 COUNTRY OF REF DOCUMENT : DE
EP1753476 A2	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20160328 YEAR OF FEE PAYMENT : 12
EP1753476 A2	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160328 YEAR OF FEE PAYMENT : 12
EP1753476 A2	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160329 YEAR OF FEE PAYMENT : 12
EP1753476 A2	20160706	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20160502
EP1753476 A2	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160331 YEAR OF FEE PAYMENT : 12
EP1753476 A2	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150729
EP1753476 A2	20161031	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1753476 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160331
EP1753476 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160331

EP1753476 B1	20150729	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1948069 A2	20080730	LSPB	+	published / reissued	
EP1948069 A2	20080730	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080417
EP1948069 A2	20081008	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : YOKLAVICH, MEG
EP1948069 A2	20081008	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : COTTONE, ROBERT, JOHN, JR.
EP1948069 A2	20081008	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : KUTRYK, MICHAEL, JOHN, BRADLEY
EP1948069 A2	20081008	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : PARKER, SHERRY
EP1948069 A2	20081008	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : ROWLAND, STEVEN, M.
EP1948069 A2	20111019	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20110920
EP1948069 A2	20111019	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/00 20060101AFI20110914BHEP
EP1948069 A2	20111019	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/08 20060101ALI20110914BHEP
EP1948069 A2	20111019	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/10 20060101ALI20110914BHEP
EP1948069 A2	20111019	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/14 20060101ALI20110914BHEP
EP1948069 A2	20111019	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/16 20060101ALI20110914BHEP
EP1948069 A2	20121128	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20121030
EP2671540 A2	20131211	LSPB	+	published / reissued	
EP2671540 A2	20131211	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130812
EP2671540 A2	20140604	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/10 20060101ALI20140430BHEP
EP2671540 A2	20140604	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/16 20060101ALI20140430BHEP
EP2671540 A2	20140604	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/06 20130101AFI20140430BHEP
EP2671540 A2	20140604	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/86 20130101ALI20140430BHEP
EP2671540 A2	20140604	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/852 20130101ALI20140430BHEP
EP2671540 A2	20140604	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/14 20060101ALI20140430BHEP
EP2671540 A2	20151216	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20151113
EP2946666 A1	20151125	LSPB	+	published / reissued	
EP2946666 A1	20160706	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160525
EP2946666 A1	20160727	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20160624
ES2283398 T3	20071101	LSGT	+	granted / extensions (spc, cpc, pte)	

HK1098968 A3	20070803	LSPB	+	published / reissued	
IL151501 A0	20080709	LSGT	+FF	PATENT GRANTED	
IL151501 A0	20080709	LSFE	+KB	PATENT RENEWED	
IL151501 A0	20150226	LSFE	+KB	PATENT RENEWED	
IL151501 A1	20080106	LSPB	+	published / reissued	
IL162803 A1	20101230	LSPB	+	published / reissued	
IL162803 A1	20110428	LSGT	+FF	PATENT GRANTED	
IL162803 A1	20130930	LSLE	-MM9K	PATENT NOT IN FORCE DUE TO NON-PAYMENT OF RENEWAL FEES	
IN03255DN2008 A	20080725	LSPB	+	published / reissued	
IN04153DN2006 A	20070713	LSPB	+	published / reissued	
IN04154DN2006 A	20070803	LSPB	+	published / reissued	
JP2003526477 T2	20030909	LSPB	+	published / reissued	
JP2003526477 T2	20070227	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070226
JP2003526477 T2	20100915	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100914
JP2003526477 T2	20110112	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110111
JP2003526477 T2	20110112	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110111
JP2003526477 T2	20110914	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110913
JP2003526477 T2	20110914	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110913
JP2003526477 T2	20120209	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120208
JP2003526477 T2	20120209	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120208
JP2003526477 T2	20120225	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20120208
JP2003526477 T2	20120225	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20120208
JP2003526477 T2	20120606	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20120605
JP2003526477 T2	20121006	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20121005
JP2003526477 T2	20121114	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20121113
JP2003526477 T2	20121228	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20121227
JP2003526477 T2	20130110	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20130109

				(ZENCHI)	
JP2003526477 T2	20130227	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20130226
JP2003526477 T2	20130827	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20130826
JP2003526477 T2	20131007	LSAL	-A912	REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A912 EFFECTIVE DATE : 20131004
JP2003526477 T2	20150129	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150129
JP2003526477 T2	20150218	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20150130
JP2003526477 T2	20151030	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20151014
JP2003526477 T2	20151224	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20151216
JP2005523050 T2	20050804	LSPB	+	published / reissued	
JP2005523050 T2	20060204	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20060203
JP2005523050 T2	20060204	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060203
JP2005523050 T2	20090902	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090901
JP2005523050 T2	20100707	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20100706
JP2005523050 T2	20100707	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20100706
JP2005525911 T2	20050902	LSPB	+	published / reissued	
JP2005525911 T2	20060519	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060518
JP2005525911 T2	20090520	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090519
JP2005525911 T2	20091021	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20091020
JP2007528275 T2	20071011	LSPB	+	published / reissued	
JP2007528275 T2	20071026	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20071025
JP2007528275 T2	20110510	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110510
JP2007528275 T2	20110806	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110805
JP2007528275 T2	20110806	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110805
JP2007528275 T2	20110824	LSRE	A521	WRITTEN	DESCRIPTION : JAPANESE

				AMENDMENT	INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110823
JP2007528275 T2	20110824	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110823
JP2007528275 T2	20111110	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111109
JP2007528275 T2	20111110	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111109
JP2007528275 T2	20111125	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111124
JP2007528275 T2	20111125	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111124
JP2007528275 T2	20120326	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20120323
JP2007528275 T2	20120326	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20120323
JP2007528275 T2	20120720	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120719
JP2007528275 T2	20120807	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20120719
JP2007528275 T2	20120810	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20120809
JP2007528275 T2	20120924	LSAL	-A912	REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A912 EFFECTIVE DATE : 20120921
JP2007528275 T2	20150129	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150129
JP2007528275 T2	20150218	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20150130
JP2007528275 T2	20150604	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20150527
JP2007535389 T2	20071206	LSPB	+	published / reissued	
JP2007535389 T2	20080425	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20080424
JP2007535389 T2	20110816	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110816
JP2007535389 T2	20120403	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20120403
JP2007535389 T2	20120403	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20120403
JP2009515659 T2	20090416	LSPB	+	published / reissued	
JP2009515659 T2	20090717	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20090716
JP2009515659 T2	20110531	LSES	-A131	NOTIFICATION OF REASONS FOR	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131

				REFUSAL	EFFECTIVE DATE : 20110531
JP2009515659 T2	20111206	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20111206
JP2009515659 T2	20111206	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20111206
JP2013046771 A2	20130307	LSPB	+	published / reissued	
JP2013046771 A2	20140108	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20140107
JP2013046771 A2	20140708	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20140707
JP2013046771 A2	20140827	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20140826
JP2013046771 A2	20141030	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20141029
JP2013046771 A2	20141119	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2013046771 A2	20141126	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20141125
JP2013046771 A2	20150108	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20141224
JP2015128597 A2	20150716	LSPB	+	published / reissued	
JP2015128597 A2	20151218	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2015128597 A2	20151224	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20151222
JP2015128597 A2	20160128	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20160120
JP2015128598 A2	20150716	LSPB	+	published / reissued	
JP2015128598 A2	20160610	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160610
JP2015128598 A2	20161101	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20161101
JP5675744 B2	20150225	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5755395 B2	20150729	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5859179 B2	20160210	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5876173 B2	20160302	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100860860 B1	20080929	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100860860 B1	20060313	LSES	A201	REQUEST FOR EXAMINATION	

KR100860860 B1	20080111	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR100860860 B1	20080704	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR100860860 B1	20080923	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100860860 B1	20120918	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20120919 YEAR OF FEE PAYMENT : 5
KR100860860 B1	20130923	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20130924 YEAR OF FEE PAYMENT : 6
KR100860860 B1	20150907	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20150908 YEAR OF FEE PAYMENT : 8
KR100860860 B1	20160818	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160818 YEAR OF FEE PAYMENT : 9
KR20030001378 A	20030106	LSPB	+	published / reissued	
KR20040105704 A	20041216	LSPB	+	published / reissued	
KR20040105704 A	20080204	LSES	A201	REQUEST FOR EXAMINATION	
KR20040105704 A	20090626	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20040105704 A	20091223	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR20050010827 A	20050128	LSPB	+	published / reissued	
KR20050010827 A	20080516	LSES	A201	REQUEST FOR EXAMINATION	
KR20050010827 A	20100316	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20050010827 A	20100526	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20060131882 A	20061220	LSPB	+	published / reissued	
KR20060131882 A	20100310	LSES	A201	REQUEST FOR EXAMINATION	
KR20060131882 A	20120118	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20070008714 A	20070117	LSPB	+	published / reissued	
KR20070008714 A	20100429	LSES	A201	REQUEST FOR EXAMINATION	
KR20070008714 A	20120530	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20080072912 A	20080807	LSPB	+	published / reissued	
KR20080072912 A	20111216	LSDW	-WITN	WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION	
RU2008120126 A	20091227	LSPB	+	published / reissued	
RU2400256 C2	20100927	LSGT	+	granted / extensions (spc, cpc, pte)	
SG192440 A1	20130830	LSPB	+	published / reissued	
TW200539841 A	20051216	LSPB	+	published / reissued	
TW200605910 A	20060216	LSPB	+	published / reissued	
US2002049495 AA	20020425	LSPB	+	published / reissued	
US2003229393 AA	20031211	LSPB	+	published / reissued	

US2003229393 AA	20030908	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUS MEDICAL TECHNOLOGIES INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KUTRYK, MICHAEL J.B.; COTTONE, ROBERT J. JR.; ROWLAND, STEPHEN M.; AND OTHERS; REEL/FRAME:014471/0794; SIGNING DATES FROM 20030622 TO 20030721
US2003229393 AA	20060921	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:ORBUS MEDICAL TECHNOLOGIES, INC.; REEL/FRAME:018285/0822 EFFECTIVE DATE : 20060814
US2004039441 AA	20040226	LSPB	+	published / reissued	
US2004039441 AA	20031010	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUS MEDICAL TECHNOLOGIES INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ROWLAND, STEPHEN MAXWELL; JUMAN, IKE; COTTONE, ROBERT JOHN, JR.; AND OTHERS; REEL/FRAME:014040/0766 EFFECTIVE DATE : 20030930
US2004039441 AA	20060921	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:ORBUS MEDICAL TECHNOLOGIES, INC.; REEL/FRAME:018285/0822 EFFECTIVE DATE : 20060814
US2005025752 AA	20050203	LSPB	+	published / reissued	
US2005043787 AA	20050224	LSPB	+	published / reissued	
US2005043787 AA	20060912	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:ORBUS MEDICAL TECHNOLOGIES, INC.; REEL/FRAME:018262/0127 EFFECTIVE DATE : 20060824
US2005271701 AA	20051208	LSPB	+	published / reissued	
US2005271701 AA	20050913	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUS MEDICAL TECHNOLOGIES, INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:COTTONE, JR., ROBERT J.; ROWLAND, STEPHEN M.; DAVIS, HORACE R.; AND OTHERS; REEL/FRAME:016982/0434; SIGNING DATES FROM 20050404 TO 20050407
US2005271701 AA	20060912	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:ORBUS MEDICAL TECHNOLOGIES, INC.; REEL/FRAME:018262/0127 EFFECTIVE DATE : 20060824
US2006121012 AA	20060608	LSPB	+	published / reissued	
US2006121012 AA	20060912	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:ORBUS MEDICAL TECHNOLOGIES, INC.; REEL/FRAME:018262/0127 EFFECTIVE DATE : 20060824
US2006121012 AA	20131120	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUS MEDICAL TECHNOLOGIES INC, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KUTRYK, MICHAEL J. B.; COTTONE, ROBERT J, JR; ROWLAND, STEPHEN M; SIGNING DATES FROM 20041007 TO 20041208; REEL/FRAME:031691/0740

US2006135476 AA	20060622	LSPB	+	published / reissued	
US2006135476 AA	20051208	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUS MEDICAL TECHNOLOGIES, INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KUTRYK, MICHAEL JOHN BRADLEY; COTTONE, ROBERT JOHN, JR.; ROWLAND, STEPHEN MAXWELL; AND OTHERS; REEL/FRAME:017346/0312; SIGNING DATES FROM 20030622 TO 20030721
US2006135476 AA	20060912	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:ORBUS MEDICAL TECHNOLOGIES, INC.; REEL/FRAME:018262/0127 EFFECTIVE DATE : 20060824
US2007042017 AA	20070222	LSPB	+	published / reissued	
US2007042017 AA	20060707	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUS MEDICAL TECHNOLOGIES, INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KUTRYK, MICHAEL J.B.; COTTONE, JR., ROBERT J.; ROWLAND, STEPHEN M.; AND OTHERS; REEL/FRAME:018129/0647; SIGNING DATES FROM 20030622 TO 20030721
US2007042017 AA	20060912	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:ORBUS MEDICAL TECHNOLOGIES, INC.; REEL/FRAME:018262/0127 EFFECTIVE DATE : 20060824
US2007055367 AA	20070308	LSPB	+	published / reissued	
US2007055367 AA	20060609	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUS MEDICAL TECHNOLOGIES INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KUTRYK, MICHAEL J. B.; COTTONE, JR., ROBERT J.; ROWLAND, STEPHEN M.; AND OTHERS; REEL/FRAME:017990/0816; SIGNING DATES FROM 20030622 TO 20030721
US2007123977 AA	20070531	LSPB	+	published / reissued	
US2007123977 AA	20070207	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:COTTONE, ROBERT JOHN, JR.; YOKLAVICH, MARGARET; PARKER, SHERRY; REEL/FRAME:018868/0077 EFFECTIVE DATE : 20061117
US2007128723 AA	20070607	LSPB	+	published / reissued	
US2007129789 AA	20070607	LSPB	+	published / reissued	
US2007129789 AA	20070219	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:COTTONE, JR., ROBERT JOHN; ROWLAND, STEPHEN M.; PARKER, SHERRY; REEL/FRAME:018944/0706 EFFECTIVE DATE : 20061128
US2007134290 AA	20070614	LSPB	+	published / reissued	
US2007134290 AA	20060921	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:ORBUS MEDICAL TECHNOLOGIES, INC.; REEL/FRAME:018285/0822 EFFECTIVE DATE : 20060814

US2007141107 AA	20070621	LSPB	+	published / reissued	
US2007141107 AA	20070215	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KUTRYK, MICHAEL JOHN BRADLEY; COTTONE, JR., ROBERT JOHN; ROWLAND, STEPHEN M.; AND OTHERS; REEL/FRAME:018895/0603; SIGNING DATES FROM 20061116 TO 20070102
US2007156232 AA	20070705	LSPB	+	published / reissued	
US2007191932 AA	20070816	LSPB	+	published / reissued	
US2007196422 AA	20070823	LSPB	+	published / reissued	
US2007196422 AA	20061027	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KUTRYK, MICHAEL JOHN BRADLEY; COTTONE JR., ROBERT J.; ROWLAND, STEPHEN M.; AND OTHERS; REEL/FRAME:018473/0492; SIGNING DATES FROM 20030622 TO 20030721
US2007213801 AA	20070913	LSPB	+	published / reissued	
US2007213801 AA	20060707	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUS MEDICAL TECHNOLOGIES, INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KUTRYK, MICHAEL J.B.; COTTONE, JR., ROBERT J.; ROWLAND, STEPHEN M.; AND OTHERS; REEL/FRAME:018090/0544; SIGNING DATES FROM 20030622 TO 20060623
US2007213801 AA	20060912	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:ORBUS MEDICAL TECHNOLOGIES, INC.; REEL/FRAME:018262/0127 EFFECTIVE DATE : 20060824
US2012172970 AA	20120705	LSPB	+	published / reissued	
US2013035755 AA	20130207	LSPB	+	published / reissued	
US2013035755 AA	20131120	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUS MEDICAL TECHNOLOGIES INC, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KUTRYK, MICHAEL J.B.; COTTONE, ROBERT JOHN, JR; ROWLAND, STEPHEN MAXWELL; SIGNING DATES FROM 20011106 TO 20020423; REEL/FRAME:031641/0112
US2013172988 AA	20130704	LSPB	+	published / reissued	
US2013172988 AA	20131120	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ORBUS MEDICAL TECHOLOGIES INC, FLORIDA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KUTRYK, MICHAEL J.B.; COTTONE, ROBERT JOHN, JR; ROWLAND, STEPHEN M; AND OTHERS; SIGNING DATES FROM 20030622 TO 20030721; REEL/FRAME:031692/0702
US2013172988 AA	20161222	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ORBUSNEICH MEDICAL, INC., FLORIDA OLDPARTY : CHANGE OF NAME; ASSIGNOR:ORBUS MEDICAL TECHNOLOGIES, INC.; REEL/FRAME:041176/0279 EFFECTIVE DATE : 20060814
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US2013295156 AA	20131031	LSAS	AS	ASSIGNMENT	OWNER NAME : ORBUSNEICH MEDICAL, INC., FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:COTTONE, ROBERT JOHN, JR; ROWLAND, STEVEN M; PARKER, SHERRY; REEL/FRAME:031517/0798 EFFECTIVE DATE : 20061117
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US2016136337 AA	20160519	LSPB	+	published / reissued	
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US8460367 BB	20161205	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
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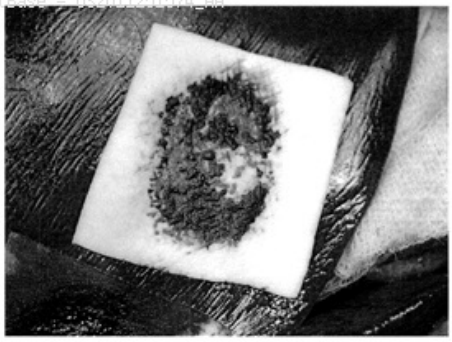
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WO05107817 A3	20060713	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 176853 COUNTRY OF REF DOCUMENT : IL
WO05107817 A3	20060822	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2005745773 COUNTRY OF REF DOCUMENT : EP
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WO05107817 A3	20061017	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007511100 COUNTRY OF REF DOCUMENT : JP
WO05107817 A3	20061020	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200580012581.X COUNTRY OF REF DOCUMENT : CN
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WO05107817 A3	20070117	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1020067025168 COUNTRY OF REF DOCUMENT : KR
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9) Family number: 49740719 (US2011251574A)

Title: HEMOSTATIC SPONGE

Abstract: Source: US2011251574A The present invention provides a hemostatic porous composite sponge comprising i) a matrix of a biomaterial and ii) one hydrophilic **polymeric** component comprising reactive groups wherein i) and ii) are associated with each other so that the reactivity of the **polymeric** component is retained, wherein associated means that said **polymeric** component is coated onto a surface of said matrix of a biomaterial, or said matrix is impregnated with said **polymeric** material, or both.



Classifications:
International (IPC 8-9): A47J A61F13/00 A61F13/36 A61K9/00 A61L A61L15/16 A61L15/18 A61L15/22 A61L15/26 A61L15/32 A61L15/42 A61L15/44 A61L15/58 A61L24/00 A61L24/04 A61L26/00 A61P17/02 B05D3/10 (Advanced/Invention);
A61L15/22 A61L15/42 A61L15/58 A61L24/00 A61L24/04 (Core/Invention);
A61L15/16 A61L15/32 (Core/Non-invention);
A61L (Subclass/Invention)
CPC: A61L15/425 A61L15/325 A61L24/0036 A61L24/0094 A61L2400/04 A61L15/28 A61L15/32 A61L15/44 A61L15/18 A61L15/225 C12Y304/21005 A61F13/00063 A61L2420/02 A61L2300/252 A61L2300/232 A61L2300/254 A61L2300/418 A61L2300/606 A61F2013/0011 A61L15/26
European: A61L24/00H8 A61L24/00R4R K61L400/04
US: 1/1 424/402 424/426 424/484 427/2.1 427/2.100S 427/2.31 514/425 514/723 604/367 604/368 604/368P 604/369 604/369S

Family:

Publication number	Publication date	Application number	Application date
AR087327 AA	20140319	AR2011P101177	20110407
AU2011237901 AA	20111013	AU20110237901	20110407
AU2011237901 BB	20140710	AU20110237901	20110407
BR112012025391 A2	20150922	BR20121125391	20110407
CA2795099 AA	20121001	CA20112795099	20110407
CL2012002804 A1	20121214	CL20120002804	20121005
CN102939113 A	20130220	CN201180028729	20110407
CN102939113 B	20141224	CN201180028729	20110407
CO6630171 A2	20130301	CO20120196255	20121031
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DE602011016912 D1	20150716	DE201160016912T	20110407
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EP2939697 A1	20151104	EP20150165862	20110407
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EP3103481 A1	20161214	EP20160178209	20110407
ES2546667 T3	20150925	ES20110712579T	20110407
HK1179904 A1	20151030	HK20130107218	20130620
HR20150896 T1	20150925	HR20150000896	20150826
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JP2013523296 T2	20130617	JP20130503115T	20110407
JP5856142 B2	20160209	JP20130503115T	20110407
KR20130091636 A	20130819	KR20127029061	20110407
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NZ602630 A	20140829	NZ20110602630	20110407
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TWI511753 B	20151211	TW20110111985	20110407
US2011251574 AA	20111013	US20110082114	20110407
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UY33320 A1	20111201	UY20110033320	20110407
WO11124640 A1	20111013	WO2011EP55418	20110407
ZA201207502 A	20130626	ZA20120007502	20121005

Priority:

EP20110712579 20110407 EP20150165862 20110407 US20110082114 20110407
US20100321661P 20100407 US20100424031P 20101216 EP20150165862 20150430
US20110639490 20110407 WO2011EP55418 20110407 US20140184543 20140219
US20160181280 20160613

Probable Assignee: BAXTER INT

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Assignee(s): BAXTER INTERNATIONAL INC. ; BAXTER INTERNATIONAL INCORPORATED ; BAXTER INT

	INCORP0RATED ; BAXTER INT INC DEERFIELD ; BAXTER HEALTHCARE S A ; BAKSTER KHELTKEHAR SA
Inventor(s): (std):	HEDRICH HANS CHRISTIAN ; HOEFINGHOFF JORIS ; JORIS HOEFINGHOFF ; KHEDRIKH GANS KHRISTIAN ; KHEFINGKHOFF JORIS
Inventor(s):	HANS CHRISTIAN HEDRICH
Agent(s):	CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; SIM AND MCBURNEY; AIRD AND BERLIS IP PARTNERSHIP LTD; SARGENT AND KRAHN; LUZ CLEMENCIA DE PAEZ; HOFFMANN EITLE PATENT U RECHTSANWAELTE PARTMBB; SONN AND PARTNER PATENTANWAELTE; AZNAREZ PABLO; KILPATRICK TOWNSEND AND STOCKTON LLP
Designated states:	AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AR087327 AA	20140319	LSPB	+	published / reissued	
AU2011237901 AA	20111013	LSPB	+	published / reissued	
AU2011237901 AA	20141106	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2011237901 BB	20140710	LSGT	+	granted / extensions (spc, cpc, pte)	
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CA2795099 AA	20121001	LSPB	+	published / reissued	
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CN102939113 A	20130220	LSPB	+	published / reissued	
CN102939113 A	20130220	LSPB	+C06	PUBLICATION	
CN102939113 A	20141224	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
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CO6630171 A2	20130301	LSPB	+	published / reissued	
CO6630171 A2	20140319	LSRV	-FC	APPLICATION REFUSED	
CR20120492 A	20130319	LSPB	+	published / reissued	
DK2555804 T3	20150803	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2555804 A1	20130213	LSPB	+	published / reissued	
EP2555804 A1	20130213	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20121005
EP2555804 A1	20131106	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20131002
EP2555804 A1	20150325	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150227
EP2555804 A1	20150603	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2555804 A1	20150615	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2555804 A1	20150701	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3
EP2555804 A1	20150715	LSGT	REG	REFERENCE TO A	REF COUNTRY CODE : IE

				NATIONAL CODE	REF LEGAL EVENT CODE : FG4D
EP2555804 A1	20150715	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 729574 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150715
EP2555804 A1	20150716	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602011016912 COUNTRY OF REF DOCUMENT : DE
EP2555804 A1	20150925	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2546667 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20150925
EP2555804 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150603
EP2555804 A1	20151030	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : GR REF DOCUMENT NUMBER : 1179904 COUNTRY OF REF DOCUMENT : HK
EP2555804 A1	20151102	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NO REF LEGAL EVENT CODE : T2 EFFECTIVE DATE : 20150603
EP2555804 A1	20151105	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20150401770 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20150929
EP2555804 A1	20151125	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2555804 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150603
EP2555804 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150603
EP2555804 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150603
EP2555804 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150603

EP2555804 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150603
EP2555804 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151003
EP2555804 A1	20160304	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602011016912 COUNTRY OF REF DOCUMENT : DE
EP2555804 A1	20160425	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 6
EP2555804 A1	20160511	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20160304
EP2555804 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150603
EP2555804 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160426 YEAR OF FEE PAYMENT : 6
EP2555804 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160427 YEAR OF FEE PAYMENT : 6
EP2555804 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160427 YEAR OF FEE PAYMENT : 6
EP2555804 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160430
EP2555804 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160421 YEAR OF FEE PAYMENT : 6
EP2555804 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : AT PAYMENT DATE : 20160321 YEAR OF FEE PAYMENT : 6
EP2555804 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160425 YEAR OF FEE PAYMENT : 6
EP2555804 A1	20161121	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EBP EFFECTIVE DATE : 20160430
EP2555804 A1	20161128	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NO REF LEGAL EVENT CODE : MMEP
EP2555804 A1	20161129	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : EUG
EP2555804 A1	20161130	LSLE	-PG25	LAPSED IN A	COUNTRY OF REF DOCUMENT :

				CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160407
EP2555804 A1	20161130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2555804 A1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160407
EP2555804 A1	20170125	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2555804 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160430
EP2555804 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160407
EP2555804 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160501
EP2555804 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160407
EP2555804 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160430
EP2555804 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160430
EP2555804 A1	20170202	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : ML REF DOCUMENT NUMBER : 20150401770 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20161104
EP2555804 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160408
EP2555804 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20161104

EP2555804 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20161031
EP2555804 B1	20150603	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2939697 A1	20151104	LSPB	+	published / reissued	
EP2939697 A1	20160120	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20151210
EP2939697 A1	20160302	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20160202
EP2939697 A1	20160727	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20160630
EP2939697 A1	20160831	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2939697 A1	20160831	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2939697 A1	20161005	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2939697 A1	20161013	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602011030002 COUNTRY OF REF DOCUMENT : DE
EP2939697 A1	20161015	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 824409 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20161015
EP2939697 A1	20161227	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2939697 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160831
EP2939697 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20161130
EP2939697 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160831
EP2939697 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160831
EP2939697 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFLAPSE : LAPSE

				ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160831
EP2939697 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160831
EP2939697 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160831
EP2939697 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160831
EP2939697 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20161201
EP2939697 B1	20160831	LSGT	+	granted / extensions (spc, cpc, pte)	
EP3103481 A1	20161214	LSPB	+	published / reissued	
ES2546667 T3	20150925	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1179904 A1	20151030	LSGT	+	granted / extensions (spc, cpc, pte)	
HR20150896 T1	20150925	LSPB	+	published / reissued	
IN08873DN2012 A	20160129	LSPB	+	published / reissued	
JP2013523296 T2	20130617	LSPB	+	published / reissued	
JP2013523296 T2	20140118	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20140117
JP2013523296 T2	20140118	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20140117
JP2013523296 T2	20150127	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150126
JP2013523296 T2	20150401	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150401
JP2013523296 T2	20150909	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150908
JP2013523296 T2	20151030	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20151030
JP2013523296 T2	20151118	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2013523296 T2	20151125	LSGT	+A01	WRITTEN	DESCRIPTION : JAPANESE

				DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20151124
JP2013523296 T2	20151217	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20151210
JP5856142 B2	20160209	LSGT	+	granted / extensions (spc, cpc, pte)	
KR20130091636 A	20130819	LSPB	+	published / reissued	
MX2012011635 A1	20130227	LSPB	+	published / reissued	
MX2012011635 A1	20141127	LSGT	+FG	GRANT OR REGISTRATION	
NZ602630 A	20140829	LSPB	+	published / reissued	
NZ602630 A	20141224	LSGT	+PSEA	PATENT SEALED	
NZ602630 A	20150327	LSFE	+RENW	RENEWAL (RENEWAL FEES ACCEPTED)	DESCRIPTION : PATENT RENEWED FOR 1 YEAR UNTIL 07 APR 2016 BY COMPUTER PACKAGES INC EFFECTIVE DATE : 20150318
NZ602630 A	20160331	LSFE	+RENW	RENEWAL (RENEWAL FEES ACCEPTED)	DESCRIPTION : PATENT RENEWED FOR 1 YEAR UNTIL 07 APR 2017 BY COMPUTER PACKAGES INC EFFECTIVE DATE : 20160318
PE06952013 A1	20130615	LSPB	+	published / reissued	
PT2555804 T	20150925	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2012147275 A	20140520	LSPB	+	published / reissued	
RU2562569 C2	20150910	LSGT	+	granted / extensions (spc, cpc, pte)	
TH141518 A	20150629	LSPB	+	published / reissued	
TW201141546 A	20111201	LSPB	+	published / reissued	
TWI511753 B	20151211	LSGT	+	granted / extensions (spc, cpc, pte)	
US2011251574 AA	20111013	LSPB	+	published / reissued	
US2011251574 AA	20110614	LSAS	AS	ASSIGNMENT	OWNER NAME : BAXTER HEALTHCARE S.A., SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HEDRICH, HANS CHRISTIAN; HOEFINGHOFF, JORIS; REEL/FRAME:026443/0545 EFFECTIVE DATE : 20110524
US2011251574 AA	20110614	LSAS	AS	ASSIGNMENT	OWNER NAME : BAXTER INTERNATIONAL INC., ILLINOIS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HEDRICH, HANS CHRISTIAN; HOEFINGHOFF, JORIS; REEL/FRAME:026443/0545 EFFECTIVE DATE : 20110524
US2013028975 AA	20130131	LSPB	+	published / reissued	
US2013028975 AA	20130307	LSAS	AS	ASSIGNMENT	OWNER NAME : BAXTER HEALTHCARE S.A., SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HEDRICH, HANS CHRISTIAN; HOEFINGHOFF, JORIS; SIGNING DATESFROM 20130213 TO 20130220; REEL/FRAME:029945/0238
US2013028975 AA	20130307	LSAS	AS	ASSIGNMENT	OWNER NAME : BAXTER INTERNATIONAL INC., ILLINOIS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST;

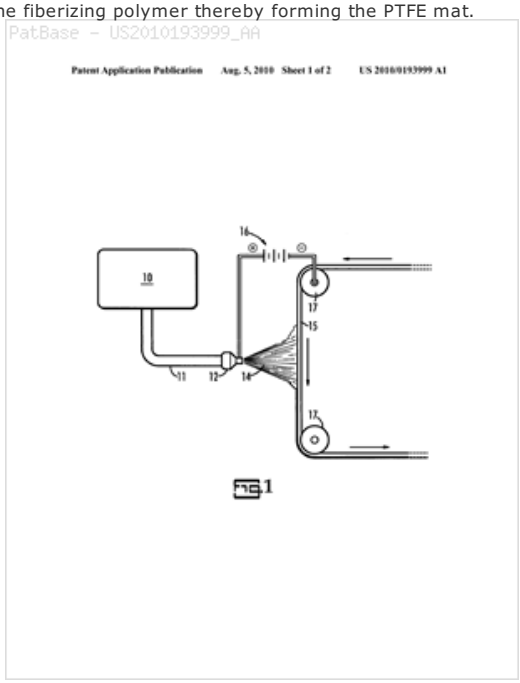
					ASSIGNORS:HEDRICH, HANS CHRISTIAN; HOEFINGHOFF, JORIS; SIGNING DATESFROM 20130213 TO 20130220; REEL/FRAME:029945/0238
US2014308325 AA	20141016	LSPB	+	published / reissued	
US2016317697 AA	20161103	LSPB	+	published / reissued	
US2016317697 AA	20160615	LSAS	AS	ASSIGNMENT	OWNER NAME : BAXTER HEALTHCARE S.A., SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HEDRICH, HANS CHRISTIAN; HOEFINGHOFF, JORIS; REEL/FRAME:038921/0057 EFFECTIVE DATE : 20110524
US2016317697 AA	20160615	LSAS	AS	ASSIGNMENT	OWNER NAME : BAXTER INTERNATIONAL INC., ILLINOIS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HEDRICH, HANS CHRISTIAN; HOEFINGHOFF, JORIS; REEL/FRAME:038921/0057 EFFECTIVE DATE : 20110524
US8703170 BB	20140422	LSGT	+	granted / extensions (spc, cpc, pte)	
US8703170 BB	20140701	LSRE	CC	CERTIFICATE OF CORRECTION	
US9375505 BB	20160628	LSGT	+	granted / extensions (spc, cpc, pte)	
UY33320 A1	20111201	LSPB	+	published / reissued	
WO11124640 A1	20111013	LSPB	+	published / reissued	
WO11124640 A1	20120924	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 222109 COUNTRY OF REF DOCUMENT : IL
WO11124640 A1	20121001	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2795099 COUNTRY OF REF DOCUMENT : CA
WO11124640 A1	20121004	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013503115 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11124640 A1	20121004	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13639490 COUNTRY OF REF DOCUMENT : US
WO11124640 A1	20121004	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2013503115 COUNTRY OF REF DOCUMENT : JP
WO11124640 A1	20121007	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1201005302 COUNTRY OF REF DOCUMENT : TH
WO11124640 A1	20121008	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11124640 A1	20121018	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011237901 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20110407 KIND CODE OF REF DOCUMENT : A
WO11124640 A1	20121106	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20127029061 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT :

					A
WO11124640 A1	20121107	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012147275 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO11124640 A1	20150922	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012025391 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20121004
ZA201207502 A	20130626	LSGT	+	granted / extensions (spc, cpc, pte)	

10) Family number: 46192361 (US2010193999A)

Title: ELECTROSPINNING OF PTFE WITH HIGH VISCOSITY MATERIALS

Abstract: Source: US2010193999A An improved process for forming a PTFE mat is described. The process includes providing a dispersion with PTFE, a fiberizing polymer and a solvent wherein said dispersion has a viscosity of at least 50,000 cP. An apparatus is provided which comprises a charge source and a target a distance from the charge source. A voltage source is provided which creates a first charge at the charge source and an opposing charge at the target. The dispersion is electrostatically charged by contact with the charge source. The electrostatically charged dispersion is collected on the target to form a mat precursor which is heated to remove the solvent and the fiberizing polymer thereby forming the PTFE mat.



Classifications:
International (IPC 8-9): A01N25/10 A01N59/02 A01N59/16 A61F2/02 A61F2/04 A61F2/06 A61F2/07 A61F2/82 A61F2/92 A61L27/00 A61L27/14 A61L27/26 A61L27/50 A61L31/00 A61L31/04 A61L31/06 A61L31/10 A61L31/12 A61L31/14 A61M1/00 A61M1/14 B01D39/16 B05D1/00 B29B11/06 B29B13/02 B29C47/00 B29C47/02 B29C47/06 B29C55/04 B29C65/70 B29C67/08 B29C70/28 B29C71/02 B32B1/08 B32B15/085 B32B27/08 B32B27/12 B32B27/30 B32B27/32 B32B37/14 B32B37/26 B32B5/02 B32B5/18 B32B5/24 B32B5/26 B32B7/04 B32B9/00 B82Y5/00 C08F114/26 C08J3/00 C08J3/05 C08J9/232 C08L27/18 D01D10/02 D01D5/00 D01D5/04 D01D5/06 D01F6/00 D01F6/12 D01F6/48 D04H1/413 D04H1/42 D04H1/4318 D04H1/4326 D04H1/4374 D04H1/4382 D04H1/492 D04H1/54 D04H1/728 D04H1/74 D04H13/00 D04H3/02 D04H3/14 D04H3/16 D06C7/00 D06M10/00 D06N7/00 F16L11/12 H05B7/00 (Advanced/Invention);
B01D39/16 B29K105/00 B29K27/18 B29L31/00 B82Y5/00 B82Y99/00 (Advanced/Non-invention);
B29C67/08 C08L27/00 D04H1/42 D04H3/14 D04H3/16 (Core/Invention);
B29C (Subclass/Invention)
CPC: B05D1/007 B32B15/085 B32B27/08 B32B9/005 B32B1/08 D01D5/0038 D01F6/48 D01D5/0084 B29C65/02 B29C65/8253 B29C66/30326 B29C66/71 B29C66/712 B29C66/727 B29L2031/7532 A01N25/10 A01N59/16 A01N59/02 D01D5/0007 D01F1/103 A61L27/26 A61L27/507 A61L31/06 A61L31/129 A61L2400/12 B01D39/1623 B01D2239/025 B01D2239/0631 B82Y5/00 D01D5/003 D01D5/0076 D10B2321/042 A61F2/92 D01D5/06 A61L2400/18 D04H1/492 A61F2/04 F16L11/12 A61F2210/0076 A61F2250/0067 B32B5/022 Y10T428/1314 Y10T428/1355 Y10T428/1362 A61L31/048 Y10T442/60 Y10T442/656 Y10T442/674 Y10T442/681 Y10T428/31544 Y10T442/66 Y10T442/677 A61L31/146 A61F2210/0071 A61F2002/075 C08J3/005 C08J2327/18 C08J2471/02 D04H1/4318 D06N7/00 B29B13/023 B29K2027/18 B29L2031/755 C08J3/05 D04H1/54 A61F2240/001 D04H1/4382 D04H1/74 B29C55/04 B29B11/06 B29K2105/0094 B29K2995/0063 B29K2995/0077 C08J9/232 C08F114/26 D01D10/02 D04H1/413 B32B5/26 B32B2250/03 B32B2250/20 B32B2250/242 B32B2262/0253 A61F2/06 C08L71/02 C08L27/18 B32B27/322 D10B2509/06 B32B2535/00 A61L31/10 A61F2240/00 A61F2/82 A61L31/041 D01F6/12 D04H1/42 D04H1/4326 D04H3/02 B32B5/18 B32B7/04 A61F2002/072 B32B2266/025 B29C47/0014 B29C47/887 A61F2/07 D04H1/728
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US: 138/177 156/187 156/294 156/61 264/127 264/211.12 264/211.17 264/234 264/236 264/250 264/255 264/257 264/258 264/263 264/291 264/438 264/438P 264/447 264/465 264/465S 264/466 264/484 264/484P 264/628 264/638 264/642 424/409 424/617 424/618 424/641 424/654 424/702 427/2.24 428/34.5 428/35.8 428/36.1 428/422 428/97 442/327 442/340 442/351 442/378 442/382 442/394 442/397 442/401 521/135 523/406 526/255 604/8 623/1.13 623/1.15 623/1.42 623/1.44 623/1.46 623/23.7 977/788 977/788S 977/931 977/931S

Family:

Publication number	Publication date	Application number	Application date
CN102282301 A	20111214	CN201080004845	20100119
CN102282301 B	20140730	CN201080004845	20100119
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Priority:

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Probable Assignee: ZEUS IND PRODUCTS INC

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Assignee(s): ZEUS INDUSTRIAL PRODUCTS INC

Inventor(s): (std): ANNEAUX BRUCE L ; ANNEAUX BRUCE L BL ; BALLARD ROBERT ; BALLARD ROBERT L ; BALLARD ROBERT L RL ; GAMER DAVID P ; GARNER DAVID P ; GARNER DAVID P DP ; MANASCO JOSHUA L ; PUCKETT SABRINA D ; ROBERT L BALLARD ; ROBERT BALLARD ; DAVID P GARNER ; BRUCE L ANNEAUX

Agent(s): GOODMAN SIMON JOHN NYE; HOFSTETTER ALFONS J; HOFSTETTER SCHURACK AND PARTNER; USUI SHINICHI; OKABE YUZURU; TAKANASHI NORIMICHI; NEXSEN PRUET LLC; DORITY AND MANNING PA; WOMBLE CARLYLE SANDRIDGE AND RICE LLP; HARDAWAY JOHN B III ET AL; BATAVIA NEIL M; GORCZYNSKI JESSICA L

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN102282301 A	20111214	LSPB	+	published / reissued	
CN102282301 A	20111214	LSPB	+C06	PUBLICATION	
CN102282301 A	20140730	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN102282301 B	20140730	LSGT	+	granted / extensions (spc, cpc, pte)	

CN102470030 A	20120523	LSPB	+	published / reissued	
CN102470030 A	20120523	LSPB	+C06	PUBLICATION	
CN102470030 A	20150923	LSDW	-C05	DEEMED WITHDRAWAL (PATENT LAW BEFORE 1993)	
CN102596534 A	20120718	LSPB	+	published / reissued	
CN102596534 A	20120718	LSPB	+C06	PUBLICATION	
CN102596534 A	20150429	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
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CN102596534 B	20150429	LSGT	+	granted / extensions (spc, cpc, pte)	
CN103826669 A	20140528	LSPB	+	published / reissued	
CN103826669 A	20140528	LSPB	+C06	PUBLICATION	
CN103826669 A	20160106	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
CN104178926 A	20141203	LSPB	+	published / reissued	
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EP2384375 A2	20111214	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : ANNEAUX, BRUCE L.
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EP2384375 A2	20170118	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : D04H 1/4382 20120101ALI20161215BHEP
EP2384375 A2	20170118	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : D01F 6/48 20060101ALI20161215BHEP
EP2384375 A2	20170118	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : B05D 1/00 20060101ALI20161215BHEP
EP2384375 A2	20170118	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : D06N 7/00 20060101ALI20161215BHEP
EP2384375 A2	20170118	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : D04H 1/4318 20120101ALI20161215BHEP
EP2384375 A2	20170215	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20170119
EP2461766 A1	20120613	LSPB	+	published / reissued	
EP2461766 A1	20120613	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120220
EP2461766 A1	20130918	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20130819
EP2461766 A1	20130918	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D01F 6/12 20060101ALI20130812BHEP
EP2461766 A1	20130918	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/04 20130101AFI20130812BHEP
EP2461766 A1	20130918	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/04 20060101ALI20130812BHEP
EP2461766 A1	20130918	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D01D 5/00 20060101ALI20130812BHEP
EP2461766 A1	20160824	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20160722
EP2461959 A1	20120613	LSPB	+	published / reissued	
EP2461959 A1	20120613	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120220
EP2461959 A1	20130918	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20130819
EP2461959 A1	20130918	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/04 20130101ALI20130812BHEP
EP2461959 A1	20130918	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D01F 6/12 20060101ALI20130812BHEP
EP2461959 A1	20130918	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/04 20060101ALI20130812BHEP
EP2461959 A1	20130918	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D01D 5/00 20060101ALI20130812BHEP

EP2461959 A1	20130918	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B01D 39/16 20060101ALN20130812BHEP
EP2461959 A1	20130918	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B29C 47/00 20060101AFI20130812BHEP
EP2461959 A1	20160824	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20160722
EP2758000 A1	20140730	LSPB	+	published / reissued	
EP2758000 A1	20140730	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140311
EP2758000 A1	20140924	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : ANNEAUX, BRUCE L.
EP2758000 A1	20140924	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : PUCKETT, SABRINA D.
EP2758000 A1	20140924	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : BALLARD, ROBERT L.
EP2758000 A1	20150527	LSES	+RA4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20150430
EP2758000 A1	20150527	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 27/14 20060101ALI20150423BHEP
EP2758000 A1	20150527	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/02 20060101ALI20150423BHEP
EP2758000 A1	20150527	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61F 2/04 20130101AFI20150423BHEP
EP2758000 A1	20160525	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20151201
HK1170700 A1	20160318	LSGT	+	granted / extensions (spc, cpc, pte)	
IN00525DN2012 A	20150605	LSPB	+	published / reissued	
IN00526DN2012 A	20150828	LSPB	+	published / reissued	
IN00700KN2014 A	20140516	LSPB	+	published / reissued	
IN06058DN2011 A	20131011	LSPB	+	published / reissued	
JP2012515850 T2	20120712	LSPB	+	published / reissued	
JP2012515850 T2	20120720	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120719
JP2012515850 T2	20120720	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20120719
JP2012515850 T2	20130515	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2012515850 T2	20130522	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20130521
JP2012515850 T2	20130627	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20130618
JP2012515850 T2	20130628	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP2013231269 A2	20131114	LSPB	+	published / reissued	

JP2013231269 A2	20141001	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20140930
JP2013231269 A2	20150309	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150309
JP2013231269 A2	20150320	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2013231269 A2	20150325	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20150324
JP2013231269 A2	20150430	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20150422
JP2013501539 A2	20130117	LSPB	+	published / reissued	
JP2013501539 T2	20130117	LSPB	+	published / reissued	
JP2013501539 T2	20140110	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20140109
JP2013501539 T2	20140410	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20140409
JP2013501539 T2	20140716	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20140715
JP2013501857 A2	20130117	LSPB	+	published / reissued	
JP2013501857 T2	20130117	LSPB	+	published / reissued	
JP2014111378 A2	20140619	LSPB	+	published / reissued	
JP2014111378 A2	20141226	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20141225
JP2014111378 A2	20150625	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150625
JP2014111378 A2	20151130	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2014111378 A2	20151204	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20151203
JP2014111378 A2	20160104	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20151225
JP2014530677 T2	20141120	LSPB	+	published / reissued	
JP2016074229 A2	20160512	LSPB	+	published / reissued	
JP2016074229 A2	20160929	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20160929
JP2016074229 A2	20170217	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20170217
JP5300987 B2	20130925	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5300987 B2	20120720	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120719

JP5300987 B2	20120720	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20120719
JP5300987 B2	20130515	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP5300987 B2	20130522	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20130521
JP5300987 B2	20130627	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20130618
JP5300987 B2	20130628	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP5300987 B2	20160607	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP5456892 B2	20140402	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5456892 B2	20121222	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20121221
JP5456892 B2	20121222	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20121221
JP5456892 B2	20131204	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP5456892 B2	20131211	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20131210
JP5456892 B2	20140116	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20140108
JP5456892 B2	20140117	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP5456892 B2	20170110	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP5738928 B2	20150624	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5865400 B2	20160217	LSGT	+	granted / extensions (spc, cpc, pte)	
US2010193999 AA	20100805	LSPB	+	published / reissued	
US2010193999 AA	20100119	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT; GARNER, DAVID P.; REEL/FRAME:023826/0353 EFFECTIVE DATE : 20100114
US2011030885 AA	20110210	LSPB	+	published / reissued	
US2011030885 AA	20101027	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; REEL/FRAME:025202/0155

					EFFECTIVE DATE : 20101022
US2011030885 AA	20110830	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE ASSIGNEE NAME PREVIOUSLY RECORDED ON REEL 025202 FRAME 0155. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNEE NAME, ZEUS, INC., IS INCORRECT; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; REEL/FRAME:026825/0200 EFFECTIVE DATE : 20110829
US2011031656 AA	20110210	LSPB	+	published / reissued	
US2011031656 AA	20101027	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; GARNER, DAVID P.; SIGNING DATES FROM 20101022 TO 20101025; REEL/FRAME:025202/0257
US2011031656 AA	20110830	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE ASSIGNEE NAME PREVIOUSLY RECORDED ON REEL 025202 FRAME 0257. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNEE NAME, ZEUS, INC., IS INCORRECT; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; GARNER, DAVID P.; REEL/FRAME:026825/0247 EFFECTIVE DATE : 20110829
US2013023175 AA	20130124	LSPB	+	published / reissued	
US2013023175 AA	20130730	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT; GARNER, DAIVD P.; REEL/FRAME:030903/0068 EFFECTIVE DATE : 20100114
US2013053948 AA	20130228	LSPB	+	published / reissued	
US2013053948 AA	20120828	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; REEL/FRAME:028859/0372 EFFECTIVE DATE : 20110829
US2013059497 AA	20130307	LSPB	+	published / reissued	
US2013059497 AA	20120828	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; GARNER, DAVID P.; REEL/FRAME:028859/0314 EFFECTIVE DATE : 20110829
US2013079700 AA	20130328	LSPB	+	published / reissued	
US2013079700 AA	20121203	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BALLARD, ROBERT L.; ANNEAUX, BRUCE L.; PUCKETT, SABRINA D.; REEL/FRAME:029391/0806 EFFECTIVE DATE : 20121108
US2013238086 AA	20130912	LSPB	+	published / reissued	
US2013238086 AA	20130306	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF

					ASSIGNORS INTEREST; ASSIGNORS:BALLARD, ROBERT L.; ANNEAUX, BRUCE L.; PUCKETT, SABRINA D.; AND OTHERS; REEL/FRAME:029931/0865 EFFECTIVE DATE : 20130226
US2013316103 AA	20131128	LSPB	+	published / reissued	
US2013325109 AA	20131205	LSPB	+	published / reissued	
US2013325109 AA	20130806	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; REEL/FRAME:030946/0387 EFFECTIVE DATE : 20110829
US2014205642 AA	20140724	LSPB	+	published / reissued	
US2014205642 AA	20140416	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BALLARD, ROBERT L.; ANNEAUX, BRUCE L.; MANASCO, JOSHUA L.; REEL/FRAME:032681/0561 EFFECTIVE DATE : 20120113
US2015011139 AA	20150108	LSPB	+	published / reissued	
US2015011139 AA	20140717	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; GARNER, DAVID P.; REEL/FRAME:033332/0852 EFFECTIVE DATE : 20100114
US2015012082 AA	20150108	LSPB	+	published / reissued	
US2015012082 AA	20140717	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; REEL/FRAME:033333/0244 EFFECTIVE DATE : 20110829
US2015012108 AA	20150108	LSPB	+	published / reissued	
US2015012108 AA	20140717	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; GARNER, DAVID P.; REEL/FRAME:033333/0731 EFFECTIVE DATE : 20110829
US2015182668 AA	20150702	LSPB	+	published / reissued	
US2015182668 AA	20150305	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BALLARD, ROBERT L.; ANNEAUX, BRUCE L.; PUCKETT, SABRINA D.; AND OTHERS; REEL/FRAME:035091/0001 EFFECTIVE DATE : 20130226
US2015183940 AA	20150702	LSPB	+	published / reissued	
US2015183940 AA	20150305	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; GARNER, DAVID P.; REEL/FRAME:035091/0989 EFFECTIVE DATE : 20100114
US2016002430 AA	20160107	LSPB	+	published / reissued	

US2016002430 AA	20150921	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; GARNER, DAVID P.; REEL/FRAME:036609/0140 EFFECTIVE DATE : 20100114
US2016030154 AA	20160204	LSPB	+	published / reissued	
US2016030154 AA	20150921	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; REEL/FRAME:036608/0961 EFFECTIVE DATE : 20110829
US2016032505 AA	20160204	LSPB	+	published / reissued	
US2016032505 AA	20151022	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT; GARNER, DAVID P.; REEL/FRAME:036852/0407 EFFECTIVE DATE : 20100114
US2016060797 AA	20160303	LSPB	+	published / reissued	
US2016060797 AA	20150921	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; GARNER, DAVID P.; REEL/FRAME:036609/0488 EFFECTIVE DATE : 20100114
US2016289874 AA	20161006	LSPB	+	published / reissued	
US2016289874 AA	20160404	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; REEL/FRAME:038179/0033 EFFECTIVE DATE : 20110829
US2016296351 AA	20161013	LSPB	+	published / reissued	
US2016331512 AA	20161117	LSPB	+	published / reissued	
US8178030 BB	20120515	LSGT	+	granted / extensions (spc, cpc, pte)	
US8178030 BB	20100119	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT; GARNER, DAVID P.; REEL/FRAME:023826/0353 EFFECTIVE DATE : 20100114
US8178030 BB	20151028	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8257640 BB	20120904	LSGT	+	granted / extensions (spc, cpc, pte)	
US8257640 BB	20101027	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; GARNER, DAVID P.; SIGNING DATES FROM 20101022 TO 20101025; REEL/FRAME:025202/0257
US8257640 BB	20110830	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE ASSIGNEE NAME PREVIOUSLY

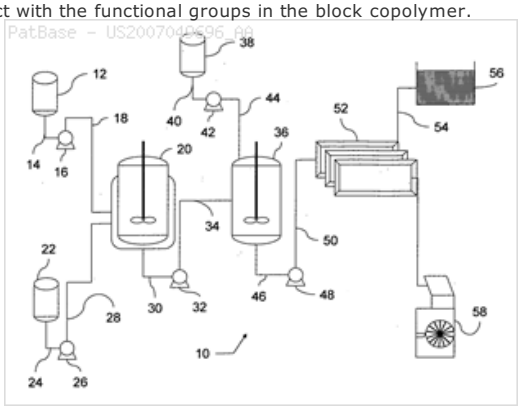
					RECORDED ON REEL 025202 FRAME 0257. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNEE NAME, ZEUS, INC., IS INCORRECT; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; GARNER, DAVID P.; REEL/FRAME:026825/0247 EFFECTIVE DATE : 20110829
US8257640 BB	20160217	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8262979 BB	20120911	LSGT	+	granted / extensions (spc, cpc, pte)	
US8262979 BB	20101027	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS, INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; REEL/FRAME:025202/0155 EFFECTIVE DATE : 20101022
US8262979 BB	20110830	LSAS	AS	ASSIGNMENT	OWNER NAME : ZEUS INDUSTRIAL PRODUCTS, INC., SOUTH CAROLINA DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE ASSIGNEE NAME PREVIOUSLY RECORDED ON REEL 025202 FRAME 0155. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNEE NAME, ZEUS, INC., IS INCORRECT; ASSIGNORS:ANNEAUX, BRUCE L.; BALLARD, ROBERT L.; REEL/FRAME:026825/0200 EFFECTIVE DATE : 20110829
US8262979 BB	20160224	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8992602 BB	20150331	LSGT	+	granted / extensions (spc, cpc, pte)	
US9034031 BB	20150519	LSGT	+	granted / extensions (spc, cpc, pte)	
WO10083530 A2	20100722	LSPB	+	published / reissued	
WO10083530 A3	20110714	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011546430 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO10083530 A3	20110718	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11017695 A1	20110210	LSPB	+	published / reissued	
WO11017695 A1	20120207	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012523994 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11017695 A1	20120207	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
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WO11017698 A1	20120207	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012523995 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11017698 A1	20120207	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
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					reissued
WO13044173 A1	20140320	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014532050 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO13044173 A1	20140324	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

11) Family number: 34244477 (US2007049696A)

Title: REACTIVE BLOCK COPOLYMERS

Abstract: Source: US2007049696A A process for making a block copolymer compatibilizer, comprising reacting an acrylic monomer that has functional groups with one or more vinyl monomers in the presence of a free radical initiator and a stable free radical to form a reaction product that includes residual unreacted acrylic monomer, and reacting one or more vinyl monomers with the reaction product to form a second block that incorporates the residual unreacted acrylic monomer. A blend composition comprising a first thermoplastic polymer, which has functional groups, a reactive block copolymer that has functional groups in two or more blocks, and a second thermoplastic polymer that is compatible with one block of the block copolymer, where the functional groups in the first thermoplastic react with the functional groups in the block copolymer.



Classifications:

International (IPC 8-9): A61K31/47 C04B35/634 C08F2/00 C08F2/38 C08F212/00 C08F222/00 C08F222/08 C08F269/00 C08F287/00 C08F293/00 C08F297/00 C08F297/02 C08F299/00 C08F4/04 C08F8/00 C08J11/04 C08J3/18 C08K3/34 C08K9/00 C08K9/04 C08K9/08 C08L23/12 C08L23/26 C08L33/14 C08L53/00 C08L63/10 C08L83/02 C09C3/10 C09J125/08 (Advanced/Invention); A61K31/47 C08F2/38 C08F287/00 C08F293/00 C08F297/00 C08F4/00 C08F8/00 C08J3/18 C08K3/00 C08K9/00 C08L53/00 C08L83/00 C09C3/10 (Core/Invention)

CPC: C08F269/00 C08K7/26 B82Y30/00 C08J5/005 C08J2333/04 C08L75/04 C08K3/346 C08F2/38 C08F293/00 C08F2800/10 C08F293/005 C08F2438/02 C08F2438/03 C08G63/91 C08G64/42 C08J7/16 C08J2453/00 C08L23/00 C08L23/10 C08L27/06 C08L51/06 C08L53/00 C08L67/00 C08L69/00 C08L2555/40 C08F222/00

European: B82Y30/00 C08F2/38 C08F222/00 C08F293/00 C08F293/00B C08F8/00 C08G63/91 C08G64/42 C08J5/00N C08J7/16 C08K3/34B C08K7/26 C08L23/00 C08L23/10 C08L27/06 C08L53/00 C08L67/00 C08L69/00 M08F438/02 M08F438/03 M08J333/04 M08J453/00 M08L51/06 M08L53/00 M08L555/40 M08L75/04

US: 521/40 521/40S 521/48 521/48P 521/49 521/49S 523/437 524/445 524/449 524/543 524/556 525/190 525/242 525/242P 525/262 525/294 525/298 525/299 525/301 525/302 525/303 525/309 525/53 525/88 525/88S 525/92.00BS 525/92.00EP 525/92.00ES 525/92.00JS 525/92.00LS 525/92.00MS 525/92.00RS 525/92B 525/92E 525/92J 525/92L 525/92M 525/92R 525/94 525/94S

Family:

Publication number	Publication date	Application number	Application date
AT526347 E	20111015	AT20060795329T	20060825
AT544820 E	20120215	AT20080719165T	20080226
BRPI0615377 A2	20110517	BR2006PI15377	20060825
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CA2679236 AA	20090826	CA20082679236	20080226
CA2679247 AA	20090826	CA20082679247	20080222
CA2679247 C	20141104	CA20082679247	20080222
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US2013144009 AA	20130606	US20130740237	20130113
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WO07023375 A2	20070301	WO2006IB02314	20060825
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WO08104851 A2	20080904	WO2008IB00413	20080226
WO08104851 A3	20081023	WO2008IB00413	20080226
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Priority:

EP20060795329 20060825
US20060508407 20060823
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WO2008IB00505 20080222

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT526347 E	20111015	LSGT	+	granted / extensions (spc, cpc, pte)	
AT526347 E	20120315	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT544820 E	20120215	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI0615377 A2	20110517	LSPB	+	published / reissued	
CA2620359 AA	20080226	LSPB	+	published / reissued	
CA2620359 AA	20080226	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2620359 AA	20080226	LSES	+EEER	EXAMINATION REQUEST	

CA2620359 C	20110510	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2679236 AA	20090826	LSPB	+	published / reissued	
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CA2679236 AA	20091126	LSES	+EEER	EXAMINATION REQUEST	
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CA2679247 AA	20160404	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20160222
CA2679247 C	20141104	LSGT	+	granted / extensions (spc, cpc, pte)	
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CN101248093 A	20080820	LSPB	+C06	PUBLICATION	
CN101248093 A	20110126	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN101248093 B	20110126	LSGT	+	granted / extensions (spc, cpc, pte)	
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EP1931716 A2	20120628	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : DE OWNER : MACRO-M S.A. DE C.V., MX REF LEGAL EVENT CODE : R081 REF DOCUMENT NUMBER : 602006024731 COUNTRY OF REF DOCUMENT : DE OLDPARTY : FORMER OWNER: CID CENTRO DE INVESTIGACION Y DESARROLLO, TECNOLOGICO S.A. DE C.V., ESTADO DE MEXICO, MX EFFECTIVE DATE : 20120509
EP1931716 A2	20120628	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : DE OWNER : RESIRENE S.A. DE C.V., MX REF LEGAL EVENT CODE : R081 REF DOCUMENT NUMBER : 602006024731 COUNTRY OF REF DOCUMENT : DE OLDPARTY : FORMER OWNER: CID CENTRO DE INVESTIGACION Y DESARROLLO, TECNOLOGICO S.A. DE C.V., ESTADO DE MEXICO, MX EFFECTIVE DATE : 20120509
EP1931716 A2	20120704	LSAS	RAP2	TRANSFER OF RIGHTS OF AN EP GRANTED PATENT	PARTYTYPE : OWNER OWNER : MACRO-M S.A. DE C.V.
EP1931716 A2	20120731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110928
EP1931716 A2	20120831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110928
EP1931716 A2	20120831	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : CH OWNER : MACRO-M, S.A. DE C.V. REF LEGAL EVENT CODE : PUE OLDPARTY : CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGICO, S.A. DE C.V.#AVENIDA DE LOS SAUCES NO 87, MANZANA 6, PARQUE INDUSTRIAL#LERMA ESTADO DE MEXICO C.P. 52000 (MX) - TRANSFER TO- MACRO-M, S.A. DE C.V.#PASEO DE LOS TAMARINDOS NO. 400 B PISO 26, COL. BOSQUES DE LAS LOMAS, DISTRITO FEDERAL,#05120 MEXICO (MX)
EP1931716 A2	20120905	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20120629
EP1931716 A2	20121025	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602006024731 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20120629
EP1931716 A2	20130329	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20120831
EP1931716 A2	20130424	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF	REF COUNTRY CODE : EP EFFECTIVE DATE : 20120825

				RENEWAL FEE	
EP1931716 A2	20130522	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1931716 A2	20130628	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20111228
EP1931716 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GB NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20120825
EP1931716 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20120825
EP1931716 A2	20140430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : TR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110928
EP1931716 A2	20140508	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : DE OWNER : RESIRENE S.A. DE C.V., MX REF LEGAL EVENT CODE : R081 REF DOCUMENT NUMBER : 602006024731 COUNTRY OF REF DOCUMENT : DE OLDPARTY : FORMER OWNER: MACRO-M S.A. DE C.V., MEXICO, MX EFFECTIVE DATE : 20140401
EP1931716 A2	20140530	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20120825
EP1931716 A2	20140731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20060825
EP1931716 A2	20151030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20150827 YEAR OF FEE PAYMENT : 10
EP1931716 A2	20160822	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 11
EP1931716 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160822 YEAR OF FEE PAYMENT : 11
EP1931716 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20160819 YEAR OF FEE PAYMENT : 11
EP1931716 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160822 YEAR OF FEE PAYMENT : 11

EP1931716 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160823 YEAR OF FEE PAYMENT : 11
EP1931716 B1	20110928	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2121774 A2	20091125	LSPB	+	published / reissued	
EP2121774 A2	20091125	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090925
EP2121774 A2	20100407	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20100308
EP2121774 A2	20120411	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08K 9/08 20060101AFI20120308BHEP
EP2121774 A2	20120411	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C09C 3/10 20060101ALI20120308BHEP
EP2121774 A2	20120411	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08L 53/00 20060101ALI20120308BHEP
EP2121774 A2	20120411	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08F 8/00 20060101ALI20120308BHEP
EP2121774 A2	20120704	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MACRO-M S.A. DE C.V.
EP2121774 A2	20120822	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2121774 A2	20120831	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2121774 A2	20120912	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2121774 A2	20120915	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 571991 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20120915
EP2121774 A2	20121018	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602008018190 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20121018
EP2121774 A2	20121128	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3
EP2121774 A2	20130102	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2393937 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 EFFECTIVE DATE : 20130102
EP2121774 A2	20130115	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 571991 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20120822
EP2121774 A2	20130125	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D EFFECTIVE DATE : 20120822
EP2121774 A2	20130131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT	REF COUNTRY CODE : NO DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE

				INFORM. FROM NAT. OFFICE TO EPO	DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20121122
EP2121774 A2	20130131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : HR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20121123
EP2121774 A2	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LV DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20121224
EP2121774 A2	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IS DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20121222
EP2121774 A2	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED	REF COUNTRY CODE : CY DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A

				VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : EE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CZ DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20130226 YEAR OF FEE PAYMENT : 06
EP2121774 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20130228 YEAR OF FEE PAYMENT : 06
EP2121774 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130227 YEAR OF FEE PAYMENT : 06
EP2121774 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130408 YEAR OF FEE PAYMENT : 06
EP2121774 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20130226 YEAR OF FEE PAYMENT : 06
EP2121774 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130408 YEAR OF FEE PAYMENT : 06
EP2121774 A2	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : RO DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130531	LSLE	-PG25	LAPSED IN A	REF COUNTRY CODE : IT

				CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20130531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20130226 YEAR OF FEE PAYMENT : 06
EP2121774 A2	20130531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20130226 YEAR OF FEE PAYMENT : 06
EP2121774 A2	20130731	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20130523
EP2121774 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BG DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20121122
EP2121774 A2	20130919	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602008018190 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20130523
EP2121774 A2	20130930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130228
EP2121774 A2	20131023	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20130222
EP2121774 A2	20131204	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2121774 A2	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130222
EP2121774 A2	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130222
EP2121774 A2	20140430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20140226 YEAR OF FEE PAYMENT : 07
EP2121774 A2	20140430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20140226 YEAR OF FEE PAYMENT : 07
EP2121774 A2	20140530	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20140226 YEAR OF FEE PAYMENT : 07
EP2121774 A2	20140731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20140417 YEAR OF FEE PAYMENT : 07
EP2121774 A2	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20140227 YEAR OF FEE PAYMENT : 07

EP2121774 A2	20150630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : TR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120822
EP2121774 A2	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : HU DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT; INVALID AB INITIO EFFECTIVE DATE : 20080222
EP2121774 A2	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130222
EP2121774 A2	20150901	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 602008018190 COUNTRY OF REF DOCUMENT : DE
EP2121774 A2	20150902	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : V1 EFFECTIVE DATE : 20150901
EP2121774 A2	20150930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150901
EP2121774 A2	20150930	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2121774 A2	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150228
EP2121774 A2	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150228
EP2121774 A2	20151127	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20151030
EP2121774 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150901
EP2121774 A2	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150302
EP2121774 A2	20160330	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20160330
EP2121774 A2	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150223
EP2121774 B1	20120822	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2125951 A2	20091202	LSPB	+	published /	

				reissued	
EP2125951 A2	20091202	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090925
EP2125951 A2	20100519	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20100416
EP2125951 A2	20111012	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08L 53/00 20060101AFI20110908BHEP
EP2125951 A2	20111012	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08F 8/00 20060101ALI20110908BHEP
EP2125951 A2	20111012	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08K 9/08 20060101ALI20110908BHEP
EP2125951 A2	20111012	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C09C 3/10 20060101ALI20110908BHEP
EP2125951 A2	20120208	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2125951 A2	20120215	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 544820 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20120215
EP2125951 A2	20120215	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2125951 A2	20120405	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602008013247 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20120405
EP2125951 A2	20120430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120320 YEAR OF FEE PAYMENT : 05
EP2125951 A2	20120430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20120227 YEAR OF FEE PAYMENT : 05
EP2125951 A2	20120531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120302 YEAR OF FEE PAYMENT : 05
EP2125951 A2	20120605	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2382135 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 EFFECTIVE DATE : 20120605
EP2125951 A2	20120606	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : VDEP EFFECTIVE DATE : 20120208
EP2125951 A2	20120704	LSAS	RAP2	TRANSFER OF RIGHTS OF AN EP GRANTED PATENT	OWNER NAME : MACRO-M S.A. DE C.V.
EP2125951 A2	20120725	LSRV	-LTIE	LT: INVALIDATION OF EUROPEAN PATENT OR PATENT EXTENSION	EFFECTIVE DATE : 20120208
EP2125951 A2	20120731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IS DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120608
EP2125951 A2	20120731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM	REF COUNTRY CODE : LT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE

				NAT. OFFICE TO EPO	FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20120731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20120731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NO DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120508
EP2125951 A2	20120831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120608
EP2125951 A2	20120831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20120831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LV DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20120831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20120831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120509
EP2125951 A2	20120831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20120831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : HR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20120831	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PUE OWNER NAME : MACRO-M, S.A. DE C.V. DESCRIPTION : CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGICO, S.A. DE C.V.#AVENIDA DE LOS SAUCES NO 87, MANZANA 6, PARQUE INDUSTRIAL#LERMA ESTADO DE MEXICO C.P. 52000 (MX) - TRANSFER TO- MACRO-M, S.A. DE C.V.#PASEO DE LOS

					TAMARINDOS NO. 400 B PISO 26, COL. BOSQUES DE LAS LOMAS, DISTRITO FEDERAL,#05120 MEXICO (MX)
EP2125951 A2	20120915	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 544820 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20120208
EP2125951 A2	20120920	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R081 REF DOCUMENT NUMBER : 602008013247 COUNTRY OF REF DOCUMENT : DE OWNER NAME : MACRO-M S.A. DE C.V., MX DESCRIPTION : FORMER OWNER: CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGICO, S.A. DE C.V., LERMA, MX EFFECTIVE DATE : 20120727
EP2125951 A2	20120920	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R081 REF DOCUMENT NUMBER : 602008013247 COUNTRY OF REF DOCUMENT : DE OWNER NAME : MACRO-M S.A. DE C.V., BOSQUES DE LAS LOMAS, MX DESCRIPTION : FORMER OWNER: CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGICO, S.A. DE C.V., LERMA, MX EFFECTIVE DATE : 20120727
EP2125951 A2	20120928	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120229
EP2125951 A2	20120928	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CY DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20121031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : EE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20121031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20121121	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2125951 A2	20121130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20121130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT

					EFFECTIVE DATE : 20120208
EP2125951 A2	20121130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : RO DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20121130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20121130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CZ DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20121130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20130116	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20121109
EP2125951 A2	20130130	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20120508
EP2125951 A2	20130131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20130131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120226
EP2125951 A2	20130307	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602008013247 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20121109
EP2125951 A2	20130430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120508
EP2125951 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130408 YEAR OF FEE PAYMENT : 06
EP2125951 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20130228 YEAR OF FEE PAYMENT : 06
EP2125951 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20130226 YEAR OF FEE PAYMENT : 06
EP2125951 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130227 YEAR OF FEE PAYMENT : 06
EP2125951 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID	REF COUNTRY CODE : CH PAYMENT DATE : 20130226

				TO NATIONAL OFFICE	YEAR OF FEE PAYMENT : 06
EP2125951 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130408 YEAR OF FEE PAYMENT : 06
EP2125951 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BG DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120508
EP2125951 A2	20140430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : TR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120208
EP2125951 A2	20140430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20140226 YEAR OF FEE PAYMENT : 07
EP2125951 A2	20140530	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120226
EP2125951 A2	20140530	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20140226 YEAR OF FEE PAYMENT : 07
EP2125951 A2	20140731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : HU DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080226
EP2125951 A2	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20140417 YEAR OF FEE PAYMENT : 07
EP2125951 A2	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20140227 YEAR OF FEE PAYMENT : 07
EP2125951 A2	20150901	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 602008013247 COUNTRY OF REF DOCUMENT : DE
EP2125951 A2	20150930	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2125951 A2	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150228
EP2125951 A2	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150228
EP2125951 A2	20151127	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20151030

EP2125951 A2	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150901
EP2125951 A2	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150302
EP2125951 A2	20160329	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20160329
EP2125951 A2	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150227
EP2125951 B1	20120208	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2373920 T3	20120210	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2382135 T3	20120605	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2393937 T3	20130102	LSGT	+	granted / extensions (spc, cpc, pte)	
MX2008002568 A1	20080630	LSPB	+	published / reissued	
MX2009009108 A1	20091214	LSPB	+	published / reissued	
MX2009009109 A1	20100308	LSPB	+	published / reissued	
MX2009009109 A1	20121116	LSGT	+FG	GRANT OR REGISTRATION	
MX2009009109 A1	20121204	LSAS	GB	TRANSFER OR ASSIGNMENT	
MX2011012820 A1	20120419	LSPB	+	published / reissued	
MX2011012821 A1	20120411	LSPB	+	published / reissued	
MX290490 B	20110927	LSGT	+	granted / extensions (spc, cpc, pte)	
MX305331 B	20121116	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2008111361 A	20091010	LSPB	+	published / reissued	
RU2008111361 A	20110410	LSWD	-FA92	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (LACK OF SUPPLEMENTARY MATERIALS SUBMITTED)	EFFECTIVE DATE : 20110302
RU2008111361 A	20111110	LSRE	+FZ9A	APPLICATION NOT WITHDRAWN (CORRECTION OF THE NOTICE OF WITHDRAWAL)	EFFECTIVE DATE : 20110908
RU2008111361 A	20120310	LSWD	-FA92	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (LACK OF SUPPLEMENTARY MATERIALS SUBMITTED)	EFFECTIVE DATE : 20120207
RU2008111361 A	20120320	LSRE	+FZ9A	APPLICATION NOT WITHDRAWN (CORRECTION OF THE NOTICE OF WITHDRAWAL)	EFFECTIVE DATE : 20120216
RU2478657 C2	20130410	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2478657 C2	20110410	LSWD	-FA92	ACKNOWLEDGEMENT	EFFECTIVE DATE : 20110302

				OF APPLICATION WITHDRAWN (LACK OF SUPPLEMENTARY MATERIALS SUBMITTED)	
RU2478657 C2	20111110	LSRE	+FZ9A	APPLICATION NOT WITHDRAWN (CORRECTION OF THE NOTICE OF WITHDRAWAL)	EFFECTIVE DATE : 20110908
RU2478657 C2	20120310	LSWD	-FA92	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (LACK OF SUPPLEMENTARY MATERIALS SUBMITTED)	EFFECTIVE DATE : 20120207
RU2478657 C2	20120320	LSRE	+FZ9A	APPLICATION NOT WITHDRAWN (CORRECTION OF THE NOTICE OF WITHDRAWAL)	EFFECTIVE DATE : 20120216
US2007049696 AA	20070301	LSPB	+	published / reissued	
US2007049696 AA	20060823	LSAS	AS	ASSIGNMENT	OWNER NAME : CID CENTRO DE INVESTIGACION DESARROLLO TECNOLOGICO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MONTIEL, ALFONSO GONZALEZ; SANTOS, LETICIA FLORES; GUERRA,ENRIQUE SALDIVAR; REEL/FRAME:018241/0717 EFFECTIVE DATE : 20060822
US2008033092 AA	20080207	LSPB	+	published / reissued	
US2008200601 AA	20080821	LSPB	+	published / reissued	
US2008200601 AA	20080425	LSAS	AS	ASSIGNMENT	OWNER NAME : CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGI DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SANTOS, LETICIA FLORES; MONTIEL, ALFONSO GONZALEZ; ALVARADO, MARIA DOLORES BAEZA; AND OTHERS; REEL/FRAME:020891/0442 EFFECTIVE DATE : 20080312
US2008200601 AA	20130410	LSAS	AS	ASSIGNMENT	OWNER NAME : MACRO-M S.A. DE C.V., MEXICO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGICO S.A.DE C.V.; REEL/FRAME:030194/0159 EFFECTIVE DATE : 20120424
US2010311849 AA	20101209	LSPB	+	published / reissued	
US2010311849 AA	20100813	LSAS	AS	ASSIGNMENT	OWNER NAME : CID CENTRO DE INVESTIGACION Y DESARROLLO TECHNOLOG DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MONTIEL, ALFONSO GONZALEZ; SANTOS, LETICIA FLORES; HERNANDEZ, PABLO ESPARZA; REEL/FRAME:024836/0024 EFFECTIVE DATE : 20100527
US2010311849 AA	20130410	LSAS	AS	ASSIGNMENT	OWNER NAME : MACRO-M S.A. DE C.V., MEXICO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGICO S.A.DE C.V.; REEL/FRAME:030194/0159 EFFECTIVE DATE : 20120424
US2010311920 AA	20101209	LSPB	+	published / reissued	
US2010311920 AA	20100813	LSAS	AS	ASSIGNMENT	OWNER NAME : CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGI DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MONTIEL, ALFONSO GONZALEZ; SANTOS, LETICIA FLORES; HERNANDEZ, PABLO

					ESPARZA; REEL/FRAME:024836/0323 EFFECTIVE DATE : 20100527
US2010311920 AA	20130410	LSAS	AS	ASSIGNMENT	OWNER NAME : MACRO-M S.A. DE C.V., MEXICO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGICO S.A.DE C.V.; REEL/FRAME:030194/0159 EFFECTIVE DATE : 20120424
US2012329911 AA	20121227	LSPB	+	published / reissued	
US2013144009 AA	20130606	LSPB	+	published / reissued	
US8344058 BB	20130101	LSGT	+	granted / extensions (spc, cpc, pte)	
US8344058 BB	20071019	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CID CENTRO DE INVESTIGACION Y DESARROLLO TECHNOLOG OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SANTOS, LETICIA FLORES; MONTIEL, ALFONSO GONZALEZ; ALVARADO, MARIA DOLORES BAEZA; REEL/FRAME:020019/0956 EFFECTIVE DATE : 20070227
US8344058 BB	20130410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MACRO-M S.A. DE C.V., MEXICO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGICO S.A. DE C.V.; REEL/FRAME:030194/0159 EFFECTIVE DATE : 20120424
US8344058 BB	20170101	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8344058 BB	20170221	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170101
US8357759 BB	20130122	LSGT	+	granted / extensions (spc, cpc, pte)	
US8357759 BB	20060823	LSAS	AS	ASSIGNMENT	OWNER NAME : CID CENTRO DE INVESTIGACION DESARROLLO TECNOLOGICO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MONTIEL, ALFONSO GONZALEZ; SANTOS, LETICIA FLORES; GUERRA,ENRIQUE SALDIVAR; REEL/FRAME:018241/0717 EFFECTIVE DATE : 20060822
US8357759 BB	20130410	LSAS	AS	ASSIGNMENT	OWNER NAME : MACRO-M S.A. DE C.V., MEXICO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGICO S.A.DE C.V.; REEL/FRAME:030194/0159 EFFECTIVE DATE : 20120424
US8357759 BB	20160610	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8557907 BB	20131015	LSGT	+	granted / extensions (spc, cpc, pte)	
US8557907 BB	20080425	LSAS	AS	ASSIGNMENT	OWNER NAME : CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGI DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SANTOS, LETICIA FLORES; MONTIEL, ALFONSO GONZALEZ; ALVARADO, MARIA DOLORES BAEZA; AND OTHERS; REEL/FRAME:020891/0442 EFFECTIVE DATE : 20080312
US8557907 BB	20130410	LSAS	AS	ASSIGNMENT	OWNER NAME : MACRO-M S.A.

					DE C.V., MEXICO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CID CENTRO DE INVESTIGACION Y DESARROLLO TECNOLOGICO S.A.DE C.V.; REEL/FRAME:030194/0159 EFFECTIVE DATE : 20120424
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WO07023375 A3	20080226	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200680031216.8 COUNTRY OF REF DOCUMENT : CN
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WO08104851 A3	20090826	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2679236 COUNTRY OF REF DOCUMENT : CA
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WO08104872 A2	20080904	LSPB	+	published / reissued	
WO08104872 A3	20090826	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2679247 COUNTRY OF REF DOCUMENT : CA
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WO10140040 A1	20101209	LSPB	+	published / reissued	
WO10140040 A1	20111205	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10140040 A1	20120704	LSNE	-122	EP: PCT APPLICATION NON-	REF DOCUMENT NUMBER : 10724584

ENTRY IN EUROPEAN PHASE

COUNTRY OF REF DOCUMENT : EP
KIND CODE OF REF DOCUMENT : A1

12) Family number: 62231739 (US2016121578A)

Title: HIGH PERFORMANCE MOLDABLE COMPOSITE

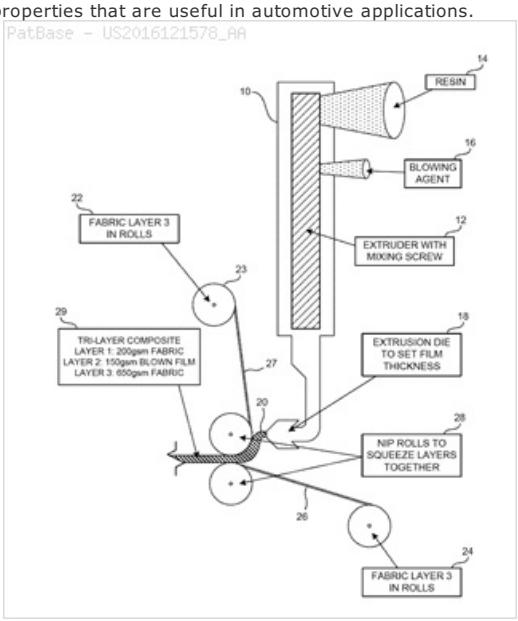
Abstract: Source: US20161215 78A A method of making a Bi-Layer or Tri-layer moldable composite with nonwoven fabrics and a blown film layer is described. Also described is a composition that provides both superior acoustic performance and excellent flex modulus for among other things automotive products and applications for use in interior and exterior structures. A blowing agent is used to create micro porous cells in a polymer non-woven structure. The cells or voids make the material lighter and allow the material to have superior acoustic properties that are useful in automotive applications.

Classifications:

International (IPC 8-9): B29C47/00 B29C65/00 B29C70/16 B32B27/12 B32B3/24 B32B37/00 B32B37/15 B32B37/20 B32B5/02 B32B5/08 B32B5/18 B32B5/20 B32B5/24 B60R13/08 B62D25/00 D04H1/435 D04H1/4382 D04H1/541 D04H1/55 D04H1/558 D04H3/153 D06N3/00 D06N7/00 E04B1/84 E04B1/86 E04B1/90 E04B1/94 E04B9/04 E04C2/20 E04F13/08 G10K11/168 G10K11/172 (Advanced/Invention);
B29C47/00 B29K105/00 B29K105/04 B29K67/00 B29L31/30 B32B38/04 C09K21/00 (Advanced/Non-invention)

CPC: B32B5/245 B32B5/022 B32B2250/02 B32B2262/0284 B32B2262/0276 B32B2266/025 B32B2266/06 B32B2605/08 B29K2105/041 B60R13/0815 B32B5/20 B29C66/4722 B32B2262/0253 B32B2262/14 B29K2067/003 D10B2401/16 D10B2331/04 D10B2401/04 B32B27/12 B32B2038/047 B32B2305/20 B32B2305/28 B29K2105/045 B29K2105/25 B29K2995/0001 B29K2995/0016 B29L2031/3005 B29K2023/065 B29L2009/00 B32B37/153 B32B2307/102 B29C47/0057 B29C47/0021 B29K2105/04 B32B37/203 D04H1/435 D04H1/541 D04H1/558 D04H1/55 B29C47/0042 B32B5/18 B32B5/22 B32B27/205 B32B27/304 B32B27/306 B32B27/32 B32B27/34 B32B27/36 B32B2266/0221 B32B2266/0235 B32B2266/0257 B32B2266/0264 B32B2270/00 B32B2307/306 B32B2307/3065 B32B2307/554 B32B2307/714 B32B2307/718 B32B2307/7265 B32B2605/00 B29C47/1072 B29C47/1081 B29C47/0064 D06N7/0002 E04B9/04 E04B9/0464 E04B1/942 D06N2209/02 D06N2209/067 B32B5/028 B32B5/08 D04H1/4382 E04B9/001

US: 156/231 156/244.11 181/290 264/103 264/45.3 428/221 442/370 442/373



Family:

Publication number	Publication date	Application number	Application date
AU2016204391 AA	20170119	AU20160204391	20160627
CA2889465 AA	20160429	CA20152889465	20150501
CA2889467 AA	20160429	CA20152889467	20150501
CA2906904 AA	20160429	CA20152906904	20151006
CA2934054 AA	20161227	CA20162934054	20160627
EP3015265 A1	20160504	EP20150162188	20150401
EP3015582 A2	20160504	EP20150162186	20150401
EP3015582 A3	20160824	EP20150162186	20150401
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EP3015583 A3	20160817	EP20150192094	20151029
EP3109041 A1	20161228	EP20160176357	20160627
US2016121578 AA	20160505	US20150631442	20150225
US2016121814 AA	20160505	US20150874947	20151005
US2016122924 AA	20160505	US20150633578	20150227
US2016376748 AA	20161229	US20160192303	20160624
US9533630 BB	20170103	US20150874947	20151005

Priority:

US20140072305P 20141029 US20150185575P 20150627 US20150631442 20150225
US20150633578 20150227 US20150874947 20151005 US20150185575P 20150727
US20160192303 20160624

Probable Assignee: NONWOVEN NETWORKS LLC

Assignee(s): (std): NONWOVEN NETWORK LLC ; NONWOVEN NETWORKS LLC

Assignee(s): TURRA JEAN MARIE ; FOSS STEPHEN W

Inventor(s): (std): FOSS STEPHEN ; FOSS STEPHEN W ; TURRA JEAN MARIE

Agent(s): SHELSTON IP PTY LTD; IP DELTA PLUS INC; CHAS HUDE A S; LERNER DAVID LITTENBERG KRUMHOLZ AND MENTLIK LLP

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU2016204391 AA	20170119	LSPB	+	published / reissued	
CA2889465 AA	20160429	LSPB	+	published / reissued	
CA2889467 AA	20160429	LSPB	+	published / reissued	
CA2906904 AA	20160429	LSPB	+	published /	

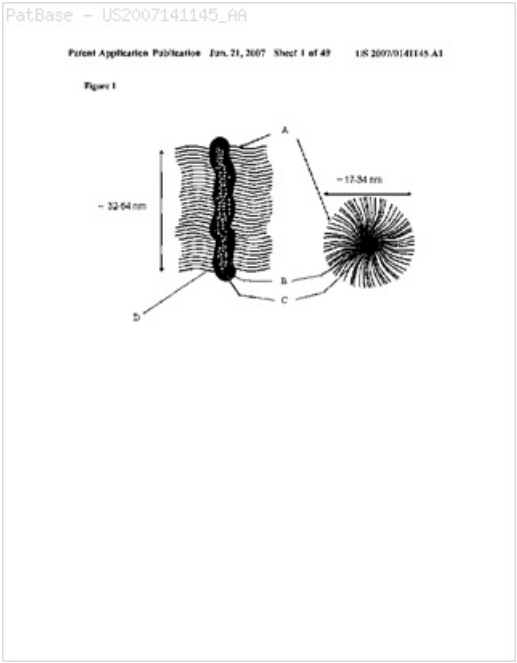
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EP3015582 A2	20160504	LSPB	+	published / reissued	
EP3015582 A2	20160824	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 1/435 20120101AFI20160715BHEP
EP3015582 A2	20160824	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 1/55 20120101ALI20160715BHEP
EP3015583 A2	20160504	LSPB	+	published / reissued	
EP3015583 A2	20160817	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B29C 47/00 20060101ALI20160713BHEP
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EP3015583 A2	20160817	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 1/435 20120101AFI20160713BHEP
EP3015583 A2	20160817	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 1/55 20120101ALI20160713BHEP
EP3109041 A1	20161228	LSPB	+	published / reissued	
EP3109041 A1	20161228	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160627
US2016121578 AA	20160505	LSPB	+	published / reissued	
US2016121578 AA	20150402	LSAS	AS	ASSIGNMENT	OWNER NAME : NONWOVEN NETWORKS LLC, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FOSS, STEPHEN W.; TURRA, JEAN-MARIE; SIGNING DATES FROM 20150327 TO 20150328; REEL/FRAME:035320/0689
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US2016121814 AA	20160114	LSAS	AS	ASSIGNMENT	OWNER NAME : NONWOVEN NETWORKS LLC, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FOSS, STEPHEN W.; TURRA, JEAN-MARIE; SIGNING DATES FROM 20151007 TO 20160111; REEL/FRAME:037491/0394
US2016122924 AA	20160505	LSPB	+	published / reissued	
US2016122924 AA	20150402	LSAS	AS	ASSIGNMENT	OWNER NAME : NONWOVEN NETWORKS LLC, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FOSS, STEPHEN W.; TURRA, JEAN-MARIE; SIGNING DATES FROM 20150327 TO 20150328; REEL/FRAME:035320/0744
US2016376748 AA	20161229	LSPB	+	published / reissued	
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US2016376748 AA	20160826	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NONWOVEN NETWORK LLC, FLORIDA

					OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FOSS, STEPHEN W.; TURRA, JEAN-MARIE; REEL/FRAME:039555/0262 EFFECTIVE DATE : 20160627
US9533630 BB	20170103	LSGT	+	granted / extensions (spc, cpc, pte)	

13) Family number: 34579275 (US2007141145A)

Title: HYDROPHOBIC CORE CARRIER COMPOSITIONS FOR DELIVERY OF THERAPEUTIC AGENTS, METHODS OF MAKING AND USING THE SAME

Abstract: Source: US2007141145A The present invention relates, in part, to a biocompatible hydrophobic-core carrier comprising a carrier, and a plurality of hydrophobic groups covalently linked to the **polymeric** carrier. The hydrophobic groups are capable of dissociably linking load molecules such as therapeutic agents. The hydrophobic-core carrier may also comprise protective side chains, orienting molecules, and targeting molecules.



Classifications:
International (IPC 8-9): A61K31/35 A61K31/355 A61K31/37 A61K31/375 A61K31/44 A61K31/4439 A61K38/00 A61K38/21 A61K38/22 A61K38/23 A61K38/24 A61K38/25 A61K38/26 A61K38/27 A61K38/48 A61K39/39 A61K39/395 A61K45/00 A61K47/30 A61K47/32 A61K47/34 A61K47/36 A61K47/42 A61K47/48 A61K51/06 A61K9/14 A61K9/20 A61K9/22 A61P1/00 A61P3/10 A61P31/04 A61P31/12 A61P35/00 A61P37/04 A61P43/00 A61P5/00 A61P5/06 A61P5/18 A61P5/24 A61P5/30 A61P5/50 A61P7/04 (Advanced/Invention);
C07K17/02 (Advanced/Non-invention);
A61K31/35 A61K31/352 A61K31/37 A61K31/375 A61K31/44 A61K31/4427 A61K38/00 A61K38/21 A61K38/22 A61K38/23 A61K38/24 A61K38/25 A61K38/26 A61K38/27 A61K38/43 A61K39/39 A61K39/395 A61K45/00 A61K47/30 A61K47/32 A61K47/34 A61K47/36 A61K47/48 A61K51/02 A61K9/14 A61K9/20 A61K9/22 A61P3/00 (Core/Invention);
C07K17/00 (Core/Non-invention)
International (IPC 1-7): A61K47/30
CPC: A61K38/09 A61K38/11 A61K38/13 A61K38/18 A61K38/1816 A61K38/185 A61K38/191 A61K38/193 A61K38/20 A61K38/2006 A61K38/2013 A61K38/2026 A61K38/204 A61K38/2053 A61K38/2066 A61K38/208 A61K38/21 A61K38/212 A61K38/215 A61K38/217 A61K38/22 A61K38/2242 A61K38/2264 A61K38/23 A61K38/27 A61K38/28 A61K38/29 A61K38/30 A61K38/31 A61K38/37 A61K38/4846 A61K38/49 A61K38/1808 A61K38/1841 A61K38/2207 A61K47/48215 A61K31/4439 A61K47/32 A61K31/44 A61K47/42 A61K47/48315 A61K38/26 A61K47/488
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Family:

Publication number	Publication date	Application number	Application date
AU2006330610 AA	20070705	AU20060330610	20061219
AU2006330610 BB	20120816	AU20060330610	20061219
CA2633070 AA	20080612	CA20062633070	20061219
CA2633070 C	20160308	CA20062633070	20061219
CN101365490 A	20090211	CN200680052127	20061219
CN101365490 B	20121128	CN200680052127	20061219
EP1971372 A2	20080924	EP20060846696	20061219
EP1971372 A4	20130529	EP20060846696	20061219
IN05068DN2008 A	20080926	IN2008DN05068	20080612
IN280639 B	20170303	IN2008DN05068	20080612
JP2009520040 T2	20090521	JP20080547735T	20061219
JP2013177408 A2	20130909	JP20130094413	20130426
JP2014132036 A2	20140717	JP20140082502	20140414
JP2016074744 A2	20160512	JP20160020812	20160205
KR101529318 B1	20150616	KR20087017728	20061219
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KR20140093292 A	20140725	KR20147017736	20061219
KR20150125732 A	20151109	KR20157030760	20061219
US2007141145 AA	20070621	US20060613183	20061219
US2014154203 AA	20140605	US20130087523	20131122
WO07076371 A2	20070705	WO2006US62328	20061219
WO07076371 A3	20080117	WO2006US62328	20061219

Priority:

JP20080547735 20061219 JP20080547735T 20061219 US20050813629 20051219
JP20130094413 20061219 JP20140082502 20061219 JP20160020812 20160205
US20050813629P 20051219 US20060613183 20061219 WO2006US62328 20061219
US20130087523 20131122

Probable Assignee: PHARMAIN LTD

Assignee(s): (std): BOLOTIN ELIJAH M ; CASTILLO GERARDO M ; PHARMALN LTD ; PHARMAIN LTD ; PHARMAIN CORP

Assignee(s): NATIONAL INSTITUTES OF HEALTH NIH US DEPT OF HEALT ; NATIONAL INSTITUTES OF HEALTH NIH US DEPT OF HEALTH AND HUMAN SERVICES DHHS US GOVERNMENT

Inventor(s): (std): GERARDO M CASTILLO ; CASTILLO GERARDO M ; BOLOTIN ELIJAH M

Inventor(s): BOLOTIN ELIJAH ; CASTILLO GERARDO ; ELIJAH M BOLOTIN

Agent(s): CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; RICHES MCKENZIE AND HERBERT LLP; ELSY DAVID ET AL; DARBY AND DARBY PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU2006330610 AA	20070705	LSPB	+	published / reissued	
AU2006330610 AA	20121213	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2006330610 BB	20120816	LSGT	+	granted / extensions (spc, cpc, pte)	
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CA2633070 AA	20080612	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2633070 AA	20111205	LSES	+EEER	EXAMINATION REQUEST	
CA2633070 AA	20111214	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20111205
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CN101365490 A	20121128	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN101365490 B	20121128	LSGT	+	granted / extensions (spc, cpc, pte)	
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EP1971372 A2	20080924	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080703
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EP1971372 A2	20130529	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20130426
EP1971372 A2	20160106	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20151207
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IN280639 B	20170303	LSGT	+	granted / extensions (spc, cpc, pte)	
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JP2009520040 T2	20100925	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20100924
JP2009520040 T2	20121029	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20121026
JP2009520040 T2	20130427	LSRE	A524	WRITTEN SUBMISSION OF COPY OF AMENDMENT UNDER SECTION 19 (PCT)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A524 EFFECTIVE DATE : 20130426
JP2009520040 T2	20130518	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20130426
JP2009520040 T2	20130702	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20130701
JP2009520040 T2	20131122	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20131121
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JP2013177408 A2	20140423	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20140422
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JP2013177408 A2	20150618	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150618
JP2013177408 A2	20150706	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20150618
JP2013177408 A2	20150713	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20150710
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JP2014132036 A2	20160205	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160205
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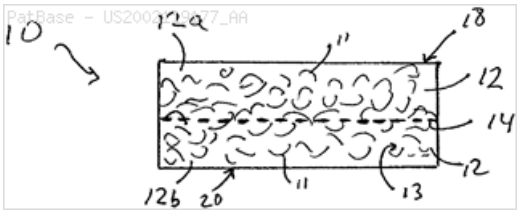
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JP2014132036 A2	20160217	LSWD	-A761	WRITTEN WITHDRAWAL OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A761 EFFECTIVE DATE : 20160217
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KR20080092923 A	20111215	LSES	A201	REQUEST FOR EXAMINATION	
KR20080092923 A	20140224	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20080092923 A	20140626	LSRE	AMND	AMENDMENT	
KR20080092923 A	20140903	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
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KR20080092923 A	20150610	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
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KR20140093292 A	20141022	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20140093292 A	20150825	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20150125732 A	20151109	LSPB	+	published / reissued	
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KR20150125732 A	20151201	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
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US2007141145 AA	20070612	LSAS	AS	ASSIGNMENT	OWNER NAME : PHARMAIN, LTD., WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CASTILLO, GERARDO M.; BOLOTIN, ELIJAH M.; REEL/FRAME:019414/0234 EFFECTIVE DATE : 20070611
US2007141145 AA	20071115	LSAS	AS	ASSIGNMENT	OWNER NAME : PHARMAIN CORPORATION, WASHINGTON DESCRIPTION : MERGER AND CHANGE OF NAME; ASSIGNOR:PHARMAIN, LTD.; REEL/FRAME:020119/0442 EFFECTIVE DATE : 20071105
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US2014154203 AA	20140605	LSPB	+	published / reissued	
WO07076371 A2	20070705	LSPB	+	published /	

				reissued	
WO07076371 A3	20080612	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2633070 COUNTRY OF REF DOCUMENT : CA
WO07076371 A3	20080618	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008547735 COUNTRY OF REF DOCUMENT : JP
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WO07076371 A3	20080707	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006330610 COUNTRY OF REF DOCUMENT : AU
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WO07076371 A3	20080731	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200680052127.1 COUNTRY OF REF DOCUMENT : CN

14) Family number: 28213580 (US2002119177A)

Title: REINFORCED FOAM IMPLANTS WITH ENHANCED INTEGRITY FOR SOFT TISSUE REPAIR AND REGENERATION

Abstract: Source: US2002119177A A biocompatible tissue repair stimulating implant or "scaffold" device, and methods for making and using such a device, are provided. The implant includes one or more layers of a bioabsorbable **polymeric** foam having pores with an open cell pore structure. A reinforcement component is also present within the implant to contribute enhanced mechanical and handling properties. The implant houses a biological component that may be released to tissue adjacent the location in which the implant is implanted to faciliate and/or expedite the healing of tissue. This biological component resides primarily within the foam component of the implant, being incorporated within pores formed within the foam.



Classifications:
International (IPC 8-9): A61B17/56 A61F13/00 A61F2/00 A61F2/02 A61F2/08 A61F2/30 A61F2/38 A61L27/00 A61L27/16 A61L27/18 A61L27/22 A61L27/44 A61L27/46 A61L27/48 A61L27/56 A61L27/58 A61L31/12 A61L31/14 (Advanced/Invention);
A61B17/56 A61F2/02 A61F2/08 A61F2/28 A61F2/30 A61F2/38 A61L27/00 (Advanced/Non-invention);
A61B17/56 A61F13/00 A61F2/00 A61F2/02 A61F2/08 A61F2/30 A61F2/38 A61L27/00 A61L31/12 A61L31/14 (Core/Invention);
A61F2/02 A61F2/28 (Core/Non-invention)
International (IPC 1-7): A61B17/56 A61F13/00 A61F2/00 A61F2/02 A61F2/08 A61F2/36 A61F2/38 A61F9/14 A61K2/02 A61K31/715 A61K38/18 A61K38/19 A61K39/12 A61K45/00 A61K48/00 A61K9/14 A61L27/00 A61L27/16 A61L27/18 A61L27/22 A61L27/24 A61L27/40 A61L27/44 A61L27/54 A61L27/56 A61L27/58 B29C44/12 B32B3/12
CPC: A61F2/0063 A61L27/46 A61L27/58 A61L31/127 A61L31/128 A61L31/129 A61L31/146 A61L31/148 A61F2/0045 A61F2/08 A61F2/30756 A61F2/3872 A61F2002/2817 A61F2002/30004 A61F2002/30011 A61F2002/30062 A61F2002/30677 A61F2002/30766 A61F2002/3092 A61F2002/30957 A61F2002/30971 A61F2210/0004 A61F2240/001 A61F2240/004 A61F2250/0014 A61F2250/0023 A61F2250/0067 Y10T428/24149 A61L27/48 A61L27/56 A61L27/446 A61L27/44
European: A61F2/00B6B4 A61F2/00H A61F2/30C A61L27/44 A61L27/44R A61L27/46 A61L27/48 A61L27/56 A61L27/58 A61L31/12D10 A61L31/12D4 A61L31/12D6 A61L31/14H A61L31/14K K61F2/00N K61F2/08B
US: 264/46.1 264/46.100P 423/426 423/484 423/486 424/204.1 424/422 424/422P 424/423 424/423P 424/426 424/486 424/85.1 424/93.21 424/93.72 424/93.720S 428/116 514/12 514/13.6 514/16.1 514/16.5 514/19.1 514/44 514/44R 514/54 514/8.1 514/8.2 514/8.5 514/8.8 514/8.9 514/9.1 514/9.3 514/9.4 514/9.5 514/9.6 623/23.72 623/23.720P 623/23.75 623/23.750S

Family:

Publication number	Publication date	Application number	Application date
AU200197396 A5	20020627	AU20010097396D	20011221
AU200197397 A5	20020627	AU20010097397D	20011221
AU762855 B2	20030710	AU20010097396	20011221
AU762895 B2	20030710	AU20010097397	20011221
CA2365376 AA	20020621	CA20012365376	20011219
CA2365376 C	20060328	CA20012365376	20011219
CA2365543 AA	20020621	CA20012365543	20011219
CA2365543 C	20050614	CA20012365543	20011219
DE60106183 D1	20041111	DE20016006183	20011221
DE60106183 T2	20051013	DE20016006183T	20011221
DE60134710 D1	20080821	DE20016034710	20011221
EP1216717 A1	20020626	EP20010310810	20011221
EP1216717 B1	20080709	EP20010310810	20011221
EP1216718 A1	20020626	EP20010310843	20011221
EP1216718 B1	20041006	EP20010310843	20011221
EP1987850 A1	20081105	EP20080012231	20011221
EP1987850 B1	20160629	EP20080012231	20011221
JP2002272833 A2	20020924	JP20010388040	20011220
JP2002320631 A2	20021105	JP20010388080	20011220
JP2006334430 A2	20061214	JP20060241690	20060906
JP4203569 B2	20090107	JP20010388080	20011220
JP4480928 B2	20100616	JP20010388040	20011220
JP4558694 B2	20101006	JP20060241690	20060906
US2002119177 AA	20020829	US20000747488	20001221
US2002120348 AA	20020829	US20000747489	20001221
US2002127265 AA	20020912	US20010022182	20011214
US2003147935 AA	20030807	US20020320751	20021216
US2003193104 AA	20031016	US20030458615	20030610
US2006067967 AA	20060330	US20050280189	20051116
US6599323 BB	20030729	US20000747489	20001221
US6852330 BB	20050208	US20000747488	20001221
US6884428 BB	20050426	US20020320751	20021216
US8691259 BB	20140408	US20050280189	20051116

Priority:

CA20012365376 20011219 CA20012365543 20011219 EP20010310810 20011221
JP20010388040 20011220 US20000747489 20001221 US20000747488 20001221
US20030458615 20030610 US20050280189 20051116 US20020320751 20021216
US20010022182 20011214

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	KELLY R ; BOWMAN STEVEN ; BINETTE FRANCOIS ; MELICAN MORA C ; ALIREZA REZANIA ; ANGELO G SCOPELIANOS ; BOWMAN STEVEN M ; FRANCOIS BINETTE ; IKSOO CHUN ; IZI BRUKER ; JOHN MCALLEN III ; JULIA HWANG ; KELLY R BROWN ; MCALLEN JOHN ; MCALLEN JOHN III
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Designated states:	DE FR GB IT

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU200197396 A5	20020627	LSPB	+	published / reissued	
AU200197396 A5	20020228	LSRE	DA3	AMENDMENTS MADE SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS: AMEND THE PRIORITY DETAILS TO READ 09/747489 US 20001221, 09/747488US 20001221 AND 10/022182 US 20011214
AU200197397 A5	20020627	LSPB	+	published / reissued	
AU762855 B2	20030710	LSGT	+	granted / extensions (spc, cpc, pte)	
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AU762855 B2	20031106	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU762895 B2	20030710	LSGT	+	granted / extensions (spc, cpc, pte)	
AU762895 B2	20031106	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
CA2365376 AA	20020621	LSPB	+	published / reissued	
CA2365376 AA	20011219	LSES	+EEER	EXAMINATION REQUEST	
CA2365376 C	20060328	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2365543 AA	20020621	LSPB	+	published / reissued	
CA2365543 AA	20011219	LSES	+EEER	EXAMINATION REQUEST	
CA2365543 AA	20150131	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20141219
CA2365543 C	20050614	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60106183 D1	20051006	LSOP	-8363	OPPOSITION AGAINST THE PATENT	
DE60106183 T2	20051013	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60134710 D1	20090625	LSOP	-8363	OPPOSITION AGAINST THE PATENT	
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EP1216717 A1	20030129	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20021202
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EP1216717 A1	20030917	LSES	+17Q	FIRST	EFFECTIVE DATE : 20030731

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EP1216717 A1	20070926	LSRE	RTI1	TITLE (CORRECTION)	DESCRIPTION : METHOD OF MAKING A REINFORCED TISSUE IMPLANT
EP1216717 A1	20080709	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1216717 A1	20090331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20081220 YEAR OF FEE PAYMENT : 08
EP1216717 A1	20090430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20081212 YEAR OF FEE PAYMENT : 08
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EP1216717 A1	20090529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20081219 YEAR OF FEE PAYMENT : 08
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EP1216718 A1	20090430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20081212 YEAR OF FEE PAYMENT : 08
EP1216718 A1	20090529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20081219 YEAR OF FEE PAYMENT : 08
EP1216718 A1	20090630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20081217 YEAR OF FEE PAYMENT : 08
EP1216718 A1	20100430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20091221 YEAR OF FEE PAYMENT : 09
EP1216718 A1	20100430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL	REF COUNTRY CODE : GB PAYMENT DATE : 20091216 YEAR OF FEE PAYMENT : 09

				OFFICE	
EP1216718 A1	20100430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20091218 YEAR OF FEE PAYMENT : 09
EP1216718 A1	20100630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20091217 YEAR OF FEE PAYMENT : 09
EP1216718 A1	20110131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20101224 YEAR OF FEE PAYMENT : 10
EP1216718 A1	20110331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20101215 YEAR OF FEE PAYMENT : 10
EP1216718 A1	20110331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20101222 YEAR OF FEE PAYMENT : 10
EP1216718 A1	20110531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20101215 YEAR OF FEE PAYMENT : 10
EP1216718 A1	20120131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20111219 YEAR OF FEE PAYMENT : 11
EP1216718 A1	20120209	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R064 REF DOCUMENT NUMBER : 60106183 COUNTRY OF REF DOCUMENT : DE
EP1216718 A1	20120209	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R103 REF DOCUMENT NUMBER : 60106183 COUNTRY OF REF DOCUMENT : DE
EP1216718 A1	20120905	LSOP	-R26	OPPOSITION FILED (CORRECTION)	OPPONENT NAME : LEPERE, MARC EFFECTIVE DATE : 20050706
EP1216718 A1	20130206	LSRV	-27W	REVOKED	EFFECTIVE DATE : 20120209
EP1216718 A1	20130206	LSRV	-GBPR	GB: PATENT REVOKED UNDER ART. 102 OF THE EP CONVENTION DESIGNATING THE UK AS CONTRACTING STATE	EFFECTIVE DATE : 20120209
EP1216718 A1	20130228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20121219 YEAR OF FEE PAYMENT : 12
EP1216718 A1	20130228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20121218 YEAR OF FEE PAYMENT : 12
EP1216718 A1	20130328	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R107 REF DOCUMENT NUMBER : 60106183 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20130328
EP1216718 A1	20130329	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130107 YEAR OF FEE PAYMENT : 12
EP1216718 B1	20041006	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1987850 A1	20081105	LSPB	+	published / reissued	
EP1987850 A1	20090304	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : MELICAN, MORA CAROLYNNE
EP1987850 A1	20090304	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : LI, YUFU

EP1987850 A1	20090304	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BROWN, KELLY R.
EP1987850 A1	20090304	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : CHUN, IKSOO
EP1987850 A1	20090304	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : MCALLEN III. JOHN
EP1987850 A1	20090304	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : REZANIA, ALIREZA
EP1987850 A1	20090304	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : SCOPELLIANOS, ANGELO G.
EP1987850 A1	20090304	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : VYAKARNAM, MURTY N.
EP1987850 A1	20090603	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090421
EP1987850 A1	20090624	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090520
EP1987850 A1	20090708	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	COUNTRY OF REF DOCUMENT : DE COUNTRY OF REF DOCUMENT : FR COUNTRY OF REF DOCUMENT : GB COUNTRY OF REF DOCUMENT : IT
EP1987850 A1	20160113	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20151217
EP1987850 A1	20160622	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20160519
EP1987850 A1	20160629	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1987850 A1	20160811	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 60149999 COUNTRY OF REF DOCUMENT : DE
EP1987850 A1	20161111	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 16
EP1987850 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20161213 YEAR OF FEE PAYMENT : 16
EP1987850 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20161111 YEAR OF FEE PAYMENT : 16
EP1987850 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20161221 YEAR OF FEE PAYMENT : 16
EP1987850 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20161221 YEAR OF FEE PAYMENT : 16
EP1987850 B1	20160629	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2002272833 A2	20020924	LSPB	+	published / reissued	
JP2002320631 A2	20021105	LSPB	+	published / reissued	
JP2006334430 A2	20061214	LSPB	+	published / reissued	
JP4203569 B2	20090107	LSGT	+	granted / extensions (spc, cpc, pte)	

JP4203569 B2	20041118	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20041117
JP4203569 B2	20080116	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080115
JP4203569 B2	20080624	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080623
JP4203569 B2	20080805	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4203569 B2	20080813	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080812
JP4203569 B2	20080814	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4203569 B2	20080910	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080909
JP4203569 B2	20080918	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080910
JP4203569 B2	20081008	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20080909
JP4203569 B2	20081024	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20111024 YEAR OF FEE PAYMENT : 3
JP4203569 B2	20081024	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4203569 B2	20111004	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20121024 YEAR OF FEE PAYMENT : 4
JP4203569 B2	20121002	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20131024 YEAR OF FEE PAYMENT : 5
JP4203569 B2	20151006	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP4480928 B2	20100616	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4480928 B2	20041118	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20041117
JP4480928 B2	20050831	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20050830
JP4480928 B2	20060215	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20060214
JP4480928 B2	20060215	LSRE	A524	WRITTEN SUBMISSION OF COPY OF AMENDMENT UNDER SECTION 19 (PCT)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A524 EFFECTIVE DATE : 20060214
JP4480928 B2	20060510	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20060509
JP4480928 B2	20060907	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523

					EFFECTIVE DATE : 20060906
JP4480928 B2	20060907	LSRE	A524	WRITTEN SUBMISSION OF COPY OF AMENDMENT UNDER SECTION 19 (PCT)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A524 EFFECTIVE DATE : 20060906
JP4480928 B2	20061111	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20061016
JP4480928 B2	20061120	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20061117
JP4480928 B2	20070213	LSAL	-A912	REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A912 EFFECTIVE DATE : 20070209
JP4480928 B2	20070323	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20070322
JP4480928 B2	20100218	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4480928 B2	20100325	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100317
JP4480928 B2	20100326	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4480928 B2	20130228	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130326 YEAR OF FEE PAYMENT : 3
JP4480928 B2	20130305	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140326 YEAR OF FEE PAYMENT : 4
JP4480928 B2	20150310	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP4558694 B2	20101006	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4558694 B2	20060908	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060906
JP4558694 B2	20070912	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070911
JP4558694 B2	20071011	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20070911
JP4558694 B2	20081127	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20081126
JP4558694 B2	20100310	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100309
JP4558694 B2	20100602	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100601
JP4558694 B2	20100617	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4558694 B2	20100623	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100622

JP4558694 B2	20100624	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4558694 B2	20100729	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100721
JP4558694 B2	20100730	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4558694 B2	20100802	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130730 YEAR OF FEE PAYMENT : 3
JP4558694 B2	20150707	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
US2002119177 AA	20020829	LSPB	+	published / reissued	
US2002120348 AA	20020829	LSPB	+	published / reissued	
US2002127265 AA	20020912	LSPB	+	published / reissued	
US2002127265 AA	20020219	LSAS	AS	ASSIGNMENT	OWNER NAME : ETHICON, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOWMAN, STEVEN M.; BRUKER, IZI; REZANIA, ALIREZA; AND OTHERS; REEL/FRAME:012572/0715; SIGNING DATES FROM 20020117 TO 20020127
US2002127265 AA	20140212	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY MITEK, LLC, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ETHICON, INC.; REEL/FRAME:032203/0854 EFFECTIVE DATE : 20140212
US2003147935 AA	20030807	LSPB	+	published / reissued	
US2003193104 AA	20031016	LSPB	+	published / reissued	
US2006067967 AA	20060330	LSPB	+	published / reissued	
US6599323 BB	20030729	LSGT	+	granted / extensions (spc, cpc, pte)	
US6599323 BB	20010504	LSAS	AS	ASSIGNMENT	OWNER NAME : ETHICON, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICAN, MORA C.; LI, YUFU; BROWN, KELLY R.; AND OTHERS; REEL/FRAME:011778/0360; SIGNING DATES FROM 20010410 TO 20010420
US6599323 BB	20061222	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6599323 BB	20110103	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6599323 BB	20150107	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6852330 BB	20050208	LSGT	+	granted / extensions (spc, cpc, pte)	
US6852330 BB	20010604	LSAS	AS	ASSIGNMENT	OWNER NAME : ETHICON, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOWMAN, STEVEN M.; BRUKER, IZI; REZANIA, ALIREZA; REEL/FRAME:011859/0549; SIGNING DATES FROM 20010409 TO 20010505
US6852330 BB	20080722	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4

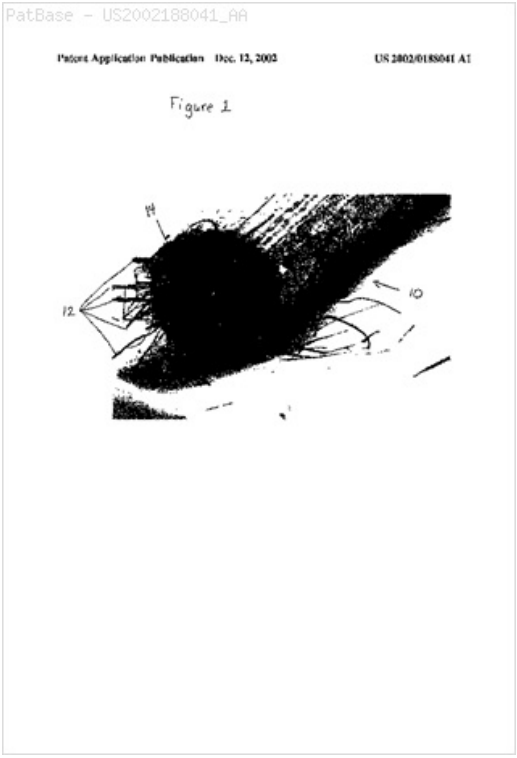
US6852330 BB	20120711	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6852330 BB	20140212	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY MITEK, LLC, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ETHICON, INC.; REEL/FRAME:032203/0854 EFFECTIVE DATE : 20140212
US6852330 BB	20160728	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6884428 BB	20050426	LSGT	+	granted / extensions (spc, cpc, pte)	
US6884428 BB	20030313	LSAS	AS	ASSIGNMENT	OWNER NAME : ETHICON, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BINETTE, FRANCOIS; BOWMAN, STEVEN M.; BRUKER, IZI; AND OTHERS; REEL/FRAME:013827/0523; SIGNING DATES FROM 20030117 TO 20030121
US6884428 BB	20080924	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6884428 BB	20120926	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6884428 BB	20140212	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY MITEK, LLC, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ETHICON, INC.; REEL/FRAME:032203/0854 EFFECTIVE DATE : 20140212
US6884428 BB	20161013	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US8691259 BB	20140408	LSGT	+	granted / extensions (spc, cpc, pte)	

15) Family number: 28291289 (US2002188041A)

Title: **FIBERS** COMPRISING STARCH AND BIODEGRADABLE POLYMERS

Abstract: Source: US2002188041A Environmentally degradable finely attenuated **fibers** produced by melt spinning a composition comprising destructurized starch, a biodegradable thermoplastic polymer, and a plasticizer are disclosed. The present invention is also directed to highly attenuated **fibers** containing thermoplastic polymer microfibrils which are formed within the starch matrix of the finely attenuated **fiber**. Nonwoven webs and disposable articles comprising the highly attenuated **fibers** are also disclosed.

Classifications:
International (IPC 8-9): C08L101/16 D01F6/92 D01F9/00 D04H1/42 (Advanced/Invention);
C08L101/00 D01F6/92 D01F9/00 D04H1/42 (Core/Invention)
International (IPC 1-7): C08J3/00 C08L101/16 C08L3/0 C08L3/00 C08L89/0 C08L89/00 D01F6/92 D01F9/00 D04H1/0 D04H1/00 D04H1/42 D04H13/0 D04H13/00 D04H3/0 D04H3/00 D04H5/0 D04H5/00
CPC: Y10T442/608 Y10T442/696 Y10T442/697 D04H1/42 D01F6/92
European: D01F6/92 D04H1/42
US: 442/334 442/414 442/415 524/47 524/48 524/51



Family:

Publication number	Publication date	Application number	Application date
AT383462 E	20080115	AT20020736699T	20020509
AU2002309683 AA	20021118	AU20020309683	20020509
AU2002309683 BB	20050707	AU20020309683	20020509
CA2446092 AA	20031031	CA20022446092	20020509
CA2446092 C	20061114	CA20022446092	20020509
DE60224530 D1	20080221	DE20026024530	20020509
DE60224530 T2	20081224	DE20026024530T	20020509
DE60224530 T3	20111013	DE20026024530T	20020509
EP1397537 A1	20040317	EP20020736699	20020509
EP1397537 B1	20080109	EP20020736699	20020509
EP1397537 B2	20110323	EP20020736699	20020509
JP2004533551 T2	20041104	JP20020587681T	20020509
JP4119756 B2	20080716	JP20020587681T	20020509
US2002188041 AA	20021212	US20010852889	20010510
US2003109605 AA	20030612	US20020294382	20021114
US2005026529 AA	20050203	US20040932596	20040902
US6890872 BB	20050510	US20020294382	20021114
US6946506 BB	20050920	US20010852889	20010510
WO02090629 A1	20021114	WO2002US14627	20020509

Priority:

EP20020736699 20020509 US20010852889 20010510 US20020294382 20021114
US20040932596 20040902 WO2002US14627 20020509

Probable Assignee: PROCTOR AND GAMBLE CO

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Assignee(s): PROCTER AND GAMBLE CO ; PROCTOR AND GAMBLE CO

Inventor(s): (std): AUTRAN JEAN PHILIPPE MARIE ; AUTRN JEAN ; AUTRN JEAN PHILIPPE ; AUTRN JEAN PHILIPPE MARIE ; BOND ERIC ; BOND ERIC BRYAN ; MACKEY LARRY ; MACKEY LARRY NEIL ; NODA ISAO ; O DONNELL HUGH ; O DONNELL HUGH JOSEPH

Inventor(s): AUTRAN JEAN PHILIPPE ; ERIC BRYAN BOND ; HUGH JOSEPH O DONNELL ; ISAO NODA ; JEAN PHILIPPE MARIE AUTRN ; LARRY NEIL MACKEY

Agent(s): PHILLIPS ORMONDE FITZPATRICK; MBM INTELLECTUAL PROPERTY LAW LLP; HAMPTON MATTHEW JOHN ET AL; ENGISCH GAUTIER; PROCTER AND GAMBLE CO INTELLECTUAL PROPERTY DIVISION; STONE ANGELA MARIE; LEWIS LEONARD W; ANGELA MARIE; LEONARD W

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AT383462 E	20080115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT383462 E	20080715	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU2002309683 AA	20021118	LSPB	+	published / reissued	
AU2002309683 BB	20050707	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2002309683 BB	20051103	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2002309683 BB	20161208	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
CA2446092 AA	20031031	LSPB	+	published / reissued	
CA2446092 AA	20031031	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2446092 AA	20031031	LSES	+EEER	EXAMINATION REQUEST	
CA2446092 C	20061114	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60224530 D1	20090129	LSOP	-8363	OPPOSITION AGAINST THE PATENT	
DE60224530 D1	20110526	LSOP	+8366	RESTRICTED MAINTAINED AFTER OPPOSITION PROCEEDINGS	
DE60224530 T2	20081224	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60224530 T3	20111013	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1397537 A1	20040317	LSPB	+	published / reissued	
EP1397537 A1	20040317	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20031117
EP1397537 A1	20060823	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20060721
EP1397537 A1	20070425	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20060721
EP1397537 A1	20080109	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1397537 A1	20080131	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1397537 A1	20080206	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1397537 A1	20080731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080109

EP1397537 A1	20080731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080420
EP1397537 A1	20080731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080109
EP1397537 A1	20080731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080109
EP1397537 A1	20080731	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
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EP1397537 A1	20080930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080109
EP1397537 A1	20080930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080609
EP1397537 A1	20081031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080109
EP1397537 A1	20081031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080409
EP1397537 A1	20081112	LSOP	-26	OPPOSITION FILED	PARTYTYPE : OPPONENT OPPONENT : METABOLIX, INC. EFFECTIVE DATE : 20081007
EP1397537 A1	20081231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20080531
EP1397537 A1	20090105	LSOP	-NLR1	NL: OPPOSITION HAS BEEN FILED WITH THE EPO	PARTYTYPE : OPPONENT REF COUNTRY CODE : EP OPPONENT : METABOLIX, INC.
EP1397537 A1	20090430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED	COUNTRY OF REF DOCUMENT : FR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION

				VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20081031
EP1397537 A1	20090430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20080509
EP1397537 A1	20090731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CY NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080109
EP1397537 A1	20090831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080109
EP1397537 A1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20080509
EP1397537 A1	20100831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : TR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080109
EP1397537 A1	20101029	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080410
EP1397537 A1	20110323	LSRE	27A	MAINTAINED AS AMENDED	EFFECTIVE DATE : 20110323
EP1397537 A1	20110526	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R102 REF DOCUMENT NUMBER : 60224530 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20110323
EP1397537 A1	20110706	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3
EP1397537 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20150601 YEAR OF FEE PAYMENT : 14
EP1397537 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20150424 YEAR OF FEE PAYMENT : 14
EP1397537 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20150512 YEAR OF FEE PAYMENT : 14
EP1397537 A1	20161201	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 60224530 COUNTRY OF REF DOCUMENT : DE
EP1397537 A1	20170125	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH	REF COUNTRY CODE : EP EFFECTIVE DATE : 20160509

				NON-PAYMENT OF RENEWAL FEE	
EP1397537 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160601
EP1397537 B1	20080109	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1397537 B2	20110323	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2004533551 T2	20041104	LSPB	+	published / reissued	
JP4119756 B2	20080716	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4119756 B2	20050427	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20050426
JP4119756 B2	20070611	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20070608
JP4119756 B2	20070908	LSRE	A524	WRITTEN SUBMISSION OF COPY OF AMENDMENT UNDER SECTION 19 (PCT)	TEXT : JAPANESE INTERMEDIATE CODE: A524 EFFECTIVE DATE : 20070907
JP4119756 B2	20071203	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20071130
JP4119756 B2	20080301	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080229
JP4119756 B2	20080324	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4119756 B2	20080331	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080328
JP4119756 B2	20080501	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080425
JP4119756 B2	20080502	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4119756 B2	20080508	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4119756 B2	20110428	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4119756 B2	20110607	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4119756 B2	20120515	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 5

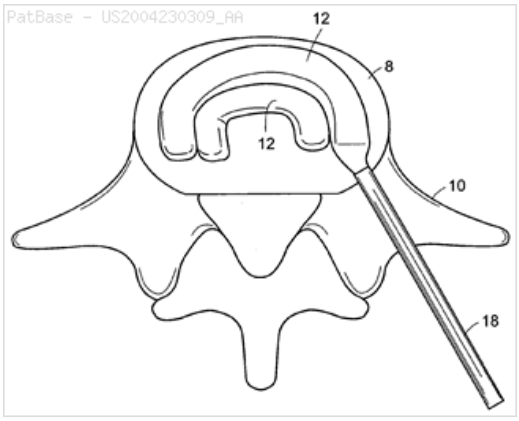
JP4119756 B2	20130514	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4119756 B2	20140507	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4119756 B2	20150512	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4119756 B2	20160502	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
US2002188041 AA	20021212	LSPB	+	published / reissued	
US2003109605 AA	20030612	LSPB	+	published / reissued	
US2005026529 AA	20050203	LSPB	+	published / reissued	
US6890872 BB	20050510	LSGT	+	granted / extensions (spc, cpc, pte)	
US6890872 BB	20030224	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PROCTOR & GAMBLE COMPANY, THE, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOND, ERIC BRYAN; AUTRAN, JEAN-PHILIPPE MARIE; MACKEY, LARRY NEIL; AND OTHERS; REEL/FRAME:013441/0988; SIGNING DATES FROM 20021203 TO 20030108
US6890872 BB	20050906	LSRE	CC	CERTIFICATE OF CORRECTION	
US6890872 BB	20080918	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6890872 BB	20121004	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6946506 BB	20050920	LSGT	+	granted / extensions (spc, cpc, pte)	
US6946506 BB	20010917	LSAS	AS	ASSIGNMENT	OWNER NAME : PROCTER AND GAMBLE COMPANY, THE, OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOND, ERIC BRYAN; AUTRAN, JEAN-PHILIPPE MARIE; MACKEY, LARRY NEIL; AND OTHERS; REEL/FRAME:012161/0624 EFFECTIVE DATE : 20010510
US6946506 BB	20051115	LSRE	CC	CERTIFICATE OF CORRECTION	
US6946506 BB	20080930	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6946506 BB	20120927	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
WO02090629 A1	20021114	LSPB	+	published / reissued	
WO02090629 A1	20031031	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2446092 COUNTRY OF REF DOCUMENT : CA
WO02090629 A1	20031107	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002309683 COUNTRY OF REF DOCUMENT : AU
WO02090629 A1	20031110	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002587681 COUNTRY OF REF DOCUMENT : JP
WO02090629 A1	20031117	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002736699 COUNTRY OF REF DOCUMENT : EP
WO02090629 A1	20040311	LSWD	REG	REFERENCE TO NATIONAL	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642

				CODE	
WO02090629 A1	20040317	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2002736699 COUNTRY OF REF DOCUMENT : EP
WO02090629 A1	20051021	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2002309683 COUNTRY OF REF DOCUMENT : AU
WO02090629 A1	20080109	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2002736699 COUNTRY OF REF DOCUMENT : EP

16) Family number: 30868660 (US2004230309A)

Title: IN-SITU FORMED INTERVERTEBRAL FUSION DEVICE AND METHOD

Abstract: Source: US2004230309A An orthopedic device for implanting between adjacent vertebrae comprising: an arcuate balloon and a hardenable material within said balloon. In some embodimnents, the balloon has a footprint that substantially corresponds to a perimeter of a vertebral endplate. An inflatable device is inserted through a cannula into an intervertebral space and oriented so that, upon expansion, a **natural** angle between vertebrae will be at least partially restored. At least one component selected from the group consisting of a load-bearing component and an osteobiologic component is directed into the inflatable device through a fluid communication means.



Classifications:
International (IPC 8-9): A61B17/00 A61B17/56 A61F2/28 A61F2/44 A61F2/46 A61K49/00 A61K9/00 A61L27/02 A61L27/06 A61L27/12 A61L27/14 A61L27/18 A61L27/38 A61L27/50 A61L27/52 A61L27/54 A61L27/56 A61L29/00 A61L31/00 (Advanced/Invention);
A61F2/00 A61F2/02 A61F2/28 A61F2/30 A61F2/44 A61L27/02 A61L27/12 A61L27/14 (Advanced/Non-invention);
A61B17/56 A61F2/44 A61F2/46 A61L27/00 A61L29/00 A61L31/00 (Core/Invention);
A61F2/00 A61F2/02 A61F2/28 A61F2/30 (Core/Non-invention)
International (IPC 1-7): A61F2/44 A61F2/46 A61L27/02 A61L27/12 A61L27/14 A61L27/18 A61L27/54
CPC: A61B17/00234 A61F2002/30579 A61F2/4611 A61F2002/30062 A61F2002/30065 A61F2002/30092 A61F2002/302 A61F2002/4475 A61F2250/0065 A61F2/442 A61F2002/448 A61F2/446 A61F2210/0061 A61F2250/001 A61F2250/0009 A61F2/30965 A61F2002/2817 A61F2002/30131 A61F2002/30224 A61F2002/3023 A61F2002/30308 A61F2002/30383 A61F2002/30451 A61F2002/3055 A61F2002/30556 A61F2002/30583 A61F2002/30586 A61F2002/30604 A61F2002/30841 A61F2002/30971 A61F2002/4627 A61F2002/4635 A61F2210/0004 A61F2210/0014 A61F2210/0071 A61F2210/0085 A61F2220/0025 A61F2220/0058 A61F2230/0013 A61F2230/0063 A61F2230/0065 A61F2230/0069 A61F2310/00179 A61F2310/00365 A61L27/18 A61L27/50 A61L27/54 A61L2300/252 A61L2300/256 A61L2300/404 A61L2300/414 A61L2300/43 A61L2300/64 A61L2430/38 A61F2/4425 A61F2002/30622 A61F2002/4677 A61K9/0024 A61L27/3821 A61K49/006 A61L27/12 A61L27/52 A61L27/3839 A61F2002/2835 A61F2/28 A61F2250/0003 A61F2310/00011 A61F2/4465 A61F2/4601 A61F2220/0016 A61L27/06 A61L27/56 A61L27/3847 A61L2430/02 A61F2/4455 A61F2/441
European: A61F2/44B A61F2/44D A61F2/44F A61F2/46B7 A61L27/18 A61L27/50 A61L27/54 K61F2/28 K61F2/28D K61F2/30A1W1 K61F2/30A1W2 K61F2/30A1W20 K61F2/30A2K2H K61F2/30A2Y1 K61F2/30A2Y28 K61F2/30A2Y3 K61F2/30A2Y3F K61F2/30A3T2 K61F2/30A3T9 K61F2/30A3W18C K61F2/30A3W18M K61F2/30A3W2L K61F2/30A3W2T K61F2/30A3W32 K61F2/30L2P K61F2/30M4 K61F2/30M8 K61F2/46B35P K61F2/46E K61F210/00A K61F210/00D K61F210/00H K61F210/00P K61F220/00T K61F220/00T9 K61F230/00K2H K61F230/00Y K61F230/00Y1 K61F230/00Y3 K61F250/00G4 K61F310/00A6 K61F310/00A66 K61L300/252 K61L300/256 K61L300/404 K61L300/414 K61L300/430 K61L300/640 K61L430/38
US: 1/1 623/17.11 623/17.110S 623/17.12 623/17.120P 623/17.16

Family:

Publication number	Publication date	Application number	Application date
AT419812 E	20090115	AT20040711129T	20040213
AU2004212942 AA	20040902	AU20040212942	20040213
BRPI0407142 A	20060110	BR2004PI07142	20040213
CA2515862 AA	20050812	CA20042515862	20040213
CN1774220 A	20060517	CN200480010041	20040213
DE602004018903 D1	20090226	DE200460018903T	20040213
EP1594423 A2	20051116	EP20040711129	20040213
EP1594423 B1	20090107	EP20040711129	20040213
JP2006517842 A2	20060803	JP20060503557	20040213
JP2006517842 T2	20060803	JP20060503557T	20040213
KR20050107426 A	20051111	KR20057014927	20050812
MXPA05008653 A1	20060427	MX2005PA08653	20040213
US2004230309 AA	20041118	US20040778684	20040213
US2012310352 AA	20121206	US20120490743	20120607
US2015164655 AA	20150618	US20150632875	20150226
US2015173914 AA	20150625	US20150640741	20150306
US2015196401 AA	20150716	US20150668576	20150325
US2015202052 AA	20150723	US20150674070	20150331
US2015216673 AA	20150806	US20150684959	20150413
US2016000577 AA	20160107	US20150856716	20150917
US2016022437 AA	20160128	US20150875983	20151006
US2016038304 AA	20160211	US20150886302	20151019
US2016051376 AA	20160225	US20150886362	20151019
US2016058573 AA	20160303	US20150934289	20151106
US2016199196 AA	20160714	US20160074725	20160318
US2016310296 AA	20161027	US20160201472	20160703
US2016317313 AA	20161103	US20160209080	20160713
US2016317714 AA	20161103	US20160206734	20160711
US2016331541 AA	20161117	US20160219360	20160726
US2016331548 AA	20161117	US20160218362	20160725
US2016338854 AA	20161124	US20160226367	20160802
US2016367380 AA	20161222	US20160188179	20160621
US2016374821 AA	20161229	US20160260465	20160909
US2017035578 AA	20170209	US20160331978	20161024
US9333091 BB	20160510	US20150684959	20150413
US9439776 BB	20160913	US20150640741	20150306
US9439777 BB	20160913	US20150674070	20150331
WO04073563 A2	20040902	WO2004US04284	20040213
WO04073563 A3	20041216	WO2004US04284	20040213

Priority:

US20030448221P 20030214
US20040778684 20040213
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WO2004US04284 20040213
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US20160331978 20161024

Probable Assignee: DEPUY SYNTHES PRODUCTS INC

Assignee(s): (std): BARTISH CHARLES M JR ; COOPER KEVIN ; DEPUY SPINE INC ; DIMAURO THOMAS M ; MALONE JOHN D ; MOORE BRADLEY T ; KADIYALA SUDHAKAR ; KELLY JAMES E ; DEPUY SYNTHES PRODUCTS INC ; SLIVKA MICHAEL A ; SERHAN HASSAN ; WOODROW HAL B ; ROHR WILLIAM L ; AQUINO LAUREN

Assignee(s): BARTISH CHARLES M ; WOODROW HAL BRENT ; SLIVKA MICHAEL ANDREW ; DEPUY SPINE LLC ; DEPUY SYNTHES PRODUCTS LLC ; HAND INNOVATIONS LLC ; MALONE JOHN DANIEL ; MOORE BRADLEY THOMAS ; KELLY JAMES EDWARD

Inventor(s): (std): CHARLES M JR BARTISH ; COOPER KEVIN ; DIMAURO THOMAS ; DIMAURO THOMAS M ; HAL B WOODROW ; HASSAN SERHAN ; JAMES E KELLY ; JOHN D MALONE ; KADIYALA SUDHAKAR ; KELLY JAMES ; KELLY JAMES E ; KELLY JAMES EDWARD ; KEVIN COOPER ; LA MALONE JOHN D WOODROW HAL B ; LAUREN AQUINO ; MALONE JOHN ; MALONE JOHN D ; MALONE JOHN DANIEL ; MICHAEL A SLIVKA ; MOORE BRADLEY ; MOORE BRADLEY T ; MOORE BRADLEY THOMAS ; ROHR WILLIAM ; ROHR WILLIAM L ; SERHAN HASSAN ; SLIVKA MICHAEL ; SLIVKA MICHAEL A ; SLIVKA MICHAEL ANDREW ; SUDHAKAR KADIYALA ; THOMAS M DIMAURO ; WILLIAM L ROHR ; WOODROW HAL ; WOODROW HAL B ; WOODROW HAL BRENT ; AQUINO LAUREN ; AQUINO SHLUZAS LAUREN ; BARTISH CHARLES ; BARTISH CHARLES M ; BARTISH CHARLES M JR ; BRADLEY T MOORE

Inventor(s): CHARLES M BARTISH JR ; MALONE JOHN D WOODROW HAL B KADIYALA SUDHAKAR SLIV

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; OGILVY RENAULT LLP SENCRL SRL; ORR ROBERT ET AL; NUTTER MCCLENNEN AND FISH LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT419812 E	20090115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT419812 E	20090715	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU2004212942 AA	20040902	LSPB	+	published / reissued	
AU2004212942 AA	20081016	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2) (E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED	
BRPI0407142 A	20060110	LSPB	+	published / reissued	
BRPI0407142 A	20080902	LSRV	-B11A	DISMISSAL ACC. ART.33 OF IPL - EXAMINATION NOT REQUESTED WITHIN 36 MONTHS OF FILING	
BRPI0407142 A	20090811	LSRV	-B11Y	DEFINITIVE DISMISSAL ACC. ARTICLE 33 OF IPL - EXTENSION OF TIME LIMIT FOR REQUEST OF EXAMINATION EXPIRED	
CA2515862 AA	20050812	LSPB	+	published / reissued	
CA2515862 AA	20050812	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2515862 AA	20100215	LSLE	-FZDE	DEAD	
CN1774220 A	20060517	LSPB	+	published / reissued	
CN1774220 A	20060517	LSPB	+C06	PUBLICATION	
CN1774220 A	20091202	LSDW	-C02	DEEMED WITHDRAWAL	

				OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
DE602004018903 D1	20100128	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
EP1594423 A2	20051116	LSPB	+	published / reissued	
EP1594423 A2	20051116	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20050914
EP1594423 A2	20060802	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20060630
EP1594423 A2	20070110	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : DIMAURO, THOMAS, M.
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EP1594423 A2	20070110	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : MOORE, BRADLEY, T.
EP1594423 A2	20070110	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : SERHAN, HASSAN
EP1594423 A2	20070110	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : KADIYALA, SUDHAKAR
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EP1594423 A2	20090107	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1594423 A2	20090115	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1594423 A2	20090218	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
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				NATIONAL OFFICE	
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EP1594423 B1	20090107	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2006517842 A2	20060803	LSPB	+	published / reissued	
JP2006517842 T2	20060803	LSPB	+	published / reissued	
KR20050107426 A	20051111	LSPB	+	published / reissued	
KR20050107426 A	20100105	LSDW	-WITN	WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION	
MXPA05008653 A1	20060427	LSPB	+	published / reissued	
US2004230309 AA	20041118	LSPB	+	published / reissued	
US2004230309 AA	20040921	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SPINE, INC., MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:DIMAURO, THOMAS M.; SLIVKA, MICHAEL ANDREW; MALONE, JOHN DANIEL; AND OTHERS; REEL/FRAME:015155/0487; SIGNING DATES FROM 20040322 TO 20040511
US2004230309 AA	20130506	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SPINE, LLC, MASSACHUSETTS DESCRIPTION : CHANGE OF NAME; ASSIGNOR:DEPUY SPINE, INC.; REEL/FRAME:030352/0673 EFFECTIVE DATE : 20121230
US2004230309 AA	20130506	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SYNTHES PRODUCTS, LLC, MASSACHUSETTS DESCRIPTION : CHANGE OF NAME; ASSIGNOR:HAND INNOVATIONS LLC; REEL/FRAME:030352/0722 EFFECTIVE DATE : 20121231
US2004230309 AA	20130506	LSAS	AS	ASSIGNMENT	OWNER NAME : HAND INNOVATIONS LLC, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DEPUY SPINE, LLC; REEL/FRAME:030352/0709 EFFECTIVE DATE : 20121230
US2004230309 AA	20150224	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SYNTHES PRODUCTS, INC., MASSACHUSETTS DESCRIPTION : CHANGE OF NAME; ASSIGNOR:DEPUY SYNTHES PRODUCTS, LLC; REEL/FRAME:035074/0647 EFFECTIVE DATE : 20141219
US2012310352 AA	20121206	LSPB	+	published / reissued	
US2012310352 AA	20130506	LSAS	AS	ASSIGNMENT	OWNER NAME : HAND INNOVATIONS LLC, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DEPUY SPINE, LLC; REEL/FRAME:030352/0709 EFFECTIVE DATE : 20121230
US2012310352 AA	20130506	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SPINE, LLC, MASSACHUSETTS

					DESCRIPTION : CHANGE OF NAME; ASSIGNOR:DEPUY SPINE, INC.; REEL/FRAME:030352/0673 EFFECTIVE DATE : 20121230
US2012310352 AA	20130506	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SYNTHES PRODUCTS, LLC, MASSACHUSETTS DESCRIPTION : CHANGE OF NAME; ASSIGNOR:HAND INNOVATIONS LLC; REEL/FRAME:030352/0722 EFFECTIVE DATE : 20121231
US2012310352 AA	20150224	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SYNTHES PRODUCTS, INC., MASSACHUSETTS DESCRIPTION : CHANGE OF NAME; ASSIGNOR:DEPUY SYNTHES PRODUCTS, LLC; REEL/FRAME:035074/0647 EFFECTIVE DATE : 20141219
US2015164655 AA	20150618	LSPB	+	published / reissued	
US2015173914 AA	20150625	LSPB	+	published / reissued	
US2015196401 AA	20150716	LSPB	+	published / reissued	
US2015202052 AA	20150723	LSPB	+	published / reissued	
US2015216673 AA	20150806	LSPB	+	published / reissued	
US2016000577 AA	20160107	LSPB	+	published / reissued	
US2016022437 AA	20160128	LSPB	+	published / reissued	
US2016038304 AA	20160211	LSPB	+	published / reissued	
US2016051376 AA	20160225	LSPB	+	published / reissued	
US2016058573 AA	20160303	LSPB	+	published / reissued	
US2016199196 AA	20160714	LSPB	+	published / reissued	
US2016310296 AA	20161027	LSPB	+	published / reissued	
US2016317313 AA	20161103	LSPB	+	published / reissued	
US2016317714 AA	20161103	LSPB	+	published / reissued	
US2016331541 AA	20161117	LSPB	+	published / reissued	
US2016331548 AA	20161117	LSPB	+	published / reissued	
US2016338854 AA	20161124	LSPB	+	published / reissued	
US2016367380 AA	20161222	LSPB	+	published / reissued	
US2016374821 AA	20161229	LSPB	+	published / reissued	
US2017035578 AA	20170209	LSPB	+	published / reissued	
US9333091 BB	20160510	LSGT	+	granted / extensions (spc, cpc, pte)	
US9439776 BB	20160913	LSGT	+	granted / extensions (spc, cpc, pte)	
US9439777 BB	20160913	LSGT	+	granted / extensions (spc, cpc, pte)	
WO04073563 A2	20040902	LSPB	+	published / reissued	
WO04073563 A3	20050803	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 541626 COUNTRY OF REF DOCUMENT : NZ
WO04073563 A3	20050808	LSNP	+WWE	WIPO INFORMATION:	REF DOCUMENT NUMBER : 2004212942

				ENTRY INTO NATIONAL PHASE	COUNTRY OF REF DOCUMENT : AU
WO04073563 A3	20050812	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006503557 COUNTRY OF REF DOCUMENT : JP
WO04073563 A3	20050812	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1020057014927 COUNTRY OF REF DOCUMENT : KR
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WO04073563 A3	20050815	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2005/008653 COUNTRY OF REF DOCUMENT : MX
WO04073563 A3	20050825	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2004212942 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20040213 KIND CODE OF REF DOCUMENT : A
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WO04073563 A3	20051116	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2004711129 COUNTRY OF REF DOCUMENT : EP
WO04073563 A3	20060110	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0407142 COUNTRY OF REF DOCUMENT : BR

17) Family number: 31426432 (US2004261995A)

Title: COMPOSITIONS AND METHODS FOR IMPROVING PROPPANT PACK PERMEABILITY AND FRACTURE CONDUCTIVITY IN A SUBTERRANEAN WELL

Abstract: Source: US2004261995A The present invention relates to enhancing fluid flow from subterranean formations. More particularly, this invention relates to providing improved proppant matrixes within fractures in a subterranean formation. An example of the methods of increasing the conductivity of a fracture in a subterranean formation comprises the steps of providing a fracturing treatment fluid comprising a proppant composition, the proppant composition comprising proppant particulates and a degradable material capable of undergoing an irreversible degradation downhole; introducing the proppant composition to the fracture; and allowing the proppant composition to form a proppant matrix having voids in the fracture.

Classifications:
International (IPC 8-9): C09K8/80 E21B33/138 E21B43/267 (Advanced/Invention);
C09K8/60 E21B33/138 E21B43/25 (Core/Invention)
International (IPC 1-7): A47B43/00 C09K7/00 C09K8/80 E21B43/00 E21B43/26 E21B43/267
CPC: Y10S507/924 Y10S507/906 C09K8/62 C09K8/805 C09K8/80 E21B43/267
European: C09K8/62 C09K8/80 C09K8/80B E21B43/267
US: 166/279 166/280.1 166/280.2 166/280.200S 166/281 166/295 166/300 507/200 507/200P 507/203 507/203P 507/209 507/209S 507/211 507/219 507/219S 507/220 507/226 507/260 507/269 507/273 507/273S 507/906 507/924 523/131

Family:

Publication number	Publication date	Application number	Application date
AR053666 AA	20070516	AR2006P100253	20060124
CA2528593 AA	20051207	CA20042528593	20040624
CA2528593 C	20090602	CA20042528593	20040624
MXPA05014055 A1	20060317	MX2005PA14055	20040624
NO20055931 A	20060127	NO20050005931	20051214
US2004261995 AA	20041230	US20030608291	20030627
US2005059558 AA	20050317	US20040947427	20040920
US2005126780 AA	20050616	US20050048465	20050201
US2005130848 AA	20050616	US20050048489	20050201
US7044220 BB	20060516	US20030608291	20030627
US7178596 BB	20070220	US20040947427	20040920
US7228904 BB	20070612	US20050048465	20050201
WO05000993 A1	20050106	WO2004GB02719	20040624
WO05000993 C1	20050217	WO2004GB02719	20040624
WO06032833 A1	20060330	WO2005GB02984	20050729
WO06082359 A1	20060810	WO2006GB00145	20060117

Priority:

US20030608291 20030627 US20040947427 20040920 US20050048465 20050201
US20050048489 20050201 WO2004GB02719 20040624

Probable Assignee: HALLIBURTON ENERGY SERVICES INC

Assignee(s): (std): BLAUCH MATTHEW E ; CURTIS PHILIP ANTHONY ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC ; MANG MICHAEL N ; NGUYEN PHILIP D ; TODD BRADLEY L ; MUNOZ TRINIDAD JR ; WAIN CHRISTOPHER PAUL ; WELTON THOMAS D

Assignee(s): MUNOZ TRINIDAD

Inventor(s): (std): BLAUCH MATTHEW E ; MANG MICHAEL N ; MUNOZ JR TRINIDAD ; MUNOZ TRINIDAD JR ; WELTON THOMAS D ; TODD BRADLEY L ; NGUYEN PHILIP D ; MUNOZ TRINIDAD

Inventor(s): BLAUCH MATTHEW ; NGUYEN PHILIP ; TODD BRADLEY ; TRINIDAD MUNOZ JR ; WELTON THOMAS ; MUNOZ ; JR TRINIDAD ; MANG MICHAEL

Agent(s): OGILVY RENAULT LLP SENCRL SRL; ROBERT A KENT HALLIBURTON ENERGY SERVICES; ROBERT A KENT; ROBERT A; BAKER BOTTS

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AR053666 AA	20070516	LSPB	+	published / reissued	
AR053666 AA	20100727	LSGT	+FG	GRANT, REGISTRATION	
CA2528593 AA	20051207	LSPB	+	published / reissued	
CA2528593 AA	20051207	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2528593 AA	20051207	LSES	+EEER	EXAMINATION REQUEST	
CA2528593 C	20090602	LSGT	+	granted / extensions (spc, cpc, pte)	
MXPA05014055 A1	20060317	LSPB	+	published / reissued	

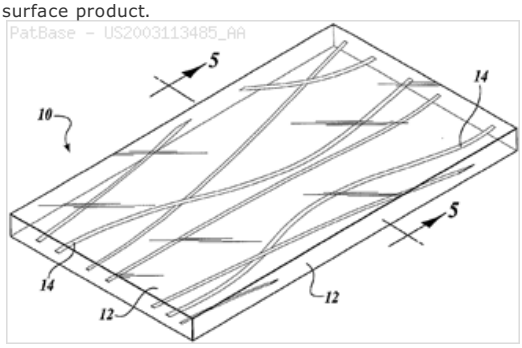
MXPA05014055 A1	20081003	LSGT	+FG	GRANT OR REGISTRATION	
NO20055931 A	20060127	LSPB	+	published / reissued	
NO20055931 A	20160926	LSRV	-FC2A	WITHDRAWAL, REJECTION OR DISMISSAL OF LAID OPEN PATENT APPLICATION	
US2004261995 AA	20041230	LSPB	+	published / reissued	
US2005059558 AA	20050317	LSPB	+	published / reissued	
US2005126780 AA	20050616	LSPB	+	published / reissued	
US2005130848 AA	20050616	LSPB	+	published / reissued	
US2005130848 AA	20050201	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TODD, BRADLEY L.; MANG, MICHAEL N.; REEL/FRAME:016246/0020; SIGNING DATES FROM 20050124 TO 20050131
US7044220 BB	20060516	LSGT	+	granted / extensions (spc, cpc, pte)	
US7044220 BB	20030625	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:NGUYEN, PHILIP D.; TODD, BRADLEY L.; MUNOZ, TRINIDAD JR.; REEL/FRAME:014248/0088 EFFECTIVE DATE : 20030613
US7044220 BB	20090928	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7044220 BB	20131011	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7178596 BB	20070220	LSGT	+	granted / extensions (spc, cpc, pte)	
US7178596 BB	20040922	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BLAUCH, MATTHEW E.; NGUYEN, PHILIP D.; WELTON, THOMAS D.; REEL/FRAME:015822/0213 EFFECTIVE DATE : 20040920
US7178596 BB	20100702	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7178596 BB	20140725	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7228904 BB	20070612	LSGT	+	granted / extensions (spc, cpc, pte)	
US7228904 BB	20050131	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TODD, BRADLEY L.; MANG, MICHAEL N.; REEL/FRAME:016244/0958; SIGNING DATES FROM 20050124 TO 20050131
US7228904 BB	20101122	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7228904 BB	20141124	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
WO05000993 A1	20050106	LSPB	+	published / reissued	
WO05000993 C1	20051207	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2528593 COUNTRY OF REF DOCUMENT : CA
WO05000993 C1	20051220	LSNP	+WWE	WIPO	REF DOCUMENT NUMBER :

				INFORMATION: ENTRY INTO NATIONAL PHASE	PA/A/2005/014055 COUNTRY OF REF DOCUMENT : MX
WO06032833 A1	20060330	LSPB	+	published / reissued	
WO06032833 A1	20070321	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO06082359 A1	20060810	LSPB	+	published / reissued	
WO06082359 A1	20070802	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO06082359 A1	20080305	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 6700680 COUNTRY OF REF DOCUMENT : EP

18) Family number: 28666835 (US2003113485A)

Title: SOLID SURFACE PRODUCTS

Abstract: Source: US2003113485A A flat non-porous unitary solid surface product comprised of: (a) a flat non-porous unitary matrix made of polymethylmethacrylate, polyvinyl chloride, polycarbonate, or combinations thereof; and (b) a visible decorative object that is permanently fixated in the matrix, wherein the decorative object extends to least one edge of the matrix. A method for manufacturing the flat non-porous unitary solid surface product.



Classifications:
International (IPC 8-9): A47G35/00 B32B27/08 B32B27/12 B32B3/08 B32B3/10 B32B3/14 B32B37/00 B32B37/18 B41M5/00 B44C5/00 B44C5/04 B44F1/06 (Advanced/Invention); A47G35/00 B32B27/08 B32B27/12 B32B3/08 B41M5/00 B44C5/00 B44F1/00 (Core/Invention)
International (IPC 1-7): A47G1/12 B32B27/06 B32B3/10 B32B3/14 B32B31/00 B32B31/20 B44F1/00
CPC: B32B3/08 B32B27/08 B32B27/12 B32B37/003 B32B2327/06 B32B2333/12 B32B2369/00 B32B2451/00 B44C5/04 Y10T428/24802 B32B17/10018 B32B17/10247 B32B17/10376 B32B17/1077 B32B37/185 B32B38/06 B32B38/1866 B32B2038/006 B32B2305/34 B32B2307/412 B32B2307/558 B32B2307/7145 B32B2309/02 B32B2309/12 B44C3/02 F41H5/0407 B44C5/005 B43L3/00 B44C5/0453 B44C5/06 B44F1/06 Y10T428/31504 Y10T428/31786
European: B32B17/10C2 B32B17/10E12 B32B17/10E32 B32B17/10G30 B32B27/08 B32B27/12 B32B3/08 B32B37/00A6 B32B37/18A4 B43L3/00 B44C3/02 B44C5/00B B44C5/04 B44C5/04N B44C5/06 B44F1/06 L32B305/34 L32B307/412 L32B307/558 L32B307/714B L32B309/02 L32B309/12 L32B327/06 L32B333/12 L32B369/00 L32B38/00F2 L32B38/06 L32B38/18D L32B451/00
US: 156/228 156/286 156/286S 156/308.2 156/309.6 156/311 156/311S 156/312 428/13 428/13P 428/195.1 428/195.100P 428/411.1 428/411.100S 428/480 428/480S

Family:

Publication number	Publication date	Application number	Application date
AU2003215237 AA	20031013	AU20030215237	20030212
CA2490743 AA	20041222	CA20032490743	20030212
EP1725400 A1	20061129	EP20030711053	20030212
EP1725400 A4	20070801	EP20030711053	20030212
TW200304409 A	20031001	TW20030104071	20030226
US2003113485 AA	20030619	US20020106833	20020325
US2004202800 AA	20041014	US20040762206	20040121
US2004247801 AA	20041209	US20040794172	20040305
US2006046034 AA	20060302	US20050262467	20051027
US2006147655 AA	20060706	US20060364920	20060301
US6743327 BB	20040601	US20020106833	20020325
WO03082572 A1	20031009	WO2003US04554	20030212
WO07051180 A2	20070503	WO2006US60325	20061027
WO07051180 A3	20080828	WO2006US60325	20061027

Priority:
US20010307898P 20010725 US20020106833 20020325 US20040762206 20040121 US20060364920 20060301 US20050262467 20051027 US20040794172 20040305 WO2003US04554 20030212

Probable Assignee: LUMICOR INC
Assignee(s): (std): LUMICOR ; LUMICOR INC ; SCHOBER DENNIS A ; SCHOBER INC
Assignee(s): SCHOBER DENNIS
Inventor(s): (std): DENNIS A SCHOBER ; SCHOBER DENNIS ; SCHOBER DENNIS A
Agent(s): OYEN WIGGS GREEN AND MUTALA LLP; BLACK LOWE AND GRAHAM PLLC
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2003215237 AA	20031013	LSPB	+	published / reissued	
AU2003215237 AA	20041209	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2) (F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
CA2490743 AA	20041222	LSPB	+	published / reissued	
CA2490743 AA	20041222	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2490743 AA	20080212	LSES	+EEER	EXAMINATION REQUEST	
CA2490743 AA	20110214	LSLE	-FZDE	DEAD	
CA2490743 AA	20110411	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20110214
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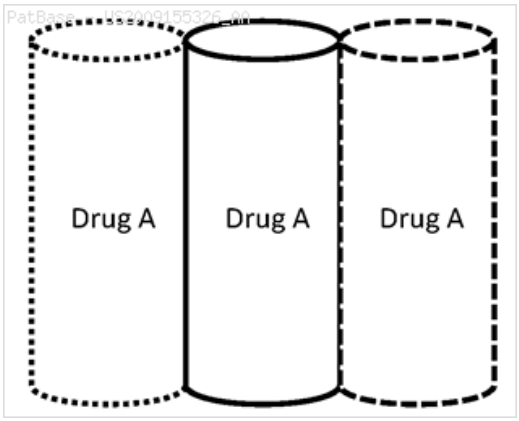
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EP1725400 A1	20070801	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20070629
EP1725400 A1	20091223	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20091124
EP1725400 A1	20101006	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20100407
TW200304409 A	20031001	LSPB	+	published / reissued	
US2003113485 AA	20030619	LSPB	+	published / reissued	
US2004202800 AA	20041014	LSPB	+	published / reissued	
US2004202800 AA	20040621	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHOBER, INC., WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SCHOBER, DENNIS A.; REEL/FRAME:015475/0841 EFFECTIVE DATE : 20040126
US2004202800 AA	20061027	LSAS	AS	ASSIGNMENT	OWNER NAME : LUMICOR, INC., WASHINGTON DESCRIPTION : CHANGE OF NAME; ASSIGNOR:SCHOBER, INC.; REEL/FRAME:018442/0448 EFFECTIVE DATE : 20050624
US2004247801 AA	20041209	LSPB	+	published / reissued	
US2006046034 AA	20060302	LSPB	+	published / reissued	
US2006046034 AA	20051027	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHOBER, INC., WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SCHOBER, DENNIS A.; REEL/FRAME:017147/0864 EFFECTIVE DATE : 20051025
US2006046034 AA	20061027	LSAS	AS	ASSIGNMENT	OWNER NAME : LUMICOR, INC., WASHINGTON DESCRIPTION : CHANGE OF NAME; ASSIGNOR:SCHOBER, INC.; REEL/FRAME:018442/0448 EFFECTIVE DATE : 20050624
US2006147655 AA	20060706	LSPB	+	published / reissued	
US2006147655 AA	20060301	LSAS	AS	ASSIGNMENT	OWNER NAME : LUMICOR, WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SCHOBER, DENNIS; REEL/FRAME:017629/0148 EFFECTIVE DATE : 20060227
US6743327 BB	20040601	LSGT	+	granted / extensions (spc, cpc, pte)	
US6743327 BB	20020604	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHOBER, INC., WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SCHOBER, DENNIS; REEL/FRAME:012952/0423 EFFECTIVE DATE : 20020528
US6743327 BB	20061027	LSAS	AS	ASSIGNMENT	OWNER NAME : LUMICOR, INC., WASHINGTON DESCRIPTION : CHANGE OF NAME; ASSIGNOR:SCHOBER, INC.; REEL/FRAME:018442/0448 EFFECTIVE DATE : 20050624
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US6743327 BB	20111206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6743327 BB	20151130	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO03082572 A1	20031009	LSPB	+	published / reissued	

WO03082572 A1	20041222	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2490743 COUNTRY OF REF DOCUMENT : CA
WO03082572 A1	20041223	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003711053 COUNTRY OF REF DOCUMENT : EP
WO03082572 A1	20060626	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
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WO03082572 A1	20061129	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003711053 COUNTRY OF REF DOCUMENT : EP
WO07051180 A2	20070503	LSPB	+	published / reissued	
WO07051180 A3	20080429	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

19) Family number: 43384325 (US2009155326A)

Title: LAYERED DRUG DELIVERY POLYMER MONOFILAMENT **FIBERS**

Abstract: Source: US2009155326A The present invention is directed generally to a layered **polymeric** monofilament **fiber** drug delivery device, where each layer of the device can contain a different polymer, drug, additive, or any combination or mixture thereof. The layered nature of the current monofilament **polymeric** monofilament device provides the capability to modulate the release of one or more drugs and/or the mechanical properties of the **fiber** so that drug release and device failure can be separately tuned to provide for the tailored introduction of therapeutically effective drugs or agents to a target tissue. Moreover, the **fiber** may comprise more than one distinct segments along its length, each segment itself having different combinations and/or numbers of layers thereby providing even greater freedom in the design of the therapeutic delivery device. The invention is also directed to a method of manufacturing such a layered **polymeric** monofilament **fiber** drug delivery device, and methods of treatment using such devices.



Classifications:
International (IPC 8-9): A01N25/34 A61K31/155 A61K31/4164 A61K31/496 A61K31/505 A61K31/5365 A61K31/56 A61K31/65 A61K31/7008 A61K31/7052 A61K38/02 A61K38/16 A61K47/30 A61K47/32 A61K47/34 A61K9/00 A61K9/70
A61P43/00 (Advanced/Invention);
A61K38/00 (Advanced/Non-invention);
A61K31/155 A61K31/4164 A61K31/496 A61K31/505 A61K31/5365 A61K31/56 A61K31/65 A61K31/7008 A61K31/7042 A61K38/02 A61K38/16 A61K47/30 A61K47/32 A61K47/34 A61K9/00
A61P43/00 (Core/Invention)
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European: A61K31/155 A61K31/4164 A61K31/496 A61K31/505 A61K31/5365 A61K31/56 A61K31/65 A61K31/7008 A61K31/7052 A61K9/00M16B A61K9/70 K61K38/00
US: 424/400 424/400S 424/402 424/402P 424/409 424/422 424/422S 424/443 424/484 514/1.1 514/1.100S 514/12 514/152 514/152S 514/178 514/178S 514/2 514/230.2 514/230.200S 514/253.07 514/253.070S 514/274 514/274S 514/36 514/36S 514/398 514/398S 514/44 514/44.00RS 514/44R 514/635 514/635S 514/772.3 514/772.300S 514/772.4 514/772.400S 514/772.5 514/772.500S 514/772.6 514/772.600S 514/772.7 514/772.700S

Family:

Publication number	Publication date	Application number	Application date
US2009155326 AA	20090618	US20080269838	20081112
US8974814 BB	20150310	US20080269838	20081112

Priority:
US20070002874P 20071112 US20080124173P 20080415 US20080269838 20081112

Probable Assignee: CALIFORNIA INST OF TECHNOLOGY
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Assignee(s): CALIFORNIA INST OF TECHNOLOGY ; CALIFORNIA INST
Inventor(s): (std): DAVIS MARK E ; MACK BRENDAN C ; WRIGHT KENNETH W
Agent(s): KAUTH POMEROY PECK AND BAILEY LLP; KPPB LLP

Legal status (INPADOC)

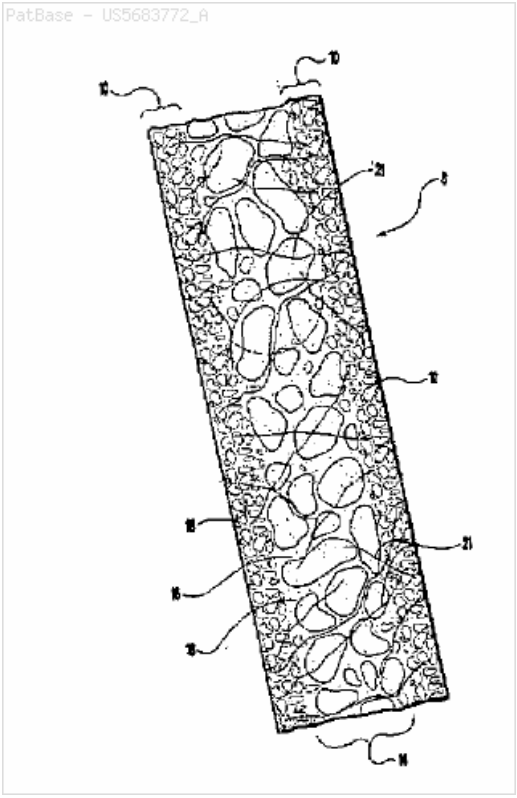
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Patent	Date recorded	Event group	Code	Event	Details
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US2009155326 AA	20090515	LSAS	AS	ASSIGNMENT	OWNER NAME : CALIFORNIA INSTITUTE OF TECHNOLOGY, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MACK, BRENDAN C.; DAVIS, MARK E.; WRIGHT, KENNETH W.; REEL/FRAME:022692/0619; SIGNING DATES FROM 20081212 TO 20090429
US8974814 BB	20150310	LSGT	+	granted / extensions (spc, cpc, pte)	
US8974814 BB	20090515	LSAS	AS	ASSIGNMENT	OWNER NAME : CALIFORNIA INSTITUTE OF TECHNOLOGY, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MACK, BRENDAN C.; DAVIS, MARK E.; WRIGHT, KENNETH W.; SIGNING DATES FROM 20081212 TO 20090429; REEL/FRAME:022692/0619

20) Family number: 33376241 (US5683772A)

Title: ARTICLES HAVING A STARCH-BOUND CELLULAR MATRIX REINFORCED WITH UNIFORMLY DISPERSED **FIBERS**

Abstract: Source: US5683772A Compositions, methods, and systems for manufacturing articles, particularly containers and packaging materials, having a starch-bound cellular matrix reinforced with substantially uniformly dispersed **fibers**. High strength articles that have adequate flexibility and toughness immediately or very shortly after being demolded without the need for subsequent conditioning are molded from compositions having a starch-based binder and **fibers** that are uniformly dispersed by means of a high yield stress fluid fraction within the starch-based composition. In a two-step mixing process, a preblended mixture is formed by gelating a portion of the starch-based binder or other thickening agent in water to form a liquid phase having high yield stress into which the **fibers** are substantially uniformly dispersed. The **fibers** preferably have an average length of at least about 2 mm and an aspect ratio of at least about 25:1. The remaining starch-based binder, water, and other desired admixtures, such as mold-release agents, inorganic fillers, rheology-modifying agents, plasticizers, integral coating or sealing materials, and dispersants, are added to the preblended mixture to form a moldable starch-based composition, which is molded between heated molds to produce form-stable articles having a desired shape and a selectively controlled foamed structural matrix. Such articles can replace articles presently made from conventional materials like paper, paperboard, polystyrene, plastic, or other organic-based materials and have especial utility in the mass-production of containers, particularly food and beverage containers.



Classifications:

International (IPC 8-9): B01F3/12 B05B11/00 B27N3/00 B28B1/00 B28B1/52 B28B11/00 B28B11/24 B28B13/02 B28B13/06 B28B23/00 B28B3/00 B28B3/02 B28B3/12 B28B3/20 B28B3/26 B28B7/42 B28C7/02 B29C33/36 B29C39/00 B29C39/42 B29C43/00 B29C43/02 B29C43/06 B29C43/24 B29C43/34 B29C43/36 B29C43/38 B29C44/04 B29C45/00 B29C49/00 B29C51/00 B29C51/04 B29C51/10 B29C53/06 B29C55/18 B29C67/20 B29C67/24 B29C70/02 B29C70/12 B29C70/50 B29C71/00 B31B17/00 B32B13/02 B32B27/04 B32B27/20 B32B37/14 B32B5/02 B32B5/14 B32B5/18 B65D43/16 B65D5/00 B65D65/38 B65D65/46 C04B14/06 C04B14/42 C04B14/46 C04B14/48 C04B16/02 C04B20/00 C04B22/00 C04B22/04 C04B24/00 C04B24/14 C04B24/38 C04B26/00 C04B26/02 C04B26/28 C04B28/00 C04B28/02 C04B38/00 C04B40/00 C04B40/06 C04B41/45 C04B41/61 C04B7/52 C08J9/00 C08J9/12 C08L1/28 C08L3/00 C08L3/02 C08L5/02 C08L5/12 C08L5/14 C08L89/06 C08L97/02 E05D1/02 (Advanced/Invention)

International (IPC 1-7): B32B5/14 B32B5/16 B65D85/40

CPC: B01F3/1214 B01F2003/125 B05C1/0826 B05C1/0834 B05C3/18 B05C5/0245 B27N3/002 B27N3/007 B28B1/00 B28B1/52 B28B3/00 B28B3/02 B28B3/126 B28B3/20 B28B3/2645 B28B7/42 B28B11/00 B28B11/003 B28B11/008 B28B11/24 B28B11/245 B28B13/021 B28B13/06 B28B23/00 B28B23/0081 B28B23/0087 B28C7/02 B29C33/10 B29C33/20 B29C33/36 B29C39/003 B29C39/42 B29C43/00 B29C43/003 B29C43/02 B29C43/06 B29C43/08 B29C43/24 B29C43/34 B29C43/36 B29C43/38 B29C44/0407 B29C45/0013 B29C49/0005 B29C51/002 B29C51/04 B29C51/10 B29C53/063 B29C53/58 B29C55/18 B29C67/202 B29C67/24 B29C67/242 B29C70/025 B29C70/12 B29C70/50 B29C71/0009 B29C2043/3433 B29C2043/3615 B29C2043/3621 B29C2043/3623 B29C2043/3689 B29C2049/4608 B29C2795/007 B29K2003/00 B29K2005/00 B29K2089/00 B29K2093/00 B29K2105/12 B29K2105/16 B29L2024/00 B29L2031/608 B29L2031/712 B29L2031/7132 B31B2201/2612 B31B2217/082 B31D1/005 B32B5/02 B32B5/14 B32B5/18 B32B13/02 B32B27/04 B32B27/20 B32B37/12 B32B37/144 B65D5/00 B65D11/02 B65D43/162 B65D65/38 B65D65/466 B65D2301/20 B65D2565/385 C04B7/527 C04B14/064 C04B16/02 C04B20/002 C04B20/0048 C04B22/002 C04B22/04 C04B24/00 C04B24/14 C04B24/38 C04B26/00 C04B26/02 C04B26/026 C04B26/28 C04B26/285 C04B28/00 C04B28/02 C04B38/0006 C04B40/00 C04B40/0032 C04B40/006 C04B40/0616 C04B41/45 C04B41/61 C08J9/0085 C08J9/12 C08J2303/00 C08L1/28 C08L1/286 C08L3/00 C08L3/02 C08L5/02 C08L5/12 C08L5/14 C08L89/06 C08L97/02 E05D1/02 E05Y2900/602 Y10T428/1372 Y10T428/17 Y10T428/269 Y10T428/2915 Y10T428/249961 Y10T428/249976 Y10T428/249986 Y10T428/249989 Y10T428/249991 Y02W30/97 Y02W90/11 B29C44/3402

European: B01F3/12B2 B05B11/00B5 B27N3/00B B27N3/00R B28B1/00 B28B1/52 B28B11/00 B28B11/00E B28B11/00E3 B28B11/24 B28B11/24D B28B13/02C B28B13/06 B28B23/00 B28B23/00Z B28B23/00Z1 B28B3/00 B28B3/02 B28B3/12C B28B3/20 B28B3/26E B28B7/42 B28C7/02 B29C33/36 B29C39/00B B29C39/42 B29C43/00B B29C43/02 B29C43/06 B29C43/08 B29C43/24 B29C43/34 B29C43/36 B29C43/38 B29C44/04A B29C45/00E B29C49/00B B29C51/00B B29C51/04 B29C51/10 B29C53/06B B29C55/18 B29C67/20C B29C67/22D1 B29C67/24 B29C67/24C B29C70/02A4 B29C70/12 B29C70/50 B29C71/00C B31B1/32 B31B17/00 B31D1/00H1 B32B13/02 B32B27/04 B32B27/20 B32B37/14B B32B5/02 B32B5/14 B32B5/18 B65D11/02 B65D43/16B B65D5/00 B65D65/38 B65D65/46C C04B14/06G C04B16/02 C04B20/00D2 C04B20/00F C04B22/00H C04B22/04 C04B24/00 C04B24/14 C04B24/38 C04B26/00 C04B26/02 C04B26/02B C04B26/28 C04B26/28B C04B28/00 C04B28/02 C04B38/00B C04B40/00 C04B40/00D1 C04B40/00D7 C04B40/06A2 C04B41/45 C04B41/61 C04B7/52H C08J9/00N C08J9/12 C08L1/28 C08L1/28F C08L3/00 C08L3/02 C08L5/02 C08L5/12 C08L5/14 C08L89/06 C08L97/02 E05D1/02 L01F3/12G L05B11/00B5 L05B11/30 L05C1/08P L05C1/08P2 L05C3/18 L05C5/02E L29C33/10 L29C33/20 L29C43/00 L29C43/06 L29C43/08 L29C43/34B L29C43/36C2 L29C43/36C2B L29C43/36C2B1 L29C43/36H2 L29C49/46B1A L29C53/58 L29C795/00D L29K105/12 L29K105/16 L29K3/00 L29K5/00 L29K89/00 L29K93/00 L29L24/00 L29L31/60C L29L31/712 L29L31/7132 L31B201/26A1A L31B217/08A L32B37/12 L65D301/20 L65D565/38Y7 M08J303/00 P05D1/02 P05Y900/602

US: 160/36.4 206/524.3 206/524.6 206/524.7 428/220 428/310.5 428/314.4 428/317.9 428/318.8 428/319.3 428/339 428/36.4 428/36.5 428/365 428/53

Family:

Publication number	Publication date	Application number	Application date
US5683772 A	19971104	US19940353543	19941209

Priority:

US19920929898 19920811 US19920982383 19921125 US19930095662 19930721
US19930109100 19930818 US19940218971 19940325 US19940353543 19941209
US19940327524 19941021 US19940288667 19940809

Probable Assignee: EARTHSHELL SPE LLC

Assignee(s): (std): KHASHOGGI E IND

Assignee(s): E KHASHOGGI IND ; E KHASHOGGI IND LLC ; E KHASHOGGI INDUSTRIES ; EARTHSHELL SPE LLC

Inventor(s): (std): ANDERSEN PER JUST ; HODSON SIMON K

Legal status (INPADOC)

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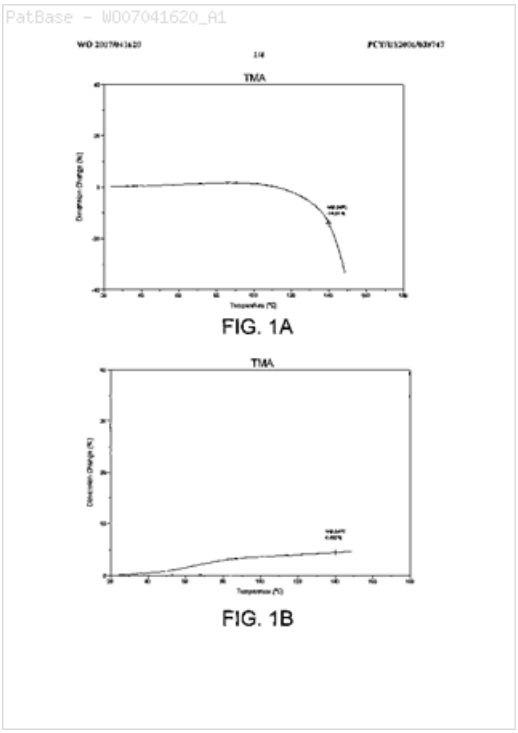
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US5683772 A	19971029	LSAS	AS	ASSIGNMENT	OWNER NAME : E. KHASHOGGI INDUSTRIES, LLC., CALIFORNIA DESCRIPTION : MERGER; ASSIGNOR:E. KHASHOGGI INDUSTRIES; REEL/FRAME:008761/0333 EFFECTIVE DATE : 19971003
US5683772 A	19980623	LSRE	CC	CERTIFICATE OF CORRECTION	
US5683772 A	20010503	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5683772 A	20050504	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5683772 A	20080828	LSAS	AS	ASSIGNMENT	OWNER NAME : EARTHSHELL SPE, LLC, NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:E. KHASHOGGI INDUSTRIES, LLC; REEL/FRAME:021450/0760 EFFECTIVE DATE : 20080714
US5683772 A	20090427	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

21) Family number: 34380916 (WO07041620A1)

Title: NONWOVEN FABRIC, ARTICLES INCLUDING NONWOVEN FABRICS, AND METHODS OF MAKING NONWOVEN FABRICS

Abstract: Briefly described, embodiments of this disclosure include nonwoven fabrics, methods of making nonwoven fabrics, articles including nonwoven fabric, and the like.

Classifications:
International (IPC 8-9): B32B27/12 D04H1/06 D04H1/42 D04H1/46 D04H13/00 (Advanced/Invention);
B32B27/12 D04H13/00 (Advanced/Non-invention);
B32B27/12 D04H1/42 D04H1/46 D04H13/00 (Core/Invention)
CPC: B32B2262/06 B32B2262/08 B32B2307/736 D04H1/06 B32B5/02 B32B5/022 B32B5/06 B32B5/08 B32B5/142 B32B5/26 B32B7/02 B32B2250/20 B32B2262/02 B32B2262/0253 B32B2262/0276 B32B2262/04 B32B2262/12 B32B2262/14 B32B2432/00 B32B2555/00 B32B2555/02
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Family:

Publication number	Publication date	Application number	Application date
BRPI0616733 A2	20160823	BR2006PI16733	20061003
CA2624808 AA	20080403	CA20062624808	20061003
CN101258029 A	20080903	CN200680032495	20061003
CN101258029 B	20110706	CN200680032495	20061003
EP1931512 A1	20080618	EP20060816190	20061003
EP1931512 A4	20140108	EP20060816190	20061003
JP2009510278 T2	20090312	JP20080533789T	20061003
KR20080088571 A	20081002	KR20087007760	20080331
MX2008004048 A1	20081023	MX20080004048	20061003
WO07041620 A1	20070412	WO2006US38747	20061003
WO07041620 C1	20080717	WO2006US38747	20061003

Priority:

US20050723197P 20051003 WO2006US38747 20061003

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Assignee(s): WUST JR ; WUST CARL J JR ; FIBERVISIONS LP

Inventor(s): (std): ALLEN CHARLIE B ; DESAI PRASHANT ; JACKSON GREGORY A ; KAZMIERCZAK MICHAEL E ; PRASHANT DESAI ; WOLHAR JOHN A ; WUST CARL J JR ; WUST JR CARL J

Inventor(s): WUST JR ; MICHAEL E KAZMIERCZAK ; JOHN A WOLHAR ; GREGORY A JACKSON ; CARL J WUST JR ; CHARLIE B ALLEN

Agent(s): RIDOUT AND MAYBEE LLP; MARTIN DIDIER ROLAND VALERY

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BRPI0616733 A2	20160823	LSPB	+	published / reissued	
BRPI0616733 A2	20130129	LSRV	B11Z	DISMISSAL: PETITION DISMISSAL - ARTICLE 216, PAR 2 OF INDUSTRIAL	TEXT : REFERENTE A PETICAO NO 16080001473/RS DE 07/03/2008.

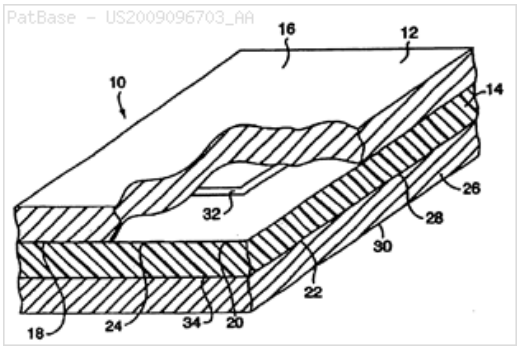
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BRPI0616733 A2	20160809	LSRE	+B11M	DISMISSAL: DECISION CANCELLED	TEXT : O DESPACHO 11.6.1 DA RPI 2195 DE 29/01/2013 ESTA SENDO ANULADO TENDO POR BASE A DETERMINACAO DO DIRETOR DE PATENTES, A QUAL E CALCADA NO PARECER NO 0003-2014 AGU/PGF/PFE/INPI/COOPHI-LBC-1.0.
BRPI0616733 A2	20160913	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	TEXT : REFERENTE AS 6A, 7A, 8A, 9A E 10A ANUIDADES.
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CA2624808 AA	20080403	LSPB	+	published / reissued	
CA2624808 AA	20080403	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2624808 AA	20091005	LSLE	-FZDE	DEAD	
CN101258029 A	20080903	LSPB	+	published / reissued	
CN101258029 A	20080903	LSPB	+C06	PUBLICATION	
CN101258029 A	20110706	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN101258029 A	20161123	LSRV	-EXPY	TERMINATION OF PATENT RIGHT OR UTILITY MODEL	
CN101258029 B	20110706	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1931512 A1	20080618	LSPB	+	published / reissued	
EP1931512 A1	20080618	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080331
EP1931512 A1	20140108	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20131206
EP1931512 A1	20140108	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 1/06 20120101ALI20131129BHEP
EP1931512 A1	20140108	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B32B 27/12 20060101AFI20131129BHEP
EP1931512 A1	20150121	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20140715
JP2009510278 T2	20090312	LSPB	+	published / reissued	
JP2009510278 T2	20110622	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110621
JP2009510278 T2	20110622	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110621
JP2009510278 T2	20111222	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111221
JP2009510278 T2	20111222	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111221
JP2009510278 T2	20120829	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120828

JP2009510278 T2	20130208	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20130207
KR20080088571 A	20081002	LSPB	+	published / reissued	
KR20080088571 A	20111104	LSDW	-WITN	WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION	
MX2008004048 A1	20081023	LSPB	+	published / reissued	
WO07041620 A1	20070412	LSPB	+	published / reissued	
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WO07041620 C1	20080326	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : MX/A/2008/004048 COUNTRY OF REF DOCUMENT : MX
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WO07041620 C1	20160823	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0616733 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20080307

22) Family number: 42572760 (US2009096703A)

Title: PAPER/BIODEGRADABLE PLASTIC LAMINATE AND ELECTROMAGNETIC SHIELDING MATERIAL

Abstract: Source: US2009096703A A paper/plastic laminate suitable for use in laser and digital copiers and printers etc. that use heat set fuser toner adhesion as the method for fusing/bonding an ink to a paper. The laminate includes a paper web laminated to a **polymeric** film using 100 percent solids, or solventless, adhesives. The **polymeric** film is made from a biodegradable **polymeric** material such as a polylactide or a biodegradable polyolefin. An electromagnetic shielding material includes a paper web, a biodegradable **polymeric** material; and a conductive layer in a laminate structure that, when interposed between a receiving antenna of an RFID smart chip and a transmitting antenna of a signal generator, prevents the reading of the chip.



Classifications:
International (IPC 8-9): A01K1/015 B32B15/04 B32B27/00 B32B27/06 B32B27/10 B32B27/18 B32B27/32 B32B27/36 B42D15/10 G03G7/00 G06K19/00 G06K19/073 G06K7/08 H01Q1/52 H05K9/00 (Advanced/Invention);
B32B15/08 B32B15/12 B32B15/20 B32B29/00 (Advanced/Non-invention);
A01K1/015 B32B27/00 B32B27/06 B32B27/10 B32B27/18 B32B27/32 B32B27/36 G03G7/00 G06K19/073 H01Q1/00 H05K9/00 (Core/Invention);
B32B15/08 B32B15/12 B32B15/20 B32B29/00 (Core/Non-invention)
CPC: Y10T156/10 B32B27/32 B32B27/10 B32B27/18 B32B27/36 G03G7/0033 G03G7/004 G03G7/0046 G06K19/07327 H01Q1/525 Y10T428/31855 Y10T428/31993 B32B7/12 B32B2255/10 B32B2255/205 B32B2255/26 B32B2307/202 B32B2307/208 B32B2307/306 B32B2307/4023 B32B2307/54 B32B2307/7163 B32B2307/734 B32B2457/00 B32B15/08 B32B15/12 B32B15/20 B32B27/06 B32B29/00
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US: 156/244.11 156/244.110S 156/60 156/60S 343/841 343/841P 428/220 428/220S 428/500 428/500S 428/537.5 428/537.500S

Family:

Publication number	Publication date	Application number	Application date
AU2008255083 AA	20081127	AU20080255083	20080514
CN101730464 A	20100609	CN200880023974	20080514
EP2154950 A1	20100224	EP20080755449	20080514
EP2154950 A4	20100623	EP20080755449	20080514
JP2011508408 T2	20110310	JP20100508557T	20080514
TW200906609 A	20090216	TW20080117804	20080515
US2009096703 AA	20090416	US20080250606	20081014
WO08144336 A1	20081127	WO2008US63595	20080514
WO10045201 A2	20100422	WO2009US60460	20091013
WO10045201 A3	20100617	WO2009US60460	20091013

Priority:
US20070803773 20070516 US20080250606 20081014 WO2008US63595 20080514

Probable Assignee: CHASE CORP

Assignee(s): (std): BOWDEN JONATHAN ; CHASE ADAM ; CHASE CORP ; GUSTAVESEN BRADLEE W ; KLEI HAROLD JAMES ; LORDI JAMES E

Inventor(s): (std): CHASE ADAM ; GUSTAVESEN BRADLEE W ; JAMES KLEI HAROLD ; JONATHAN BOWDEN ; KLEI HAROLD JAMES ; BOWDEN JONATHAN ; LORDI JAMES E

Inventor(s): BRADLEE W GUSTAVESEN ; HAROLD JAMES KLEI ; JAMES E LORDI

Agent(s): HALFORDS IP; BERGLUND STEFAN; MICHAUD DUFFY GROUP LLP; MICHAUD RICHARD R

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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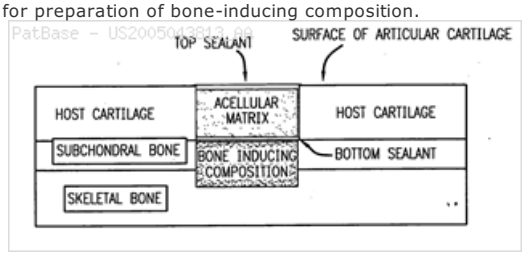
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AU2008255083 AA	20121206	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED	
CN101730464 A	20100609	LSPB	+	published / reissued	
CN101730464 A	20100609	LSPB	+C06	PUBLICATION	
CN101730464 A	20130327	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
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EP2154950 A1	20100224	LSES	+17P	REQUEST FOR	EFFECTIVE DATE : 20091216

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JP2011508408 T2	20120105	LSWD	-A762	WRITTEN ABANDONMENT OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A762 EFFECTIVE DATE : 20111231
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US2009096703 AA	20090416	LSPB	+	published / reissued	
US2009096703 AA	20081229	LSAS	AS	ASSIGNMENT	OWNER NAME : CHASE CORPORATION, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHASE, ADAM; LORDI, JAMES E.; BOWDEN, JONATHAN; REEL/FRAME:022032/0731 EFFECTIVE DATE : 20081223
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WO10045201 A2	20100422	LSPB	+	published / reissued	
WO10045201 A3	20110414	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
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23) Family number: 31714670 (US2005043813A)

Title: ACELLULAR MATRIX IMPLANTS FOR TREATMENT OF ARTICULAR CARTILAGE, BONE OR OSTEOCHONDRAL DEFECTS AND INJURIES AND METHOD FOR USE THEREOF

Abstract: Source: US2005043813A An acellular matrix implant for treatment of defects and injuries of articular cartilage, bone or osteochondral bone and a method for treatment of injured, damaged, diseased or aged articular cartilage or bone, using the acellular matrix implant implanted into a joint cartilage lesion in situ and a bone-inducing composition implanted into an osteochondral or bone defect. A method for repair and restoration of the injured, damaged, diseased or aged cartilage or bone into its full functionality by implanting the acellular matrix implant between two layers of biologically acceptable sealants and/or the bone-inducing composition into the osteochondral bone or skeletal bone defect. A method for fabrication of the acellular matrix implant of the invention. A method for preparation of bone-inducing composition.



Classifications:
International (IPC 8-9): A61B17/56 A61F13/00 A61F2/00 A61F2/28 A61F2/30 A61K35/34 A61K38/00 A61K38/22 A61K38/27 A61K38/43 A61K9/00 A61L24/00 A61L24/04 A61L27/00 A61L27/24 A61L27/26 A61L27/34 A61L27/36 A61L27/52 A61L27/58
A61P19/00 (Advanced/Invention);
A61F2/00 A61F2/02 A61F2/28 A61F2/38 (Advanced/Non-invention);
A61B17/56 A61F13/00 A61F2/00 A61F2/28 A61F2/30 A61K35/34 A61K38/43 A61L24/00 A61L27/00 (Core/Invention);
A61F2/00 A61F2/02 A61F2/28 A61F2/38 (Core/Non-invention);
A61B (Subclass/Invention)
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CPC: A61F2/28 A61F2/2846 A61F2/3859 A61F2002/2817 A61F2002/2825 A61F2002/30062 A61F2002/30064 A61F2002/30677 A61F2210/0004 A61F2310/00365 A61F2310/00982 A61L2430/06 A61F2/30756 A61F2002/30535 A61F2250/0058 A61L27/24 A61L27/34 A61L27/3633 A61L27/3654 A61L27/52 A61L27/58
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US: 424/422 424/422S 424/484 424/548 424/548P 424/94.1 424/94.100P 435/397 435/397S 606/77 606/77S 623/14.12 623/14.120S 623/18.11 623/23.58 623/23.580P 623/908 623/908S

Family:

Publication number	Publication date	Application number	Application date
AU2004266696 AA	20050303	AU20040266696	20040818
AU2004266710 AA	20050303	AU20040266710	20040818
CA2536094 AA	20060216	CA20042536094	20040818
CA2536094 C	20130709	CA20042536094	20040818
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EP1656081 A4	20110720	EP20040781499	20040818
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HK1088525 A3	20061110	HK20060110375	20060919
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US2006083729 AA	20060420	US20050292587	20051201
US2006083730 AA	20060420	US20050292928	20051201
US2007014867 AA	20070118	US20060525782	20060922
US7217294 BB	20070515	US20040882581	20040630
WO05018429 A2	20050303	WO2004US26958	20040818
WO05018429 A3	20061116	WO2004US26958	20040818
WO05018429 C1	20060427	WO2004US26958	20040818
WO05018491 A2	20050303	WO2004US26824	20040818
WO05018491 A3	20061207	WO2004US26824	20040818

Priority:

US20030496971P 20030820 US20040882581 20040630 US20040921389 20040818
US20050292587 20051201 US20050292928 20051201 US20050292466 20051201
US20060525782 20060922 WO2004US26824 20040818 WO2004US26958 20040818

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Assignee(s): (std): KUSANAGI AKIHIKO ; SCHMIDT MARY B ; TARRANT LAURENCE J B ; TARRANT LAURENCE J ; SCHMIDT MARY BETH ; HISTOGENICS CORP

Assignee(s): AKIHIKO KUSANAGI

Inventor(s): (std): AKIHIKO KUSANAGI ; KUSANAGI AKIHIKO ; LAURENCE J B TARRANT ; MARY BETH SCHMIDT ; SCHMIDT MARY B ; SCHMIDT MARY BETH ; TARRANT LAURENCE J ; TARRANT LAURENCE J B

Inventor(s): TARRANT LAURENCE JB ; TARRANT LAURENCE ; SCHMIDT MARY

Agent(s): SPRUSON AND FERGUSON; GOWLING LAFLEUR HENDERSON LLP; HANA VERNY PETERS VERNY JONES AND SCHMITT LLP; HANA VERNY, PETERS VERNY JONES SCHMITT AND ASTON LLP; HANA VERNY PETERS VERNY JONES SCHMITT AND ASTON LLP; PETERS VERNY JONES , SCHMITT AND ASTON LLP; PETERS VERNY JONES SCHMITT AND ASTON LLP; PETERS VERNY JONES AND SCHMITT LLP; HANA

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU2004266696 AA	20050303	LSPB	+	published / reissued	
AU2004266696 AA	20090903	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED	
AU2004266710 AA	20050303	LSPB	+	published / reissued	
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CA2536094 AA	20060216	LSPB	+	published / reissued	
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CA2536094 AA	20060720	LSES	+EEER	EXAMINATION REQUEST	
CA2536094 C	20130709	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2536104 AA	20060216	LSPB	+	published / reissued	
CA2536104 AA	20060216	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2536104 AA	20071026	LSES	+EEER	EXAMINATION REQUEST	
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EP1656081 A2	20110720	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20110621
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EP1662973 A2	20110720	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20110621
EP1662973 A2	20120613	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20120510
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HK1088525 A3	20061110	LSPB	+	published / reissued	
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US2006083728 AA	20060420	LSPB	+	published / reissued	
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24) Family number: 33341916 (US2006201390A)

Title: MULTI-PHASIC NANOPARTICLES

Abstract: Source: US2006201390A A method of forming multi-phasic nano-objects involves the jetting of two or more different liquids in side-by-side capillaries thereby generating a composite liquid stream. The composite then exposed to a force field which causes the composite liquid stream to at least partially solidify into a nano-object. The method forms a nano-object having a number of morphologies such as rods, spheres, and **fibers**.

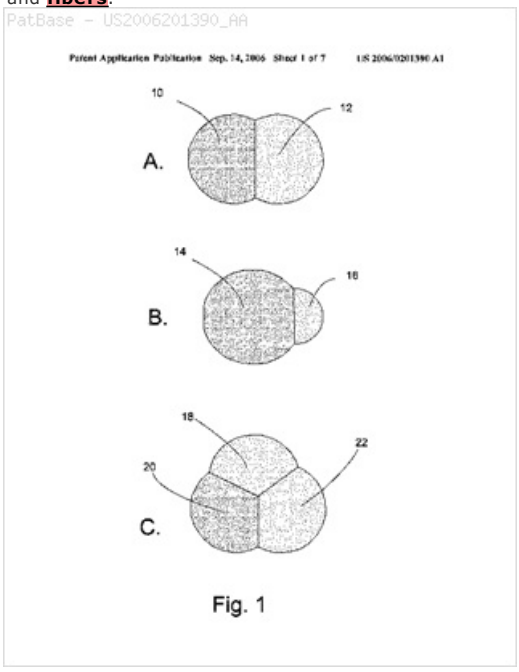


Fig. 1

Classifications:
International (IPC 8-9): A61J3/00 A61K9/14 B01J13/02 B01J2/04 B05B5/00 B05D1/04 B29B9/12 B29C59/10 B29C67/00 B32B1/00 B32B19/02 B32B9/00 B44C1/26 B44C1/28 B44C3/12 B82B1/00 B82B3/00 C08G65/00 C08G67/00 C08J3/00 C08J3/12 C08J3/20 C08J3/205 C08K3/10 C08K3/22 C08K3/34 C08K5/23 C08K5/34 C08K9/04 C08L33/08 C08L33/26 C09B67/02 C09B67/08 C09D11/00 C09D11/02 C09K11/02 C09K11/08 D01D5/00 D01D5/32 D01D5/34 D01F1/06 H05F3/00 (Advanced/Invention);
A61J3/00 B01J13/02 B01J2/02 B05D1/04 B29C59/00 B29C67/00 B32B1/00 B82B1/00 B82B3/00 C08G65/00 C08G67/00 C08J3/12 C08K3/00 C08K5/00 C08K9/00 C08L33/00 C09B67/00 C09K11/02 C09K11/08 (Core/Invention)
CPC: A61K9/5153 A61K9/70 A61K49/1854 A61K49/1887 B05B5/0255 C08J3/122 C08J2367/04 C09K11/08 Y10S977/906 C08J2371/12 Y10T428/22 Y10T428/2991 B05B5/043 B82Y20/00 C08J3/005 C08J3/205 C09D11/037 C09D11/322 D01D5/0007 D01D5/34 D01F1/06 A61K9/1694 A61K9/1676 A61K9/5026 A61K9/5089 B01J13/04 B01J13/14 B01J13/20 B82Y5/00 Y10T428/31678 D01D5/0069 B82Y10/00 B82Y30/00 C08J3/12 C08J3/20 C08J3/246 D01D5/32 D01F8/00
European: A61K49/18P8 A61K49/18R2N2K4 A61K49/18R6 A61K9/16K2 A61K9/16P4 A61K9/50H6B A61K9/50P A61K9/51H6D4 B01J13/04 B01J13/14 B01J13/20 B05B5/025A B82Y10/00 B82Y20/00 B82Y30/00 B82Y5/00 C08J3/00B C08J3/12 C08J3/12A C08J3/20 C08J3/205 C08J3/24H C09D11/037 C09D11/322 C09K11/08 D01D5/00E D01D5/00E4B D01D5/32 D01D5/34 D01F1/06 D01F8/00 K61K9/70 L05B5/043 M08J367/04
US: 106/401 106/436 106/472 106/474 204/164 204/168 204/168S 252/301 252/301.36 252/301.360S 252/301.40R 252/301.40RS 252/301.4R 252/301.60S 252/301.60SS 252/301.6S 264/10 264/10P 264/484 264/484P 264/9 423/447.1 424/400 424/422 424/422P 424/489 424/490 424/501 428/403 428/403P 428/457 428/67 428/689 428/690 428/704 524/190 524/190S 524/413 524/424 524/430 524/431 524/431S 524/612 524/612S 524/99 524/99P 977/901 977/901S 977/906

Family:

Publication number	Publication date	Application number	Application date
DE602005037936 D1	20130321	DE200560037936T	20051110
EP1809719 A2	20070725	EP20050858311	20051110
EP1809719 A4	20111130	EP20050858311	20051110
EP1809719 B1	20130116	EP20050858311	20051110
EP2285889 A1	20110223	EP20080768415	20080612
EP2285889 A4	20120104	EP20080768415	20080612
JP2008520407 T2	20080619	JP20070540190T	20051110
JP4690418 B2	20110601	JP20070540190T	20051110
US2006201390 AA	20060914	US20050272194	20051110
US2007237800 AA	20071011	US20070763842	20070615
US2008242774 AA	20081002	US20080137121	20080611
US2010015447 AA	20100121	US20090506712	20090721
US2010038830 AA	20100218	US20080257945	20081024
US2011062608 AA	20110317	US20100821688	20100623
US7767017 BB	20100803	US20050272194	20051110
US7947772 BB	20110524	US20080137121	20080611
US8043480 BB	20111025	US20080257945	20081024
US8052849 BB	20111108	US20100821688	20100623
US8187708 BB	20120529	US20090506712	20090721
US8241651 BB	20120814	US20070763842	20070615
WO06137936 A2	20061228	WO2005US40560	20051110
WO06137936 A3	20070621	WO2005US40560	20051110
WO07149310 A2	20071227	WO2007US14028	20070615
WO07149310 A3	20080925	WO2007US14028	20070615
WO09055693 A2	20090430	WO2008US81145	20081024
WO09055693 A3	20090917	WO2008US81145	20081024
WO09151421 A1	20091217	WO2008US07372	20080612
WO10011641 A2	20100128	WO2009US51238	20090721
WO10011641 A3	20100422	WO2009US51238	20090721

Priority:

EP20050858311 20051110 US20040626792P 20041110 US20050272194 20051110
US20060814706P 20060616 US20070763842 20070615 US20050651288P 20050209
US20080137121 20080611 WO2005US40560 20051110 US20080082396P 20080721
US20090506712 20090721 US20070982389P 20071024 US20080257945 20081024
WO2008US07372 20080612 US20100821688 20100623

Probable Assignee: UNIV MICHIGAN

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Assignee(s): UNIV OF MICHIGAN ; OF MICHIGAN UNIV ; THE UNIV OF MICHIGAN ; THE REGENTS OF THE UNIVERSITY OF MICHIGAN ; THE REGENTS OF THE UNIVERSITY OF MICHIGAN TECHNOLO ; THE UNIV

	MICHIGAN ; UNIV ; THE UNIV ; THE REGENTS OF THE UNIVERSITY OF MICHIGAN TECHNOLOGY MANAGEMENT WOLVERINE TOWER OFFICE ; THE REGENTS OF THE UNIVERSITY OF MICHIGAN OFFICE OF TECHNOLOGY TRANSFER ; THE UNIV OF MICHIGAN TECHNOLOGY MANAGEMENT WOLVERINE TOWER OFFICE ; THE UNIV OF MICHIGAN OFFICE OF TECHNOLOGY TRANSFER ; THE UNIV OF MICHIGAN ANN ARBOR
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Designated states:	AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
EP1809719 A2	20070725	LSPB	+	published / reissued	
EP1809719 A2	20070725	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20070504
EP1809719 A2	20070801	LSES	R17D	SEARCH REPORT (CORRECTION)	EFFECTIVE DATE : 20070621
EP1809719 A2	20070919	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08K 3/22 20060101AFI20070816BHEP
EP1809719 A2	20111130	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20111103
EP1809719 A2	20111130	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D01D 5/32 20060101AFI20111027BHEP
EP1809719 A2	20111130	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08J 3/12 20060101ALI20111027BHEP
EP1809719 A2	20120725	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08J 3/12 20060101ALI20120620BHEP
EP1809719 A2	20120725	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D01D 5/32 20060101AFI20120620BHEP
EP1809719 A2	20130116	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1809719 A2	20130213	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1809719 A2	20130215	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1809719 A2	20130215	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 593979 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20130215
EP1809719 A2	20130321	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602005037936 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20130321
EP1809719 A2	20130615	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 593979 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20130116
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EP1809719 A2	20130625	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D

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EP1809719 A2	20130830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20130417
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EP1809719 A2	20130830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20130427
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EP1809719 A2	20130830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20130116

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EP1809719 A2	20131031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20130116
EP1809719 A2	20131129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CY DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20130116
EP1809719 A2	20131129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CZ DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20130116
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EP1809719 A2	20140213	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602005037936 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20131017
EP1809719 A2	20140603	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 602005037936 COUNTRY OF REF DOCUMENT : DE

EP1809719 A2	20140630	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1809719 A2	20140723	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20131110
EP1809719 A2	20140731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20131130
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EP1809719 A2	20140822	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20140731
EP1809719 A2	20140827	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1809719 A2	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140603
EP1809719 A2	20140911	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 602005037936 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20140603
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EP1809719 B1	20130116	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2285889 A1	20110223	LSPB	+	published / reissued	
EP2285889 A1	20110223	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20101210
EP2285889 A1	20110413	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : LAHANN, JOERG
EP2285889 A1	20110413	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : ROH, KYUNG-HO
EP2285889 A1	20110413	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : MARTIN, DAVID, C.
EP2285889 A1	20120104	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20111205
EP2285889 A1	20120104	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08K 9/04 20060101AFI20111125BHEP
EP2285889 A1	20120104	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08K 3/34 20060101ALI20111125BHEP
EP2285889 A1	20120104	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C08J 3/00 20060101ALI20111125BHEP
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EP2285889 A1	20120104	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D01D 5/00 20060101ALI20111125BHEP
EP2285889 A1	20120516	LSWD	-18W	WITHDRAWN	EFFECTIVE DATE : 20120403
JP2008520407 T2	20080619	LSPB	+	published / reissued	
JP2008520407 T2	20100728	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100727

JP2008520407 T2	20101228	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20101227
JP2008520407 T2	20110119	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2008520407 T2	20110126	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20110125
JP2008520407 T2	20110127	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP2008520407 T2	20110224	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20110217
JP2008520407 T2	20110225	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP2008520407 T2	20110228	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140225 YEAR OF FEE PAYMENT : 3
JP4690418 B2	20110601	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4690418 B2	20081108	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20081107
JP4690418 B2	20100728	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100727
JP4690418 B2	20101228	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20101227
JP4690418 B2	20110119	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4690418 B2	20110126	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20110125
JP4690418 B2	20110127	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
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JP4690418 B2	20110225	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4690418 B2	20110228	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140225 YEAR OF FEE PAYMENT : 3
JP4690418 B2	20140218	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP4690418 B2	20150225	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	

US2006201390 AA	20060914	LSPB	+	published / reissued	
US2006201390 AA	20060405	LSAS	AS	ASSIGNMENT	OWNER NAME : THE REGENTS OF THE UNIVERSITY OF MICHIGAN, MICHIGA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LAHANN, JOERG; MARTIN, DAVID C.; ROH, KYUNG HO; REEL/FRAME:017423/0400; SIGNING DATES FROM 20060208 TO 20060306
US2007237800 AA	20071011	LSPB	+	published / reissued	
US2007237800 AA	20100803	LSAS	AS	ASSIGNMENT	OWNER NAME : THE REGENTS OF THE UNIVERSITY OF MICHIGAN, MICHIGA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:LAHANN, JOERG; REEL/FRAME:024783/0229 EFFECTIVE DATE : 20100803
US2008242774 AA	20081002	LSPB	+	published / reissued	
US2008242774 AA	20081124	LSAS	AS	ASSIGNMENT	OWNER NAME : REGENTS OF THE UNIVERSITY OF MICHIGAN, THE, MICHIG DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ROH, KYUNG-HO; LAHANN, JOERG; MARTIN, DAVID C.; REEL/FRAME:021940/0934; SIGNING DATES FROM 20080611 TO 20081114
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US2010015447 AA	20100121	LSPB	+	published / reissued	
US2010015447 AA	20100809	LSAS	AS	ASSIGNMENT	OWNER NAME : THE REGENTS OF THE UNIVERSITY OF MICHIGAN, MICHIGA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LAHANN, JOERG; KAZEMI, ABBASS; SIGNING DATES FROM 20091005TO 20100808; REEL/FRAME:024807/0602
US2010038830 AA	20100218	LSPB	+	published / reissued	
US2010038830 AA	20081124	LSAS	AS	ASSIGNMENT	OWNER NAME : THE REGENTS OF THE UNIVERSITY OF MICHIGAN,MICHIGAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LAHANN, JOERG; BHASKAR, SRIJANANI; REEL/FRAME:021881/0091 EFFECTIVE DATE : 20081114
US2010038830 AA	20081124	LSAS	AS	ASSIGNMENT	OWNER NAME : THE REGENTS OF THE UNIVERSITY OF MICHIGAN,MICHIGAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LAHANN, JOERG; BHASKAR, SRIJANANI; US-ASSIGNMENT DATABASE UPDATED:20100218; REEL/FRAME:21881/91 EFFECTIVE DATE : 20081114
US2011062608 AA	20110317	LSPB	+	published / reissued	
US7767017 BB	20100803	LSGT	+	granted / extensions (spc, cpc, pte)	
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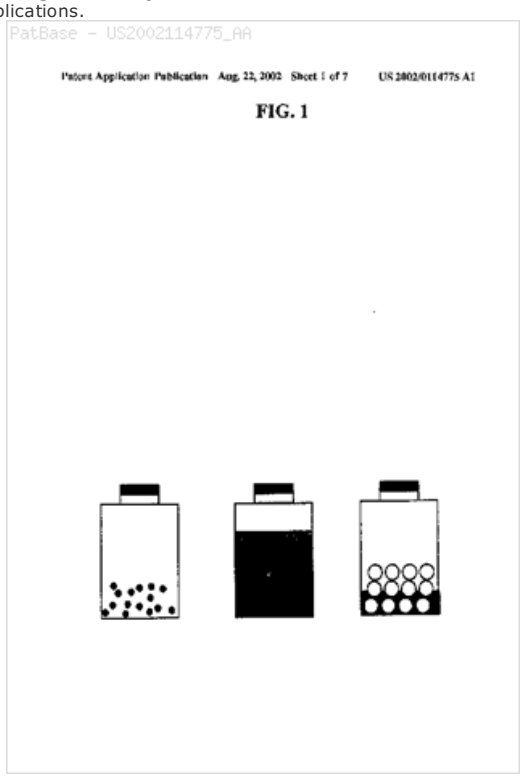
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US7767017 BB	20101123	LSRE	CC	CERTIFICATE OF CORRECTION	
US7767017 BB	20140203	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
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US7947772 BB	20081124	LSAS	AS	ASSIGNMENT	OWNER NAME : REGENTS OF THE UNIVERSITY OF MICHIGAN, THE, MICHIG DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ROH, KYUNG-HO; LAHANN, JOERG; MARTIN, DAVID C.; REEL/FRAME:021940/0934; SIGNING DATES FROM 20080611 TO 20081114
US7947772 BB	20081124	LSAS	AS	ASSIGNMENT	OWNER NAME : REGENTS OF THE UNIVERSITY OF MICHIGAN, THE, MICHIG DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ROH, KYUNG-HO; LEHANN, JOERG; MARTIN, DAVID C.; REEL/FRAME:021940/0934; SIGNING DATES FROM 20080611 TO 20081114
US7947772 BB	20081124	LSAS	AS	ASSIGNMENT	OWNER NAME : REGENTS OF THE UNIVERSITY OF MICHIGAN, THE, MICHIG DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ROH, KYUNG-HO; LAHANN, JOERG; MARTIN, DAVID C.; SIGNING DATES FROM 20080611 TO 20081114; REEL/FRAME:021940/0934
US7947772 BB	20110809	LSRE	CC	CERTIFICATE OF CORRECTION	
US7947772 BB	20141124	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
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US8043480 BB	20081124	LSAS	AS	ASSIGNMENT	OWNER NAME : THE REGENTS OF THE UNIVERSITY OF MICHIGAN,MICHIGAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LAHANN, JOERG; BHASKAR, SRIJANANI; REEL/FRAME:021881/0091 EFFECTIVE DATE : 20081114
US8043480 BB	20081124	LSAS	AS	ASSIGNMENT	OWNER NAME : THE REGENTS OF THE UNIVERSITY OF MICHIGAN, MICHIGA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LAHANN, JOERG; BHASKAR, SRIJANANI; REEL/FRAME:021881/0091 EFFECTIVE DATE : 20081114
US8043480 BB	20120306	LSRE	CC	CERTIFICATE OF CORRECTION	
US8043480 BB	20150427	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8052849 BB	20111108	LSGT	+	granted / extensions (spc, cpc, pte)	
US8052849 BB	20120207	LSRE	CC	CERTIFICATE OF CORRECTION	

US8052849 BB	20150508	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8187708 BB	20120529	LSGT	+	granted / extensions (spc, cpc, pte)	
US8187708 BB	20100809	LSAS	AS	ASSIGNMENT	OWNER NAME : THE REGENTS OF THE UNIVERSITY OF MICHIGAN, MICHIGA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LAHANN, JOERG; KAZEMI, ABBASS; SIGNING DATES FROM 20091005TO 20100808; REEL/FRAME:024807/0602
US8187708 BB	20151130	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8241651 BB	20120814	LSGT	+	granted / extensions (spc, cpc, pte)	
US8241651 BB	20100803	LSAS	AS	ASSIGNMENT	OWNER NAME : THE REGENTS OF THE UNIVERSITY OF MICHIGAN, MICHIGA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:LAHANN, JOERG; REEL/FRAME:024783/0229 EFFECTIVE DATE : 20100803
US8241651 BB	20130521	LSRE	CC	CERTIFICATE OF CORRECTION	
US8241651 BB	20160215	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
WO06137936 A2	20061228	LSPB	+	published / reissued	
WO06137936 A3	20070504	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2005858311 COUNTRY OF REF DOCUMENT : EP
WO06137936 A3	20070508	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007540190 COUNTRY OF REF DOCUMENT : JP
WO06137936 A3	20070725	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2005858311 COUNTRY OF REF DOCUMENT : EP
WO07149310 A2	20071227	LSPB	+	published / reissued	
WO07149310 A3	20081217	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO07149310 A3	20090116	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : RU
WO09055693 A2	20090430	LSPB	+	published / reissued	
WO09055693 A3	20100427	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09055693 A3	20101117	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 08841129 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2
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WO09151421 A1	20101214	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10011641 A2	20100128	LSPB	+	published / reissued	
WO10011641 A3	20110122	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10011641 A3	20110817	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 09800868 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2

25) Family number: 31388901 (US2002114775A)

Title: CROSSLINKING AGENTS AND METHODS OF USE

Abstract: Source: US2002114775A Methods and compositions are provided for preparing protein concentrates from protein comprising aqueous compositions. In the subject methods, an initial protein comprising aqueous compositions, such as whole blood or a derivative thereof, is contacted with a non-protein denaturant hydrogel under conditions sufficient for a substantial amount of water present in the composition to be absorbed by the hydrogel, resulting in the production of a protein concentrate, such as a fibrinogen rich composition. Of particularl interest is the use of the subject methods to prepare fibrinogen rich compositions, where such compositions produced according to the subject invention are useful in fibrin sealants, drug delivery vehicles and in a number of other diverse applications.



Classifications:

International (IPC 8-9): A61B17/00 A61B17/10 A61F2/00 A61K31/74 A61K31/765 A61K31/77 A61K31/785 A61K31/787 A61K31/795 A61K35/14 A61K35/16 A61K38/40 A61K47/10 A61K47/30 A61K47/32 A61K47/34 A61K47/42 A61K51/08 A61K8/41 A61K9/00 A61K9/06 A61K9/10 A61K9/107 A61L24/04 A61L24/06 A61L24/10 A61L26/00 A61L27/00 A61L27/18 A61L27/34 A61L27/50 A61L27/52 A61L27/58 A61L31/00 A61L31/06 A61M11/00 A61M31/00 A61M35/00 A61M37/00 A61P19/02 A61P29/00 A61P3/10 A61P35/00 A61P41/00 A61P43/00 A61P7/08 A61P9/10 B05B7/02 C07K1/00 C07K14/74 C07K14/745 C07K14/75 C07K14/80 C07K16/36 C08G63/08 C08G63/48 C08G63/91 C08G85/00 C08J3/075 C08J3/24 C08K5/17 C08K5/3415 C08L101/14 C08L89/00 C09F15/00 C12Q1/56 G06K7/10 (Advanced/Invention);
A61L26/00 A61L27/00 A61P41/00 B05B7/02 C08G63/08 C08J3/24 (Advanced/Non-invention);
A61B17/00 A61B17/03 A61K31/74 A61K47/00 A61K47/10 A61K47/34 A61K47/42 A61K8/30 A61K9/00 A61K9/06 A61K9/107 A61L24/00 A61L27/00 A61L31/00 A61L31/04 A61M11/00 A61M35/00 A61P41/00 B05B7/02 C07K1/00 C07K14/43 C07K14/435 C07K14/79 C08G63/00 C08J3/02 (Core/Invention);
A61P41/00 (Core/Non-invention)

International (IPC 1-7): A61B17/00 A61B17/04 A61B17/08 A61B17/10 A61F2/00 A61K31/00 A61K31/74 A61K38/38 A61K38/39 A61K38/48 A61K47/30 A61K47/32 A61K47/34 A61K49/00 A61K9/00 A61K9/14 A61K9/50 A61L24/06 A61L26/00 A61L27/00 A61L27/18 A61L27/34 A61L31/06 A61M31/00 A61M35/00 A61M37/00 A61M5/17 A61M5/178 A61M5/32 B01L3/00 B05B7/02 B05D3/00 C07K1/00 C07K14/765 C08F283/04 C08F283/06 C08F8/00 C08F8/30 C08G63/02 C08G63/08 C08G63/44 C08G63/48 C08G63/91 C08G69/10 C08G69/44 C08G69/48 C08H1/00 C08J3/24 C08L67/00 C08L71/02 C08L77/00 C09F1/00 C09F15/00

CPC: A61K9/0024 A61K47/34 A61L27/18 A61L27/50 A61L31/06 A61M25/0071 A61M35/00 C08G63/08 C08G63/912 A61K9/06 A61K47/10 C08G2210/00 C08J3/075 C08J2371/02 A61K31/74 A61K47/46 A61L27/52 A61L27/58 Y10S435/81 C07K14/75 A61K9/0014 A61K9/0019 A61K47/42 A61L24/106 C07K1/30 C07K14/745 C08L89/00 G06K7/10831 G06K2207/1016 A61L31/145 A61B17/00491 A61B50/30 A61B2017/00495 A61L31/148

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US: 128/200.14 128/200.140S 424/1.69 424/422 424/423 424/424 424/426 424/426P 424/428 424/484 424/484S 424/486 424/486P 424/488 424/78.01 424/78.010P 424/78.08 424/78.080P 424/78.080S 424/78.16 424/78.17 424/78.170P 424/78.24 424/78.26 424/78.28 424/78.35 424/9.6 424/9.600P 424/94.64 424/94.640P 424/96 427/2.1 427/2.100S 435/13 435/810 514/1 514/12 514/13.6 514/13.600S 514/14.7 514/14.700S 514/15.2 514/15.200S 514/15.3 514/17.2 514/17.200S 514/1P 514/2 514/21 514/21.2 514/21.200S 514/54 514/59 514/772.1 514/772.7 514/772.700P 514/773 514/781 514/781S 514/9.4 514/9.400S 523/118 525/54.1 525/54.11 525/54.2 527/200 527/200S 527/207 527/207S 528/354 528/361 530/200 530/350 530/356 530/362 530/363 530/363S 530/380 530/382 530/388.25 530/402 604/197 604/240 604/38 604/38S 604/500 604/500S 604/82 606/214

Family:

Publication number	Publication date	Application number	Application date
AT502670 E	20110415	AT19990942172T	19990813
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AU199955608 A1	20000306	AU19990055608	19990813
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Priority:

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US20030373939	20030225	WO1997US16897	19970922		

Probable Assignee: COVIDIEN LP

Assignee(s): (std): COVIDIEN LP ; ROWE STEPHEN C ; INCEPT LLC ; SAWHNEY AMARPREET S ; PATHAK CHANDRASHEKAR ; PATHAK CHANDRASHEKHAR P ; INCEPT ; EDELMAN PETER E ; EDELMAN PETER G ; KENNEDY JACK ; HADBA AHMAD ROBERT ; ABUZAINA FERASS ; BENNETT STEVEN ; CHANDRASHEKAR PATHAK ; STEPHEN C ROWE ; TYCO HEALTHCARE

Assignee(s): TYCO HEALTHCARE GROUP LP ; CHANDRASHEKHAR P PATHAK ; CAMPBELL PATRICK K ; MELANSON DAVID A ; COVIDIEN LP MANSFIELD

Inventor(s): (std): AMARPREET S SAWHNEY ; BENNETT STEVEN ; CAMPBELL PATRICK ; CHANDRASHEKAR PATHAK ; CHANDRASHEKHAR P PATHAK ; DAVID A MELANSON ; EDELMAN PETER E ; ABUZAINA FERASS ; HADBA AHAMAD ROBERT ; HADBA AHMAD ROBERT ; KENNEDY JACK ; MELANSON DAVID ; PATHAK CHANDRASHEKHAR P ; PATRICK K CAMPBELL ; SAWHNEY AMARPREET ; STEPHEN C ROWE ; SAWHNEY AMARPREET S ; ROWE STEPHEN C ; PATHAK CHANDRASHEKAR ; MELANSON DAVID A ; CAMPBELL PATRICK K ; EDELMAN PETER G

Inventor(s): EDELMAN PETER ; PATHAK CHANDRASHEKHAR ; STEVEN BENNETT ; PETER G EDELMAN ; KENNEDY JACK GUILFORD ; JACK KENNEDY ; HADBA AHAMAD ROBERT WALLINGFORD ; ABUZAINA FERASS SHELTON ; AHAMAD ROBERT HADBA ; FERASS ABUZAINA

Agent(s): CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; SPRUSON AND FERGUSON; SMART AND BIGGAR; OSLER HOSKIN AND HARCOURT LLP; VOSSIUS AND PARTNER; SOAMES CANDIDA JANE; PATTERSON THUENTE SKAAR AND CHRISTENSEN PA 4800 IDS CENTER; DARDI AND ASSOCIATES PLLC; DARDI AND ASSOCIATES PLLC US BANK PLAZA; MARK FARBER ESQ TYCO HEALTHCARE GROUP LP; DARDI AND HERBERT PLLC; PATTERSON THUENTE SKAAR AND CHRISTENSEN PA; CURTIS B

Designated states: AL AM AT AU AZ BA BB BE BG BR BY CA CH CN CU CY CZ DE DK EE ES FI FR GB GE GH GR HR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK MN MT MW MX NL NO NZ PL PT RO RS RU SD SE SG SI SK SL SM SZ TJ TM TR TT UA UG US UZ VN YU ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT502670 E	20110415	LSGT	+	granted / extensions (spc,	

				cpc, pte)	
AT502670 E	20110915	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU199746486 A1	19980414	LSPB	+	published / reissued	
AU199955608 A1	20000306	LSPB	+	published / reissued	
AU199955608 A1	20011018	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
AU199955608 A5	20000306	LSPB	+	published / reissued	
AU200027075 A1	20000626	LSPB	+	published / reissued	
AU200027075 A1	20010830	LSAS	PC1	ASSIGNMENT BEFORE GRANT (SECT. 113)	PARTYTYPE : OWNER OWNER : INCEPT LLC OLDPARTY : THE FORMER OWNER WAS: CHANDRASHEKHAR P PATHAK
AU200027075 A1	20020509	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
AU200027075 A5	20000626	LSPB	+	published / reissued	
AU2009202751 AA	20100128	LSPB	+	published / reissued	
AU2009202751 AA	20100422	LSPB	SREP	SPECIFICATION REPUBLISHED	
AU2009202751 AA	20130502	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
CA2340381 AA	20010213	LSPB	+	published / reissued	
CA2340381 AA	20010213	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2340381 AA	20040420	LSES	+EEER	EXAMINATION REQUEST	
CA2340381 C	20090113	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2353642 AA	20010601	LSPB	+	published / reissued	
CA2353642 AA	20010601	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2353642 AA	20040512	LSES	+EEER	EXAMINATION REQUEST	
CA2353642 C	20091110	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2671115 AA	20100108	LSPB	+	published / reissued	
CA2671115 AA	20130902	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20130708
EP1104324 A1	20010606	LSPB	+	published / reissued	
EP1104324 A1	20010606	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20010307
EP1104324 A1	20010905	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : SAWHNEY, AMARPREET, S.
EP1104324 A1	20010905	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : CAMPBELL, PATRICK, K.
EP1104324 A1	20010905	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : MELANSON, DAVID, A.

EP1104324 A1	20020220	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20020107
EP1104324 A1	20020220	LSRE	RIC1	CLASSIFICATION (CORRECTION)	TEXT : 7A 61M 37/00 A, 7A 61M 35/00 B, 7A 61B 17/00 B
EP1104324 A1	20061018	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20060918
EP1104324 A1	20100908	LSRE	RTI1	TITLE (CORRECTION)	TEXT : APPARATUS FOR IN SITU FORMATION OF HYDROGELS
EP1104324 A1	20110323	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1104324 A1	20110331	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1104324 A1	20110413	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1104324 A1	20110427	LSAS	RAP2	TRANSFER OF RIGHTS OF AN EP GRANTED PATENT	PARTYTYPE : OWNER OWNER : INCEPT LLC
EP1104324 A1	20110505	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 69943297 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20110505
EP1104324 A1	20110714	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : DE OWNER : INCEPT LLC, LEXINGTON, US REF LEGAL EVENT CODE : R081 REF DOCUMENT NUMBER : 69943297 COUNTRY OF REF DOCUMENT : DE OLDPARTY : FORMER OWNER: INCEPT LLC, SAN MATEO, CALIF., US EFFECTIVE DATE : 20110322
EP1104324 A1	20110720	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : VDEP EFFECTIVE DATE : 20110323
EP1104324 A1	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110624
EP1104324 A1	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110323
EP1104324 A1	20110819	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2363922 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20110819
EP1104324 A1	20110831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110323
EP1104324 A1	20110831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM	COUNTRY OF REF DOCUMENT : CY NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE

				NAT. OFFICE TO EPO	DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110323
EP1104324 A1	20110831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110323
EP1104324 A1	20110930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110323
EP1104324 A1	20111031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110725
EP1104324 A1	20111230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110323
EP1104324 A1	20120229	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20111227
EP1104324 A1	20120229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110323
EP1104324 A1	20120330	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20110831
EP1104324 A1	20120330	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1104324 A1	20120419	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 69943297 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20111227
EP1104324 A1	20120430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20110831
EP1104324 A1	20120430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20110831
EP1104324 A1	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20110323
EP1104324 A1	20160201	LSFE	REG	REFERENCE TO A	COUNTRY OF REF DOCUMENT :

				NATIONAL CODE	FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 17
EP1104324 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160222 YEAR OF FEE PAYMENT : 17
EP1104324 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160229 YEAR OF FEE PAYMENT : 17
EP1104324 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160201 YEAR OF FEE PAYMENT : 17
EP1104324 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IE PAYMENT DATE : 20160202 YEAR OF FEE PAYMENT : 17
EP1104324 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160201 YEAR OF FEE PAYMENT : 17
EP1104324 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160201 YEAR OF FEE PAYMENT : 17
EP1104324 A1	20170210	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 18
EP1104324 B1	20110323	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1137373 A1	20011004	LSPB	+	published / reissued	
EP1137373 A1	20011004	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20010611
EP1137373 A1	20040512	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : 7A 61K 9/00 A
EP1137373 A1	20040512	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : 7A 61L 31/06 B
EP1137373 A1	20040512	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : 7A 61K 47/34 B
EP1137373 A1	20040512	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : 7A 61L 27/18 B
EP1137373 A1	20040519	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20040402
EP1137373 A1	20070502	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20040803
EP1137373 A1	20081119	LSWD	-18W	WITHDRAWN	EFFECTIVE DATE : 20081009
EP2196193 A1	20100616	LSPB	+	published / reissued	
EP2196193 A1	20110126	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20101215
EP2196193 A1	20121226	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : COVIDIEN LP
EP2196193 A1	20141231	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61K 47/10 20060101ALI20141125BHEP
EP2196193 A1	20141231	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61K 47/34 20060101ALI20141125BHEP
EP2196193 A1	20141231	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61K 9/00 20060101ALI20141125BHEP

EP2196193 A1	20141231	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61K 47/42 20060101ALI20141125BHEP
EP2196193 A1	20141231	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61K 9/06 20060101AFI20141125BHEP
EP2196193 A1	20150114	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20141216
EP2196193 A1	20150304	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150202
EP2196193 A1	20150610	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150513
EP2196193 A1	20150923	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2196193 A1	20150930	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2196193 A1	20151015	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 750831 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20151015
EP2196193 A1	20151021	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2196193 A1	20151029	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602009033782 COUNTRY OF REF DOCUMENT : DE
EP2196193 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151223
EP2196193 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151224

EP2196193 A1	20160210	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2196193 A1	20160215	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 750831 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150923
EP2196193 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160123
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EP2196193 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923

EP2196193 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160125
EP2196193 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160622	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 8
EP2196193 A1	20160624	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602009033782 COUNTRY OF REF DOCUMENT : DE
EP2196193 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IE PAYMENT DATE : 20160622 YEAR OF FEE PAYMENT : 8
EP2196193 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160627 YEAR OF FEE PAYMENT : 8
EP2196193 A1	20160831	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20160624
EP2196193 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160622 YEAR OF FEE PAYMENT : 8
EP2196193 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160622 YEAR OF FEE PAYMENT : 8
EP2196193 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT

				VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150923
EP2196193 A1	20170228	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2196193 B1	20150923	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2363922 T3	20110819	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2002522177 T2	20020723	LSPB	+	published / reissued	
JP2002531217 T2	20020924	LSPB	+	published / reissued	
JP2002531217 T2	20040122	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20040121
JP2002531217 T2	20040329	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20040326
JP2002531217 T2	20040419	LSAL	-A912	REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A912 EFFECTIVE DATE : 20040416
JP2002531217 T2	20070403	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20070402
JP2007217699 A2	20070830	LSPB	+	published / reissued	
JP2007217699 A2	20101019	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20101019
JP2007217699 A2	20110419	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110418
JP2007217699 A2	20111101	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20111101
JP2007217699 A2	20120225	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120224
JP2007217699 A2	20120323	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20120322
JP2007217699 A2	20120514	LSAL	-A912	REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A912 EFFECTIVE DATE : 20120511
JP2010017548 A2	20100128	LSPB	+	published / reissued	
JP4159254 B2	20081001	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4159254 B2	20060810	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20060809
JP4159254 B2	20060810	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060809
JP4159254 B2	20060923	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20060922
JP4159254 B2	20071024	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20071023

JP4159254 B2	20080419	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080418
JP4159254 B2	20080624	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4159254 B2	20080702	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080701
JP4159254 B2	20080703	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP4159254 B2	20080724	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080715
JP4159254 B2	20080725	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4159254 B2	20080728	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4159254 B2	20081111	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4159254 B2	20110802	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4159254 B2	20120731	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 5
JP4159254 B2	20130730	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4159254 B2	20140902	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4159254 B2	20160119	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4159254 B2	20161206	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
US2002114775 AA	20020822	LSPB	+	published / reissued	
US2003012734 AA	20030116	LSPB	+	published / reissued	
US2003077272 AA	20030424	LSPB	+	published / reissued	
US2003108511 AA	20030612	LSPB	+	published / reissued	
US2003162841 AA	20030828	LSPB	+	published / reissued	
US2004002456 AA	20040101	LSPB	+	published / reissued	
US2004023842 AA	20040205	LSPB	+	published / reissued	
US2006147409 AA	20060706	LSPB	+	published / reissued	
US2007197776 AA	20070823	LSPB	+	published / reissued	
US2008095736 AA	20080424	LSPB	+	published / reissued	
US2008114092 AA	20080515	LSPB	+	published / reissued	
US2008214695 AA	20080904	LSPB	+	published /	

US2008260802 AA	20081023	LSPB	+	reissued published / reissued	
US2008260802 AA	20080624	LSAS	AS	ASSIGNMENT	OWNER NAME : INCEPT LLC, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SAWHNEY, AMARPREET S.; BENNETT, STEVEN; EDELMAN, PETER G.; REEL/FRAME:021143/0809; SIGNING DATES FROM 20080508 TO 20080528
US2009324721 AA	20091231	LSPB	+	published / reissued	
US2009324721 AA	20090910	LSAS	AS	ASSIGNMENT	OWNER NAME : TYCO HEALTHCARE GROUP LP, CONNECTICUT DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KENNEDY, JACK; ABUZAINA, FERASS; BENNETT, STEVEN; AND OTHERS; REEL/FRAME:023213/0166; SIGNING DATES FROM 20090624 TO 20090709
US2010069613 AA	20100318	LSPB	+	published / reissued	
US6165201 A	20001226	LSGT	+	granted / extensions (spc, cpc, pte)	
US6165201 A	19991108	LSAS	AS	ASSIGNMENT	OWNER NAME : INCEPT LLC, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SAWHNEY, AMARPREET S.; CAMPBELL, PATRICK K.; MELANSON, DAVID A.; REEL/FRAME:010372/0400 EFFECTIVE DATE : 19991004
US6165201 A	20040520	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6165201 A	20080930	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6165201 A	20120626	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6179862 BA	20010130	LSGT	+	granted / extensions (spc, cpc, pte)	
US6179862 BA	19990602	LSAS	AS	ASSIGNMENT	OWNER NAME : INCEPT LLC, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SAWHNEY, AMARPREET S.; REEL/FRAME:009994/0520 EFFECTIVE DATE : 19990524
US6179862 BA	20040728	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6179862 BA	20080930	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6179862 BA	20120730	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6566406 BA	20030520	LSGT	+	granted / extensions (spc, cpc, pte)	
US6566406 BA	19991227	LSAS	AS	ASSIGNMENT	OWNER NAME : PATHAK, CHANDRASHEKHAR P., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SAWHNEY, AMARPREET S.; EDELMAN, PETER G.; REEL/FRAME:010498/0771 EFFECTIVE DATE : 19991203
US6566406 BA	20010724	LSAS	AS	ASSIGNMENT	OWNER NAME : INCEPT LLC, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PATHAK, CHANDRASHEKHAR P.; REEL/FRAME:012008/0017 EFFECTIVE DATE : 20010618
US6566406 BA	20031223	LSRE	CC	CERTIFICATE OF CORRECTION	

US6566406 BA	20061120	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6566406 BA	20101122	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6566406 BA	20141120	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6673093 BA	20040106	LSGT	+	granted / extensions (spc, cpc, pte)	
US6673093 BA	20070706	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6673093 BA	20110706	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6673093 BA	20160106	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6887974 BB	20050503	LSGT	+	granted / extensions (spc, cpc, pte)	
US6887974 BB	20050830	LSRE	CC	CERTIFICATE OF CORRECTION	
US6887974 BB	20081103	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6887974 BB	20121105	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6887974 BB	20170220	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US7009034 BB	20060307	LSGT	+	granted / extensions (spc, cpc, pte)	
US7009034 BB	20020617	LSAS	AS	ASSIGNMENT	OWNER NAME : INCEPT LLC, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PATHAK, CHANDRASHEKHAR P.; SAWHNEY, AMARPREET S.; EDELMAN,PETER G.; REEL/FRAME:013005/0327; SIGNING DATES FROM 20020205 TO 20020304
US7009034 BB	20070417	LSRE	CC	CERTIFICATE OF CORRECTION	
US7009034 BB	20090908	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7009034 BB	20130909	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7009034 BB	20161101	LSAL	IPR	AIA TRIAL PROCEEDING FILED BEFORE THE PATENT AND APPEAL BOARD: INTER PARTES REVIEW	DESCRIPTION : TRIAL NO: IPR2016-01836 OPPONENT NAME : HYPERBRANCH MEDICAL TECHNOLOGY, INC. EFFECTIVE DATE : 20160916
US7057019 BB	20060606	LSGT	+	granted / extensions (spc, cpc, pte)	
US7057019 BB	20070417	LSRE	CC	CERTIFICATE OF CORRECTION	
US7057019 BB	20091207	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7057019 BB	20131206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7211651 BB	20070501	LSGT	+	granted / extensions (spc, cpc, pte)	
US7211651 BB	20101101	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7211651 BB	20141103	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7332566 BB	20080219	LSGT	+	granted / extensions (spc, cpc, pte)	
US7332566 BB	20110819	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7332566 BB	20160129	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7347850 BB	20080325	LSGT	+	granted / extensions (spc, cpc, pte)	
US7347850 BB	20030421	LSAS	AS	ASSIGNMENT	OWNER NAME : INCEPT LLC,

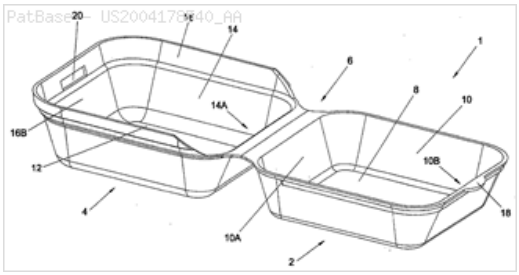
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US7347850 BB	20110923	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7347850 BB	20160129	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7592418 BB	20090922	LSGT	+	granted / extensions (spc, cpc, pte)	
US7592418 BB	20130322	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7605232 BB	20091020	LSGT	+	granted / extensions (spc, cpc, pte)	
US7605232 BB	20130422	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8003705 BB	20110823	LSGT	+	granted / extensions (spc, cpc, pte)	
US8003705 BB	20080624	LSAS	AS	ASSIGNMENT	OWNER NAME : INCEPT LLC, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SAWHNEY, AMARPREET S.; BENNETT, STEVEN; EDELMAN, PETER G.; REEL/FRAME:021143/0809; SIGNING DATES FROM 20080508 TO 20080528
US8003705 BB	20080624	LSAS	AS	ASSIGNMENT	OWNER NAME : INCEPT LLC, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SAWHNEY, AMARPREET S.; BENNETT, STEVEN; EDELMAN, PETER G.; SIGNING DATES FROM 20080508 TO 20080528; REEL/FRAME:021143/0809
US8003705 BB	20150223	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8535705 BB	20130917	LSGT	+	granted / extensions (spc, cpc, pte)	
US8557535 BB	20131015	LSGT	+	granted / extensions (spc, cpc, pte)	
WO0009199 A1	20000224	LSPB	+	published / reissued	
WO0009199 A1	20010205	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 55608/99 COUNTRY OF REF DOCUMENT : AU
WO0009199 A1	20010208	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1999942172 COUNTRY OF REF DOCUMENT : EP
WO0009199 A1	20010213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2340381 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO0009199 A1	20010213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2340381 COUNTRY OF REF DOCUMENT : CA
WO0009199 A1	20010606	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1999942172 COUNTRY OF REF DOCUMENT : EP
WO0033764 A1	20000615	LSPB	+	published / reissued	
WO0033764 A1	20010601	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2353642 KIND CODE OF REF DOCUMENT :

					A FORMAT OF REF DOCUMENT (F/P) : F
WO0033764 A1	20010601	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP REF DOCUMENT NUMBER : 2000 586259 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
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WO0033764 A1	20010611	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1999968867 COUNTRY OF REF DOCUMENT : EP
WO0033764 A1	20010614	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 27075/00 COUNTRY OF REF DOCUMENT : AU
WO0033764 A1	20011004	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1999968867 COUNTRY OF REF DOCUMENT : EP
WO9812274 A1	19980326	LSPB	+	published / reissued	
WO9812274 A1	19990604	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP REF DOCUMENT NUMBER : 1998514977 FORMAT OF REF DOCUMENT (F/P) : F
WO9812274 A1	19990722	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO9812274 A1	19990830	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 09147897 COUNTRY OF REF DOCUMENT : US
WO9812274 A1	20000323	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA

26) Family number: 20753634 (US2004178540A)

Title: METHOD FOR MANUFACTURING PRODUCTS WITH **NATURAL** POLYMERS, AND SUCH PRODUCTS

Abstract: Source: US2004178540A A method for manufacturing products, wherein a mass, comprising at least **natural** polymers such as starch, is brought into or through a mold and the mass in the mold is heated, such that this involves at least cross-linkage of the **natural** polymers, while of at least one first part of the product, the material composition is influenced such that the material properties of the relevant first part deviate from the material properties of parts adjoining said part.



Classifications:
International (IPC 8-9): B27N3/08 B29C33/60 B29C45/16 B65D43/16 C08J5/00 C08J5/04 C08J7/04 C08K3/00 C08K5/00 C08L101/00 C08L101/16 C08L3/02 C09D101/00 C09D109/08 C09D123/06 C09D129/04 C09D133/00 C09D161/28 C09D167/04 C09D171/02 C09D191/06 (Advanced/Invention);
B29K1/00 B29K105/04 B29K105/16 B29L22/00 C08J5/00 C08J5/04 C08K3/00 C08K5/00 C08L101/00 C09D101/00 C09D133/00 C09D167/04 (Advanced/Non-invention);
B27N3/08 B29C33/56 B29C45/16 B65D43/16 C08J5/00 C08J5/04 C08J7/00 C08K3/00 C08K5/00 C08L101/00 C08L3/00 C09D101/00 C09D109/00 C09D123/00 C09D129/00 C09D133/00 C09D161/20 C09D167/04 C09D171/00 C09D191/00 (Core/Invention)
International (IPC 1-7): B29C33/60 B29C44/02 B29C44/04 B29C44/06 B29C45/00 B29C45/16 B29D1/00 B32B27/00 B32B3/26 B65D43/16 C08J5/00 C08J5/04 C08J7/04 C08J7/12 C08J9/36 C08K3/00 C08K5/00 C08L101/00 C08L3/02 C09D109/08 C09D123/06 C09D129/04 C09D133/00 C09D161/28 C09D167/04 C09D171/02 C09D191/06 H05B6/00
CPC: Y02W90/11 C08J7/04 B65D43/162 B27N3/08 B29C45/16 B29K2003/00 B29K2995/006 C08L3/02 B29C33/60 Y10T428/249953 Y10T428/249991
European: B27N3/08 B29C33/60 B29C45/16 B65D43/16B C08J7/04 C08L3/02 L29K3/00 L29K995/00F14B
US: 264/255 264/255P 264/309 264/309S 264/328.1 264/328.100S 264/45.1 264/45.100S 264/478 264/478P 264/51 264/51S 428/304.4 428/304.400S 428/319.3 428/319.300S

Family:

Publication number	Publication date	Application number	Application date
AU200030820 A1	20000731	AU20000030820	19991229
AU200030820 A5	20000731	AU20000030820	19991229
AU200030821 A1	20000731	AU20000030821	19991229
AU200030821 A5	20000731	AU20000030821	19991229
AU775754 B2	20040812	AU20000030820	19991229
AU778476 B2	20041209	AU20000030821	19991229
BRPI9916709 A	20011211	BR1999PI16709	19991229
BRPI9916713 A	20011211	BR1999PI16713	19991229
CA2358956 AA	20010628	CA19992358956	19991229
CA2358991 AA	20010628	CA19992358991	19991229
CN1334843 A	20020206	CN19998015958	19991229
CN1335870 A	20020213	CN19998016336	19991229
EP1141117 A1	20011010	EP19990964781	19991229
EP1144501 A1	20011017	EP19990964782	19991229
IN00764MN2005 A	20051202	IN2005MN00764	20050711
IN204762 B	20070622	IN2001MN00822	20010712
JP2002533250 T2	20021008	JP20000591119T	19991229
NL1010915 C2	20000630	NL19981010915	19981229
NL1010916 C2	20000630	NL19981010916	19981229
US2004178540 AA	20040916	US20040809002	20040325
US2004207113 AA	20041021	US20040809017	20040325
WO0039214 A1	20000706	WO1999NL00817	19991229
WO0039215 A1	20000706	WO1999NL00818	19991229

Priority:

NL19981010915 19981229 NL19981010916 19981229 US20010869532 20010830
US20010869533 20010911 NL19991010915 19991229 NL19991010916 19991229
US20040809017 20040325 US20040809002 20040325 WO1999NL00817 19991229
WO1999NL00818 19991229

Probable Assignee: VERTIS BV

Assignee(s): (std): HUISMAN JAN WIETZE ; HUISMANN JAN WIETZE ; VERTIS BV

Assignee(s): VERTIS B V

Inventor(s): (std): HUISMANN JAN WIETZE ; HUISMAN JAN WIETZE

Inventor(s): JAN WIETZE HUISMANN ; JAN WIETZE HUISMAN ; JAN VIETZE HUISMANN

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; BORDEN LADNER GERVAIS LLP; NAGAI HIROSHI

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU200030820 A1	20000731	LSPB	+	published / reissued	
AU200030820 A5	20000731	LSPB	+	published / reissued	
AU200030821 A1	20000731	LSPB	+	published / reissued	

AU200030821 A5	20000731	LSPB	+	published / reissued	
AU775754 B2	20040812	LSGT	+	granted / extensions (spc, cpc, pte)	
AU778476 B2	20041209	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI9916709 A	20011211	LSPB	+	published / reissued	
BRPI9916709 A	20100223	LSRV	-B11B	DISMISSAL ACC. ART. 36, PAR 1 OF IPL - NO REPLY WITHIN 90 DAYS TO FULLFIL THE NECESSARY REQUIREMENTS	
BRPI9916713 A	20011211	LSPB	+	published / reissued	
BRPI9916713 A	20071211	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BRPI9916713 A	20100223	LSRV	-B11B	DISMISSAL ACC. ART. 36, PAR 1 OF IPL - NO REPLY WITHIN 90 DAYS TO FULLFIL THE NECESSARY REQUIREMENTS	
CA2358956 AA	20010628	LSPB	+	published / reissued	
CA2358956 AA	20010628	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2358956 AA	20041206	LSES	+EEER	EXAMINATION REQUEST	
CA2358956 AA	20090415	LSLE	-FZDE	DEAD	
CA2358991 AA	20010628	LSPB	+	published / reissued	
CA2358991 AA	20010628	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2358991 AA	20041206	LSES	+EEER	EXAMINATION REQUEST	
CA2358991 AA	20090420	LSLE	-FZDE	DEAD	
CN1334843 A	20020206	LSPB	+	published / reissued	
CN1334843 A	20020206	LSPB	+C06	PUBLICATION	
CN1334843 A	20091021	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
CN1335870 A	20020213	LSPB	+	published / reissued	
CN1335870 A	20020213	LSPB	+C06	PUBLICATION	
CN1335870 A	20020619	LSRE	COR	CHANGE OF BIBLIOGRAPHIC DATA	DESCRIPTION : CORRECT: APPLICANT; FROM: ELTY STOCK CO., LTD. TO: ELTYDITH STOCK CO., LTD.
CN1335870 A	20090617	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
EP1141117 A1	20011010	LSPB	+	published / reissued	
EP1141117 A1	20011010	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20010726
EP1141117 A1	20020925	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20020807
EP1141117 A1	20091230	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20090701
EP1144501 A1	20011017	LSPB	+	published / reissued	
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EP1144501 A1	20021106	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20020923
EP1144501 A1	20091230	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20090701
IN00764MN2005 A	20051202	LSPB	+	published / reissued	
IN204762 B	20070622	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2002533250 T2	20021008	LSPB	+	published / reissued	
JP2002533250 T2	20061223	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE :

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JP2002533250 T2	20080530	LSWD	-A761	WRITTEN WITHDRAWAL OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A761 EFFECTIVE DATE : 20080529
JP2002533250 T2	20080626	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20080529
NL1010915 C2	20000630	LSGT	+	granted / extensions (spc, cpc, pte)	
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US2004178540 AA	20040916	LSPB	+	published / reissued	
US2004207113 AA	20041021	LSPB	+	published / reissued	
WO0039214 A1	20000706	LSPB	+	published / reissued	
WO0039214 A1	20010628	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2358956 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO0039214 A1	20010628	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2358956 COUNTRY OF REF DOCUMENT : CA
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WO0039214 A1	20010726	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1999964781 COUNTRY OF REF DOCUMENT : EP
WO0039214 A1	20010911	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 09869533 COUNTRY OF REF DOCUMENT : US
WO0039214 A1	20011010	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1999964781 COUNTRY OF REF DOCUMENT : EP
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WO0039214 A1	20041125	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 30820/00 COUNTRY OF REF DOCUMENT : AU
WO0039215 A1	20000706	LSPB	+	published / reissued	
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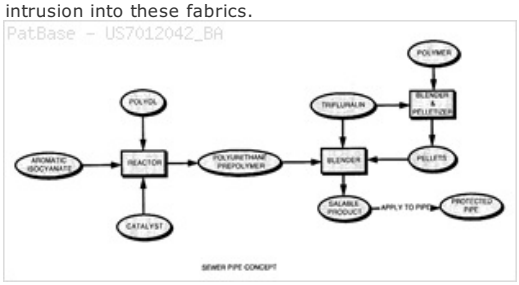
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WO0039215 A1	20010629	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 30821/00 COUNTRY OF REF DOCUMENT : AU
WO0039215 A1	20010726	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1999964782 COUNTRY OF REF DOCUMENT : EP
WO0039215 A1	20010830	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 09869532 COUNTRY OF REF DOCUMENT : US
WO0039215 A1	20011017	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1999964782 COUNTRY OF REF DOCUMENT : EP
WO0039215 A1	20011031	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0039215 A1	20050407	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 30821/00 COUNTRY OF REF DOCUMENT : AU

27) Family number: 61502996 (US2004266625A)

Title: METHODS AND PRODUCTS TO PROTECT AGAINST ROOT INTRUSION AND PLANT AND ROOT GROWTH

Abstract: Source: US2004266625A This invention provides repellent devices and methods for control of root intrusion and plant growth. One aspect of this invention is a geotextile in which 2,6-dinitroaniline is stored inside the individual filaments. The 2,6-dinitroaniline is stored in nanoclay or smectite clay reservoirs that control the rate of release of the 2,6-dinitroaniline. These reservoir particles are placed in the **fibers** during the melt spinning production of the **fibers** or by film-to-**fiber** processes. The particles are very thin and are oriented within the **fibers** during the spinning process. These clay reservoirs are superior to conventional carbon-based reservoirs, because the dispersed clay materials have a uniform, e.g., 1-nanometer, thickness that is needed to fit into individual filaments. Nonwoven, woven, or knitting processes are used to make the geotextile fabrics. The **fibers** of this invention prevent root intrusion into these fabrics.

Classifications:
International (IPC 8-9): A01N25/00 A01N25/28 A01N25/34 A01N33/18 A01N41/06 D01F1/02 H04N5/44 (Advanced/Invention); A01N25/00 A01N25/26 A01N25/34 A01N33/00 A01N41/00 D01F1/02 H04N5/44 (Core/Invention)
International (IPC 1-7): A01N25/10 A01N33/18
CPC: A01N25/34 A01N33/18 A01N25/08 A01N33/12 D01F1/10 D01D5/0023
European: A01N25/08 A01N25/34 A01N33/12 A01N33/18 D01D5/00E2B D01F1/10 H04N5/44N
US: 264/211 348/E5.108 504/333 504/347 504/358 504/359 504/36 504/360 504/361 977/900



Family:

Publication number	Publication date	Application number	Application date
US2004266625 AA	20041230	US20040899956	20040727
US2006148651 AA	20060706	US20060364247	20060228
US2010137141 AA	20100603	US20090632167	20091207
US7012042 BA	20060314	US20030438559	20030515

Priority:

US20020380584P 20020515 US20030438559 20030515 US20060364247 20060228
US20090632167 20091207 US20040899956 20040727

Probable Assignee: GROWGUARD LLC INC

Assignee(s): (std): CATALDO DOMINIC A ; GROWGUARD LLC INC ; VANVORIS PETER ; LIPINSKY EDWARD S

Assignee(s): VAN VORIS PETER ; GROWGRAUD LLC INC ; BIOGUARD RESEARCH AND DEVELOPMENT INC ; BIOGUARD TECHNOLOGIES INC

Inventor(s): (std): BECK DAREN L ; BECK RICHARD ; CATALDO DOMINIC A ; LIPINSKY EDWARD S ; VAN VORIS PETER ; VANVORIS PETER ; VORIS PETER VAN

Inventor(s): LIPINSKY EDWARD ; CATALDO DOMINIC

Agent(s): MUELLER AND SMITH LPA, MUELLER-SMITH BUILDING; MUELLER AND SMITH LPA MUELLER SMITH BUILDING; MUELLER AND SMITH LPA

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Patent	Date recorded	Event group	Code	Event	Details
US2004266625 AA	20041230	LSPB	+	published / reissued	
US2004266625 AA	20040727	LSAS	AS	ASSIGNMENT	OWNER NAME : GROWGRAUD, LLC, INC., WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIPINSKY, EDWARD S.; CATALDO, DOMINIC A.; VAN VORIS, PETER; REEL/FRAME:015637/0367; SIGNING DATES FROM 20040624 TO 20040702
US2004266625 AA	20060629	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOGUARD TECHNOLOGIES, INC., WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GROWGUARD, LLC, INC.; REEL/FRAME:017868/0801 EFFECTIVE DATE : 20060626
US2006148651 AA	20060706	LSPB	+	published / reissued	
US2006148651 AA	20060228	LSAS	AS	ASSIGNMENT	OWNER NAME : GROWGUARD, LLC, INC., WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIPINSKY, EDWARD S.; CATALDO, DOMINIC A.; VAN VORIS, PETER; REEL/FRAME:017630/0173; SIGNING DATES FROM 20060206 TO 20060227
US2010137141 AA	20100603	LSPB	+	published / reissued	
US2010137141 AA	20100210	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOGUARD RESEARCH

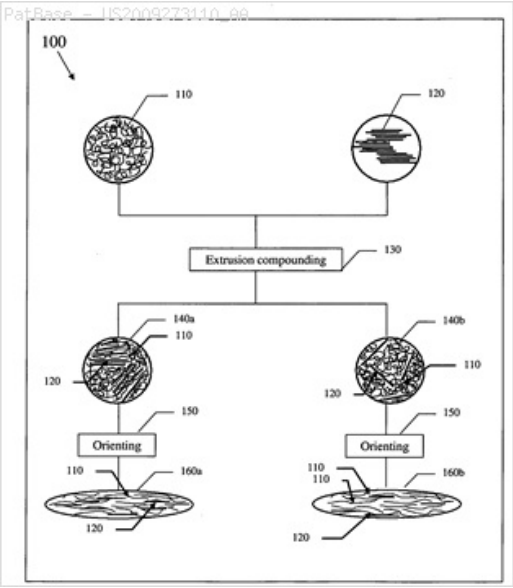
					AND DEVELOPMENT, INC.,WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIPINSKY, EDWARD S.; CATALDO, DOMINIC A.; VANVORIS, PETER; SIGNED BETWEEN 20100112 AND 20100209; REEL/FRAME:23919/425
US2010137141 AA	20100210	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOGUARD RESEARCH AND DEVELOPMENT, INC.,WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIPINSKY, EDWARD S.; CATALDO, DOMINIC A.; VANVORIS, PETER; SIGNING DATES FROM 20100112 TO 20100209; REEL/FRAME:023919/0425
US7012042 BA	20060314	LSGT	+	granted / extensions (spc, cpc, pte)	
US7012042 BA	20040601	LSAS	AS	ASSIGNMENT	OWNER NAME : GROWGUARD, LLC, INC., WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LIPINSKY, EDWARD S.; CATALDO, DOMINIC; VAN VORIS, PETER; AND OTHERS; REEL/FRAME:015406/0614; SIGNING DATES FROM 20040302 TO 20040413
US7012042 BA	20090720	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7012042 BA	20130717	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8

28) Family number: 43952885 (US2009273110A)

Title: COMPOSITES COMPRISING A POLYMER AND A LAYERED COMPOUND AND METHODS OF PREPARING AND USING SAME

Abstract: Source: US2009273110A A method comprising extrusion compounding a styrenic polymer and a layered compound to produce a composite, and orienting the composite to produce an oriented composite wherein the layered compound comprises **natural** clay, synthetic clay, **natural** colloid, synthetic colloid, **natural** sol, synthetic sol, **natural** gel, synthetic gel, **natural** fumes, synthetic fumes, or combinations thereof. A method of preparing an oriented film comprising extrusion compounding a styrenic polymer and a clay to produce a nanocomposite, casting the nanocomposite into a film, and orienting the film in at least one direction.

Classifications:
International (IPC 8-9): B29B7/30 B29C47/00 B29C47/36 C08J5/18 C08K3/34 C08L25/06 (Advanced/Invention);
B29B7/30 B29C47/36 (Core/Invention)
CPC: C08J5/18 C08K3/346 B29C47/0057 B29C47/50 B29C55/143 B29K2025/00 B29K2105/16 B29K2105/162 B82Y30/00 C08J3/203 C08J5/005 D01F6/22 B29C47/366 B29C47/92 B29C2947/92704 B29C2947/92923 B29C47/40 B29C47/0021 B29C47/8805 B29C47/8845
European: B29C55/14B B82Y30/00 C08J3/20H C08J5/00N D01F6/22 L29C47/00J5 L29C47/00L8 L29C47/50 L29C47/88C4B L29K105/16 L29K105/16B L29K25/00
US: 264/108 264/112 264/171.1 264/174.1 264/210.6 264/211 264/288.4 264/70 264/70P 366/77 366/77S 524/445



Family:

Publication number	Publication date	Application number	Application date
BRPI0912705 A2	20151013	BR2009PI12705	20090428
CN102015234 A	20110413	CN200980116557	20090428
CO6311093 A2	20110822	CO20100150619	20101130
EP2271468 A1	20110112	EP20090739560	20090428
US2009273110 AA	20091105	US20080112723	20080430
US2012270989 AA	20121025	US20120533842	20120626
US2014080958 AA	20140320	US20130081182	20131115
US8246878 BB	20120821	US20080112723	20080430
WO09134758 A1	20091105	WO2009US41914	20090428

Priority:

US20080112723 20080430 US20120533842 20120626 WO2009US41914 20090428 US20130081182 20131115

Probable Assignee: FINA TECHNOLOGY INC

Assignee(s): (std): FINA TECHNOLOGY ; SOSA JOSE ; SUN LUYI

Assignee(s): FINA TECHNOLOGY INC

Inventor(s): (std): JOSE SOSA ; LUYI SUN ; SOSA JOE ; SOSA JOSE ; SUN LUYI

Inventor(s): JOE SOSA

Agent(s): LUZ CLEMENCIA DE PAEZ; SELG PETER; FINA TECHNOLOGY INC; ALEXANDER DAVID J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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Patent	Date recorded	Event group	Code	Event	Details
BRPI0912705 A2	20151013	LSPB	+	published / reissued	
BRPI0912705 A2	20151208	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	DESCRIPTION : REFERENTE AS 5A E 6A ANUIDADES.
BRPI0912705 A2	20160405	LSLE	-B08K	LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO	DESCRIPTION : EM VIRTUDE DO ARQUIVAMENTO PUBLICADO NA RPI 2344 DE 08-12-2015 E CONSIDERANDO AUSENCIA DE MANIFESTACAO DENTRO DOS PRAZOS LEGAIS, INFORMO QUE

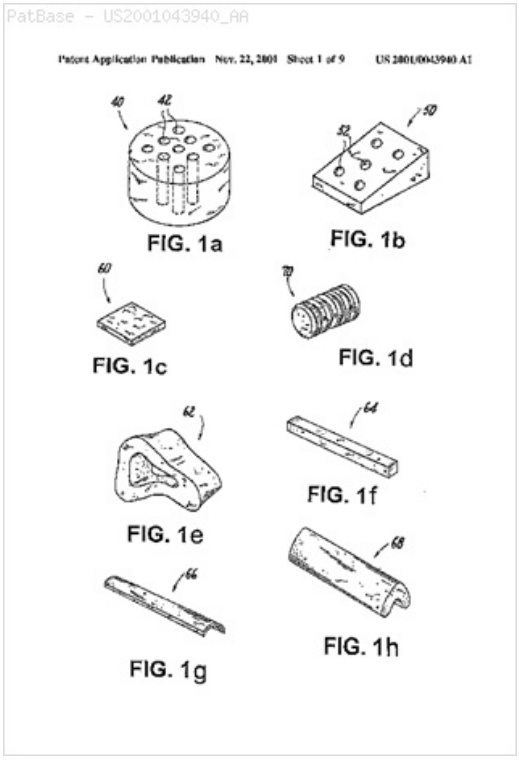
				INPI (ACC. ART. 87)	CABE SER MANTIDO O ARQUIVAMENTO DO PEDIDO DE PATENTE, CONFORME O DISPOSTO NO ARTIGO 12, DA RESOLUCAO 113/2013.
CN102015234 A	20110413	LSPB	+	published / reissued	
CN102015234 A	20110413	LSPB	+C06	PUBLICATION	
CN102015234 A	20131023	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
CO6311093 A2	20110822	LSPB	+	published / reissued	
CO6311093 A2	20131118	LSRV	-FC	APPLICATION REFUSED	
EP2271468 A1	20110112	LSPB	+	published / reissued	
EP2271468 A1	20110112	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20101027
EP2271468 A1	20141231	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : SOSA, JOSE
EP2271468 A1	20141231	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : SUN, LUYI
EP2271468 A1	20150422	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20141101
US2009273110 AA	20091105	LSPB	+	published / reissued	
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US2009273110 AA	20090423	LSAS	AS	ASSIGNMENT	OWNER NAME : FINA TECHNOLOGY, INC., TEXAS DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE FIRST INVENTORS EXECUTION DATE. DOCUMENT PREVIOUSLY RECORDED AT REEL 021460 FRAME 0668; ASSIGNORS:SUN, LUYI; SOSA, JOSE; REEL/FRAME:022586/0892; SIGNING DATES FROM 20080430 TO 20080501
US2012270989 AA	20121025	LSPB	+	published / reissued	
US2014080958 AA	20140320	LSPB	+	published / reissued	
US8246878 BB	20120821	LSGT	+	granted / extensions (spc, cpc, pte)	
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US8246878 BB	20080829	LSAS	AS	ASSIGNMENT	OWNER NAME : FINA TECHNOLOGY, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SUN, LUYI; SOSA, JOSE; REEL/FRAME:021460/0668; SIGNING DATES FROM 20070430 TO 20080501
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US8246878 BB	20160821	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
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WO09134758 A1	20091105	LSPB	+	published / reissued	
WO09134758 A1	20101103	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09134758 A1	20151013	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0912705 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20101029

29) Family number: 28140808 (US2001043940A)

Title: Load-bearing osteoimplant, method for its manufacture and method of repairing bone using same

Abstract: Source: US2001043940A A load-bearing osteoimplant, method of making the osteoimplant and method for repairing bone using the osteoimplant are provided. The osteoimplant comprises a shaped, compressed composition of bone particles. The osteoimplant possesses a bulk density of greater than about 0.7 grams per cubic centimetre and a wet compressive strength of at least about 3 MPa.



Classifications:

International (IPC 8-9): A61B17/56 A61B17/88 A61F2/28 A61F2/44 A61L27/00 A61L27/36 A61L31/00 (Advanced/Invention); A61F2/00 A61F2/30 (Advanced/Non-invention); A61F2/28 A61F2/44 A61L27/00 A61L31/00 (Core/Invention); A61F2/00 A61F2/30 (Core/Non-invention)

International (IPC 1-7): A61F13/00 A61F2/00 A61F2/28 A61L27/00 A61L27/36 A61L31/00

CPC: A61F2002/30535 A61F2250/0058 A61L27/3645 A61B17/0401 A61B17/7291 A61B17/742 A61F2/28 A61B17/72 A61B17/74 A61B17/80 A61B17/86 A61B2017/0409 A61B2017/0414 A61B2017/044 A61C8/0012 A61C8/0036 A61F2/2803 A61F2/2875 A61F2/30965 A61F2/32 A61F2/34 A61F2/36 A61F2/442 A61F2/446 A61F2/4611 A61F2/4644 A61F2002/2817 A61F2002/2825 A61F2002/2835 A61F2002/2871 A61F2002/2892 A61F2002/30004 A61F2002/30059 A61F2002/30062 A61F2002/30113 A61F2002/30125 A61F2002/30143 A61F2002/30146 A61F2002/30148 A61F2002/30153 A61F2002/30154 A61F2002/30158 A61F2002/30225 A61F2002/30237 A61F2002/30238 A61F2002/30261 A61F2002/30266 A61F2002/30433 A61F2002/30561 A61F2002/30622 A61F2002/30678 A61F2002/30785 A61F2002/3085 A61F2002/3092 A61F2002/3095 A61F2002/30952 A61F2002/30957 A61F2002/30962 A61F2002/30968 A61F2002/3611 A61F2002/365 A61F2002/3686 A61F2210/0004 A61F2220/0041 A61F2230/0006 A61F2230/0008 A61F2230/0017 A61F2230/0019 A61F2230/0021 A61F2230/0026 A61F2230/0069 A61F2230/0082 A61F2250/0014 A61F2250/0071 A61F2310/00011 A61F2310/00161 A61F2310/00173 A61F2310/00293 A61F2310/00347 A61F2310/00365 A61L27/3608 A61L27/3641 A61L27/3683 A61L27/3691 A61L27/3839 A61L27/3847 A61L31/005 A61L2430/02

European: A61B17/04A A61C8/00E A61C8/00F9 A61F2/28 A61F2/32 A61F2/46G A61L27/36B2 A61L27/36F A61L27/36F2 A61L27/36H A61L27/36H4 A61L27/38D A61L27/38D2B A61L31/00F K61B17/04A30 K61B17/04A5 K61B17/04A8 K61B17/72 K61B17/72J K61B17/74 K61B17/74D K61B17/80 K61B17/86 K61F2/00N K61F2/28B K61F2/28D K61F2/28F K61F2/28G K61F2/28R K61F2/28S K61F2/28T K61F2/30A1N K61F2/30A1N29 K61F2/30A1W1 K61F2/30A2K2C K61F2/30A2K2E K61F2/30A2K4H K61F2/30A2K4J K61F2/30A2K4L K61F2/30A2K4R K61F2/30A2K4S K61F2/30A2K4U K61F2/30A2Y3D K61F2/30A2Y3T1 K61F2/30A2Y3T1H K61F2/30A2Y6 K61F2/30A2Y6F K61F2/30A3T7 K61F2/30A3W K61F2/30A3W6 K61F2/30A4F K61F2/30A5D2 K61F2/30L2A9P K61F2/30L2Q K61F2/30L5 K61F2/30M2B2 K61F2/30M2C K61F2/30M2M K61F2/30M2S K61F2/30M4 K61F2/30M6 K61F2/34 K61F2/36 K61F2/36C1 K61F2/36C4 K61F2/36D8B K61F2/44D K61F2/44F2 K61F2/46B7 K61F210/00A K61F220/00T7 K61F230/00K2C K61F230/00K2E K61F230/00K4 K61F230/00K4R K61F230/00K4S K61F230/00K4U K61F230/00Y3 K61F230/00Y6 K61F250/00N K61F250/00W K61F250/00W8 K61F310/00A10 K61F310/00A2 K61F310/00A4 K61F310/00A4G K61F310/00A66 K61F310/00A6E K61L430/02

US: 264/109 264/328.1 424/422 424/423 424/423P 424/443 424/484 424/623 606/99 606/99S 623/16.11 623/16.110P 623/16.110S 623/17.16 623/17.160S 623/23.61 623/23.610P 623/23.63 623/23.630P

Family:

Publication number	Publication date	Application number	Application date
AU200037033 A5	20000914	AU20000037033	20000222
AU758828 B2	20030403	AU20000037033	20000222
CA2363153 AA	20000831	CA20002363153	20000222
CA2363153 C	20110426	CA20002363153	20000222
DE60027698 D1	20060608	DE20006027698	20000222
DE60027698 T2	20070426	DE20006027698T	20000222
EP1152777 A1	20011114	EP20000915821	20000222
EP1152777 B1	20060503	EP20000915821	20000222
ES2261191 T3	20061116	ES20000915821T	20000222
JP2002537073 T2	20021105	JP20000600712T	20000222
JP4658331 B2	20110323	JP20000600712T	20000222
TR200102480 T2	20011221	TR20010002480T	20000222
US2001043940 AA	20011122	US20010911562	20010724
US2003039676 AA	20030227	US20020229767	20020827
US2007233272 AA	20071004	US20070758751	20070606
US2008188945 AA	20080807	US20030736799	20031216
US2012143334 AA	20120607	US20120370107	20120209
US6294187 BA	20010925	US19990256447	19990223
US6440444 BB	20020827	US20010911562	20010724
US6696073 BB	20040224	US20020229767	20020827
US8133421 BB	20120313	US20030736799	20031216
WO0050102 A1	20000831	WO2000US04408	20000222

Priority:

US19990256447 19990223 US20010911562 20010724 US20020229767 20020827 US20030736799 20031216 US20070758751 20070606 US20120370107 20120209 WO2000US04408 20000222

Probable Assignee: WARSAW ORTHOPEDIC INC

Assignee(s): (std): BOYCE TODD M ; MANRIQUE ALBERT ; OSTEOTECH INC ; SHIMP LAWRENCE A ; WINTERBOTTOM JOHN W ; WINTERBOTTOM JOHN M ; WARSAW ORTHOPEDIC INC

Assignee(s): SHIMP LAWRENCE

Inventor(s): (std): ALBERT MANRIQUE ; BOYCE M ; BOYCE TODD M ; LAWRENCE A SHIMP ; MANRIQUE ALBERT ; SHIMP A ; SHIMP LAWRENCE ; SHIMP LAWRENCE A ; TODD M BOYCE ; WINTERBOTTOM JOHN M ; WINTERBOTTOM JOHN W

Inventor(s): WINTERBOTTOM JOHN ; BOYCE TODD

Agent(s): FB RICE; SMART AND BIGGAR; CHOATE HALL AND STEWART LLP; DORSEY AND WHITNEY LLP, INTELLECTUAL PROPERTY DEPARTMENT; DORSEY AND WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT

Designated states: AE AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU200037033 A5	20000914	LSPB	+	published / reissued	
AU758828 B2	20030403	LSGT	+	granted / extensions (spc, cpc, pte)	
AU758828 B2	20030731	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
CA2363153 AA	20000831	LSPB	+	published / reissued	
CA2363153 AA	20010822	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2363153 AA	20050211	LSES	+EEER	EXAMINATION REQUEST	
CA2363153 AA	20150406	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20150223
CA2363153 C	20110426	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60027698 T2	20070426	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1152777 A1	20011114	LSPB	+	published / reissued	
EP1152777 A1	20011114	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20010917
EP1152777 A1	20030409	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20030220
EP1152777 A1	20051026	LSRE	RTI1	TITLE (CORRECTION)	DESCRIPTION : LOAD-BEARING OSTEOIMPLANT AND METHOD FOR ITS MANUFACTURE
EP1152777 A1	20060503	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20060503
EP1152777 A1	20060503	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1152777 A1	20061116	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2261191 KIND CODE OF REF DOCUMENT : T3
EP1152777 A1	20070411	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20070206
EP1152777 A1	20090430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20090226 YEAR OF FEE PAYMENT : 10
EP1152777 A1	20090529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20090219 YEAR OF FEE PAYMENT : 10

EP1152777 A1	20090630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090217 YEAR OF FEE PAYMENT : 10
EP1152777 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20090213 YEAR OF FEE PAYMENT : 10
EP1152777 A1	20091030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090213 YEAR OF FEE PAYMENT : 10
EP1152777 A1	20100430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20100225 YEAR OF FEE PAYMENT : 11
EP1152777 A1	20100531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100223 YEAR OF FEE PAYMENT : 11
EP1152777 A1	20100531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20100224 YEAR OF FEE PAYMENT : 11
EP1152777 A1	20100630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100226 YEAR OF FEE PAYMENT : 11
EP1152777 A1	20100630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100224 YEAR OF FEE PAYMENT : 11
EP1152777 A1	20110531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110309 YEAR OF FEE PAYMENT : 12
EP1152777 A1	20110531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110225 YEAR OF FEE PAYMENT : 12
EP1152777 A1	20110531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20110224 YEAR OF FEE PAYMENT : 12
EP1152777 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110223 YEAR OF FEE PAYMENT : 12
EP1152777 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20110224 YEAR OF FEE PAYMENT : 12
EP1152777 A1	20120430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120306 YEAR OF FEE PAYMENT : 13
EP1152777 A1	20120531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120228 YEAR OF FEE PAYMENT : 13
EP1152777 A1	20120629	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120224 YEAR OF FEE PAYMENT : 13
EP1152777 A1	20120629	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20120224 YEAR OF FEE PAYMENT : 13
EP1152777 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130227 YEAR OF FEE PAYMENT : 14
EP1152777 A1	20130430	LSFE	+PGFP	POSTGRANT:	REF COUNTRY CODE : GB

				ANNUAL FEES PAID TO NATIONAL OFFICE	PAYMENT DATE : 20130227 YEAR OF FEE PAYMENT : 14
EP1152777 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20130226 YEAR OF FEE PAYMENT : 14
EP1152777 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130311 YEAR OF FEE PAYMENT : 14
EP1152777 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130227 YEAR OF FEE PAYMENT : 14
EP1152777 A1	20140430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20140227 YEAR OF FEE PAYMENT : 15
EP1152777 A1	20140530	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20140220 YEAR OF FEE PAYMENT : 15
EP1152777 A1	20141029	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20140222
EP1152777 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140222
EP1152777 A1	20150407	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20150407
EP1152777 A1	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140223
EP1152777 A1	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20150226 YEAR OF FEE PAYMENT : 16
EP1152777 A1	20150529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20150217 YEAR OF FEE PAYMENT : 16
EP1152777 A1	20160217	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 17
EP1152777 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20160226 YEAR OF FEE PAYMENT : 17
EP1152777 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20160217 YEAR OF FEE PAYMENT : 17
EP1152777 A1	20160630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140222
EP1152777 B1	20060503	LSGT	+	granted / extensions (spc, cpc, pte)	

ES2261191 T3	20061116	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2002537073 T2	20021105	LSPB	+	published / reissued	
JP4658331 B2	20110323	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4658331 B2	20070221	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20070220
JP4658331 B2	20070221	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070220
JP4658331 B2	20100317	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100316
JP4658331 B2	20100317	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100316
JP4658331 B2	20100917	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100916
JP4658331 B2	20101115	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4658331 B2	20101115	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4658331 B2	20101125	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20101124
JP4658331 B2	20101125	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20101124
JP4658331 B2	20101202	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4658331 B2	20101202	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4658331 B2	20110106	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20101224
JP4658331 B2	20110106	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20101224
JP4658331 B2	20110107	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140107 YEAR OF FEE PAYMENT : 3
JP4658331 B2	20110107	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4658331 B2	20110107	LSGT	+R150	CERTIFICATE	DESCRIPTION : JAPANESE

				OF PATENT OR REGISTRATION OF UTILITY MODEL	INTERMEDIATE CODE: R150
JP4658331 B2	20110705	LSAS	S111	REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R313113
JP4658331 B2	20110727	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140107 YEAR OF FEE PAYMENT : 3
JP4658331 B2	20110727	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R350
JP4658331 B2	20140107	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
TR200102480 T2	20011221	LSPB	+	published / reissued	
US2001043940 AA	20011122	LSPB	+	published / reissued	
US2003039676 AA	20030227	LSPB	+	published / reissued	
US2007233272 AA	20071004	LSPB	+	published / reissued	
US2007233272 AA	20100923	LSAS	AS	ASSIGNMENT	OWNER NAME : OSTEOTECH, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOYCE, TODD M.; SHIMP, LAWRENCE A.; WINTERBOTTOM, JOHN; ANDOTHERS; SIGNING DATES FROM 20041215 TO 20041217; REEL/FRAME:025033/0798
US2007233272 AA	20110428	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:OSTEOTECH, INC.; REEL/FRAME:026196/0585 EFFECTIVE DATE : 20110415
US2008188945 AA	20080807	LSPB	+	published / reissued	
US2008188945 AA	20041230	LSAS	AS	ASSIGNMENT	OWNER NAME : OSTEOTECH, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOYCE, TODD M.; SHIMP, LAWRENCE A.; MANRIQUE, ALBERT; AND OTHERS; REEL/FRAME:016118/0105; SIGNING DATES FROM 19941215 TO 20041217
US2008188945 AA	20110428	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:OSTEOTECH, INC.; REEL/FRAME:026196/0585 EFFECTIVE DATE : 20110415
US2012143334 AA	20120607	LSPB	+	published / reissued	
US6294187 BA	20010925	LSGT	+	granted / extensions (spc, cpc, pte)	
US6294187 BA	19990329	LSAS	AS	ASSIGNMENT	OWNER NAME : OSTEOTECH, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOYCE, TODD M.; SHIMP, LAWRENCE A.; MANRIQUE, ALBERT; REEL/FRAME:009860/0280 EFFECTIVE DATE : 19990225
US6294187 BA	20050310	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6294187 BA	20090225	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8

US6294187 BA	20110428	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:OSTEOTECH, INC.; REEL/FRAME:026196/0585 EFFECTIVE DATE : 20110415
US6294187 BA	20121002	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6440444 BB	20020827	LSGT	+	granted / extensions (spc, cpc, pte)	
US6440444 BB	20060227	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6440444 BB	20100301	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6440444 BB	20100923	LSAS	AS	ASSIGNMENT	OWNER NAME : OSTEOTECH, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOYCE, TODD M.; SHIMP, LAWRENCE A.; MANRIQUE, ALBERT; REEL/FRAME:025026/0599 EFFECTIVE DATE : 19990225
US6440444 BB	20110428	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:OSTEOTECH, INC.; REEL/FRAME:026196/0585 EFFECTIVE DATE : 20110415
US6440444 BB	20140227	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6696073 BB	20040224	LSGT	+	granted / extensions (spc, cpc, pte)	
US6696073 BB	20021028	LSAS	AS	ASSIGNMENT	OWNER NAME : OSTEOTECH, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOYCE, TODD M.; SHIMP, LAWRENCE A.; MANRIQUE, ALBERT; AND OTHERS; REEL/FRAME:013428/0237; SIGNING DATES FROM 20021014 TO 20021015
US6696073 BB	20070824	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6696073 BB	20110428	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:OSTEOTECH, INC.; REEL/FRAME:026196/0585 EFFECTIVE DATE : 20110415
US6696073 BB	20110824	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
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US8133421 BB	20041230	LSAS	AS	ASSIGNMENT	OWNER NAME : OSTEOTECH, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOYCE, TODD M.; SHIMP, LAWRENCE A.; MANRIQUE, ALBERT; AND OTHERS; SIGNING DATES FROM 19941215 TO 20041217; REEL/FRAME:016118/0105
US8133421 BB	20110428	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA

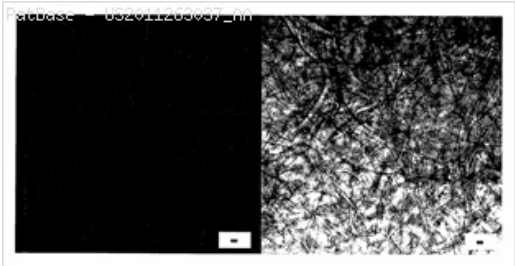
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30) Family number: 44009866 (US2011263037A)

Title: **POLYMERIC** MATERIALS INCORPORATING CORE-SHELL SILICA NANOPARTICLES

Abstract: Source: US2011263037A **Fibers**, fabrics and textiles in which core-shell silica nanoparticles are incorporated are provided. The **fibers**, fabrics and textiles can be **polymeric** materials or **natural** cellulose-based or protein-based materials in which core-shell silica nanoparticles are incorporated. A variety of **polymeric** and **natural** materials can be employed, such as cellulose acetate, nylon, rayon, modacrylic, olefin, acrylic, polyester, **polylactic** **acid**, **polylactic**-co-glycolic **acid** (PLGA), polyurethane, aramid, wool, cotton, ramie, milk protein, soy protein, bamboo, etc. The core-shell silica nanoparticles can incorporate sensing, magnetic, thermal, electrical, chemical or RFID properties that can be imparted to the materials and that allow the materials to sense one or more conditions of interest, making them ideal for in situ sensing, treatment, or security applications.

Classifications:
International (IPC 8-9): C08K3/36 C08K7/18 C08K7/26 C08K9/00 C08K9/04 C08L101/00 C09K11/02 G01N31/22 (Advanced/Invention); B82Y15/00 (Advanced/Non-invention);
C08K3/00 C08K7/00 C08K9/00 C08L101/00 (Core/Invention)
CPC: C08K3/36 C08K9/04
European: C08K3/36 C08K9/04
US: 252/301.34 252/301.340S 436/163 436/163P 977/773 977/773S 977/904 977/904S



Family:

Publication number	Publication date	Application number	Application date
US2011263037 AA	20111027	US20090992455	20090512
WO09140266 A2	20091119	WO2009US43608	20090512
WO09140266 A3	20100311	WO2009US43608	20090512

Priority:
US20080127578P 20080514 US20090992455 20090512 WO2009US43608 20090512

Probable Assignee: CORNELL UNIV

Assignee(s): (std): FREY MARGARET W ; HENDRICK ERIN SUE ; HERZ ERIK ; WIESNER ULRICH B ; UNIV CORNELL ; WIESNER ULRICH

Assignee(s): CORNELL UNIV ; CORNELL UNIVERSITY

Inventor(s): (std): FREY MARGARET W ; HENDRICK ERIN SUE ; HERZ ERIK ; WIESNER ULRICH ; WIESNER ULRICH B

Agent(s): MARJAMA OWEN D ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2011263037 AA	20111027	LSPB	+	published / reissued	
US2011263037 AA	20120131	LSAS	AS	ASSIGNMENT	OWNER NAME : CORNELL UNIVERSITY, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HERZ, ERIK; HENDRICK, ERIN SUE; FREY, MARGARET W.; AND OTHERS; SIGNING DATES FROM 20091202 TO 20100313; REEL/FRAME:027622/0293
US2011263037 AA	20120202	LSAS	AS	ASSIGNMENT	OWNER NAME : CORNELL UNIVERSITY, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HERZ, ERIK; HENDRICK, ERIN SUE; FREY, MARGARET W.; AND OTHERS; SIGNING DATES FROM 20091202 TO 20100313; REEL/FRAME:027642/0869
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WO09140266 A3	20101116	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09140266 A3	20110224	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12992455 COUNTRY OF REF DOCUMENT : US
WO09140266 A3	20110608	LSNE	-122	EP: PCT APPLICATION	REF DOCUMENT NUMBER : 09747350 COUNTRY OF REF DOCUMENT : EP

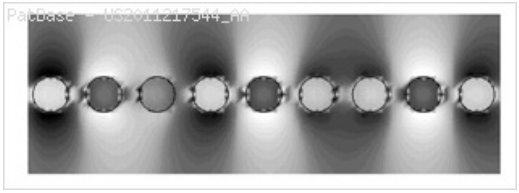
NON-ENTRY IN EUROPEAN PHASE

KIND CODE OF REF DOCUMENT : A2

31) Family number: 44434955 (US2011217544A)

Title: ENHANCED SURFACES, COATINGS, AND RELATED METHODS

Abstract: Source: US2011217544A Disclosed are methods for incorporating additives, such as chemically active particles, into the surfaces of articles or into coatings disposed atop articles. The disclosed methods are also applicable to conventional molding techniques, and can be performed in batch or continuous fashion.



Classifications:
International (IPC 8-9): B05D1/00 B05D3/00 B05D5/00 B05D7/02 B28B1/00 B28B19/00 B28B23/00 B28B5/00 B28B7/38 B29C70/68 B32B18/00 B32B27/18 B32B5/16 C08J7/04 C08J9/40 C08K3/00 C08K5/00 C08L101/00 C09D157/00 C09D187/00 C09D201/00 C09D4/00 C09D5/00 C09D5/02 C09D5/24 C09D5/28 C09D7/12 H01B1/22 H01B5/14 H01B5/16 H05K1/02
H05K1/09 (Advanced/Invention);
B05D5/00 B28B19/00 B28B23/00 B82Y30/00 (Advanced/Non-invention);
B05D5/00 B28B19/00 B28B23/00 (Core/Invention);
B05D B28B (Subclass/Invention)
CPC: Y02E10/50 H01L51/442 H01L23/373 B05D1/005 B05D3/007 H05K1/0271 H01L31/1884 H01L2924/0002 Y10T428/25 Y10T428/254 Y10T428/24364 Y10T428/24372 B29C37/0032 B29C70/64 B29C71/0009 B29C2071/0018 H01B1/22 H05K1/097 H01L51/5206 H01L31/022466 H01L31/035209 Y10T428/249921 B29C2071/0054 B28B23/00 B28B1/00 B28B19/00 B28B5/00
European: B29C37/00C2B B29C70/64 B29C71/00C H01L31/0224C H01L31/18J L29C71/00C1
US: 174/251 252/514 427/108 427/133 427/133S 428/142 428/142P 428/143 428/143S 428/221 428/221S 428/323 428/323S 428/327 428/327P 977/742 977/742S 977/762 977/762S 977/773 977/773S

Family:

Publication number	Publication date	Application number	Application date
AU2009282691 AA	20100225	AU20090282691	20090821
AU2011220397 AA	20110901	AU20110220397	20110225
AU2011220397 BB	20150903	AU20110220397	20110225
CA2734864 AA	20110217	CA20092734864	20090821
CA2828468 AA	20130827	CA20112828468	20110225
CN102186643 A	20110914	CN200980140882	20090821
CN102186643 B	20140521	CN200980140882	20090821
CN102971805 A	20130313	CN201180021313	20110225
CN102971805 B	20160824	CN201180021313	20110225
EP2328731 A1	20110608	EP20090808889	20090821
EP2539904 A2	20130102	EP20110748200	20110225
HK1159023 A1	20141010	HK20110113546	20111215
HK1159023 A3	20120727	HK20110113546	20111215
JP2012500865 T2	20120112	JP20110524032T	20090821
JP2013521595 T2	20130610	JP20120555200T	20110225
JP2016065253 A2	20160428	JP20150241669	20151211
KR101660813 B1	20161010	KR20117006533	20090821
KR20110079623 A	20110707	KR20117006533	20090821
KR20130010471 A	20130128	KR20127025522	20110225
KR20160117621 A	20161010	KR20167026129	20090821
US2011217544 AA	20110908	US20090059963	20090821
US2011281070 AA	20111117	US20110035888	20110225
US2014299359 AA	20141009	US20140247033	20140407
US2015137049 AA	20150521	US20140522080	20141023
WO10022353 A1	20100225	WO2009US54655	20090821
WO11106730 A2	20110901	WO2011US26362	20110225
WO11106730 A3	20111201	WO2011US26362	20110225

Priority:

JP20110524032T 20090821 US20080189540P 20080821 US20080203661P 20081226
US20090059963 20090821 US20100308894P 20100227 US20100311395P 20100308
WO2009US54655 20090821 US20110059963 20110510 US20100311396P 20100308
US20100408773P 20101101 US20100409116P 20101102 US20110035888 20110225
US20140247033 20140407 US20140522080 20141023 WO2011US26362 20110225

Probable Assignee: TPK HOLDING CO LTD

Assignee(s): (std): SRINIVAS ARJUN DANIEL ; MITTAL ALEXANDER CHOW ; YOUNG MICHAEL EUGENE ; PENG CALVIN ; INNOVA METERIALS LLC ; ROBINSON MATTHEW R ; TPK HOLDING CO LTD ; INNOVA DYNAMICS INC

Assignee(s): INNOVA MATERIALS LLC ; TPK HOLDING CO

Inventor(s): (std): ALEXANDER CHOW MITTAL ; ARJUN DANIEL SRINIVAS ; MICHAEL EUGENE YOUNG ; MITTAL ALEXANDER CHOW ; PENG CALVIN ; ROBINSON MATTHEW R ; SRINIVAS ARJUN DANIEL ; YOUNG MICHAEL EUGENE ; EUGENE YOUNG MICHAEL ; DANIEL SRINIVAS ARJUN ; CHOW MITTAL ALEXANDER ; CALVIN PENG

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS; EKM PATENT AND TRADE MARKS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; SMART AND BIGGAR; IP DELTA PLUS INC; ATMAC PATENT SERVICES LTD; GOWLING LAFLEUR HENDERSON LLP; ACKROYD ROBERT; TEALL CHARLOTTE; KAWAMOTO KAZUYA; SHIMIZU HATSUSHI; OSAKABE SUGURU; IEIRI TAKESHI; BAILEY DAVID R ET AL; LIU CLIFF Z ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2009282691 AA	20100225	LSPB	+	published / reissued	
AU2009282691 AA	20160414	LSAS	PC1	ASSIGNMENT BEFORE GRANT (SECT. 113)	PARTYTYPE : OWNER OWNER : TPK HOLDING CO., LTD. OLDPARTY : FORMER APPLICANT(S): INNOVA DYNAMICS, INC.
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AU2011220397 BB	20150903	LSGT	+	granted / extensions (spc, cpc, pte)	
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CA2734864 AA	20140826	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20140818
CA2828468 AA	20130827	LSPB	+	published / reissued	
CA2828468 AA	20160302	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20160224
CN102186643 A	20110914	LSPB	+	published / reissued	
CN102186643 A	20110914	LSPB	+C06	PUBLICATION	
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CN102186643 A	20141010	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : GR REF DOCUMENT NUMBER : 1159023 COUNTRY OF REF DOCUMENT : HK
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CN102186643 B	20140521	LSGT	+	granted / extensions (spc, cpc, pte)	
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CN102971805 A	20130313	LSPB	+C06	PUBLICATION	
CN102971805 A	20160817	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
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EP2539904 A2	20130102	LSPB	+	published / reissued	
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HK1159023 A1	20141010	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1159023 A3	20120727	LSPB	+	published / reissued	
JP2012500865 T2	20120112	LSPB	+	published / reissued	
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JP2013521595 T2	20150703	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150703
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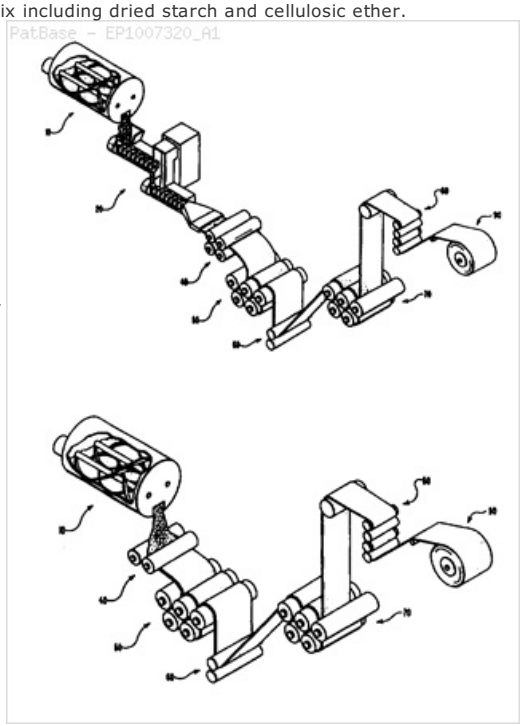
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KR20130010471 A	20150831	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20130010471 A	20160628	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20160117621 A	20161010	LSPB	+	published / reissued	
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KR20160117621 A	20161017	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
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US2011217544 AA	20160310	LSAS	AS	ASSIGNMENT	OWNER NAME : TPK HOLDING CO., LTD., CAYMAN ISLANDS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:INNOVA DYNAMICS, INC.; REEL/FRAME:037947/0806 EFFECTIVE DATE : 20160224
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US2011281070 AA	20110802	LSAS	AS	ASSIGNMENT	OWNER NAME : INNOVA DYNAMICS, INC., CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MITTAL, ALEXANDER CHOW; SRINIVAS, ARJUN DANIEL; ROBINSON, MATTHEW R.; AND OTHERS; SIGNING DATES FROM 20110228 TO 20110301; REEL/FRAME:026690/0321
US2014299359 AA	20141009	LSPB	+	published / reissued	
US2015137049 AA	20150521	LSPB	+	published /	

				reissued	
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WO10022353 A1	20110217	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2734864 COUNTRY OF REF DOCUMENT : CA
WO10022353 A1	20110217	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2734864 COUNTRY OF REF DOCUMENT : CA
WO10022353 A1	20110218	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011524032 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO10022353 A1	20110317	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009282691 COUNTRY OF REF DOCUMENT : AU
WO10022353 A1	20110321	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20117006533 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
WO10022353 A1	20110407	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009282691 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20090821 KIND CODE OF REF DOCUMENT : A
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WO10022353 A1	20110627	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11106730 A2	20110901	LSPB	+	published / reissued	
WO11106730 A2	20120824	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012555200 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11106730 A3	20120824	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012555200 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11106730 A3	20120824	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2012555200 COUNTRY OF REF DOCUMENT : JP
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WO11106730 A3	20121018	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011220397 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20110225 KIND CODE OF REF DOCUMENT : A
WO11106730 A3	20130827	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2828468 COUNTRY OF REF DOCUMENT : CA

32) Family number: 33376296 (EP1007320B1)

Title: METHODS FOR MANUFACTURING MOLDED SHEETS HAVING A HIGH STARCH CONTENT

Abstract: Source: EP1007320B1 (Claim 1) 1. A method for manufacturing a starch-bound sheet comprising the steps of:(a) mixing together water, ungelatinized starch granules, a cellulosic ether, a fibrous material, and optionally an inorganic aggregate filler to form a moldable mixture;(b) forming the moldable mixture into an initial green sheet by passing the mixture between at least one set of forming rollers (40) having a temperature such that a portion of the cellulosic ether thermally precipitates so as to reduce adhesion of the initial green sheet to the forming rollers upon gelatinization of the ungelatinized starch granules in step (c);(c) passing the initial green sheet between at least one set of rollers having a temperature such that at least a portion of the ungelatinized starch granules become gelatinized and in order to form an intermediate green sheet; and(d) heating the green sheet in order to remove a portion of the water from the intermediate green sheet in order to form a hardened sheet having a binding matrix including dried starch and cellulosic ether.



Classifications:

International (IPC 8-9): B05B11/00 B05C5/02 B27N3/00 B28B1/00 B28B1/52 B28B11/00 B28B23/00 B28B3/12 B28B3/20 B29C43/00 B29C43/06 B29C43/08 B29C43/22 B29C43/24 B29C43/34 B29C43/46 B29C44/04 B29C45/00 B29C47/00 B29C47/50 B29C47/52 B29C47/88 B29C49/00 B29C49/04 B29C49/06 B29C51/00 B29C51/04 B29C51/08 B29C51/10 B29C53/06 B29C53/58 B29C55/18 B29C67/24 B29C70/02 B29C70/50 B29C71/00 B29D7/01 B31B17/00 B32B13/02 B32B27/04 B32B27/20 B32B37/12 B32B37/14 B32B5/02 B32B5/18 B32B9/00 B65D43/16 B65D65/38 B65D65/46 C04B16/02 C04B26/00 C04B26/02 C04B26/28 C04B28/00 C04B40/00 C08J3/02 C08J5/04 C08J5/18 C08L1/28 C08L3/02 C08L5/12 E05D1/02 (Advanced/Invention); B05C5/02 B29C43/08 B29C43/22 B29C47/00 B29C47/88 B29C49/04 B29C51/08 B29C53/58 B29K1/00 B29L7/00 B32B37/12 C08J3/02 (Advanced/Non-invention)

International (IPC 1-7): B28B1/52 B28B23/00 B29C43/22 B29C43/24 B29C47/00 B29C47/88 B29C70/02 B29D7/01 B29K1/00 B29L7/00 C08J3/02 C08J5/04 C08L3/02

CPC: Y02W30/97 Y02W90/11 B32B37/144 B05B11/0037 B05B11/30 B05C5/0245 B27N3/002 B27N3/007 B28B1/00 B28B1/52 B28B3/126 B28B3/20 B28B11/00 B28B11/003 B28B23/00 B28B23/0081 B28B23/0087 B29C43/00 B29C43/003 B29C43/08 B29C43/22 B29C43/222 B29C43/24 B29C43/34 B29C43/46 B29C44/0407 B29C45/0013 B29C47/0004 B29C47/0014 B29C47/0021 B29C47/0023 B29C47/0033 B29C47/0054 B29C47/02 B29C47/50 B29C47/522 B29C49/0005 B29C49/0047 B29C49/04 B29C49/06 B29C49/063 B29C51/002 B29C51/04 B29C51/08 B29C51/082 B29C51/10 B29C53/063 B29C53/58 B29C55/18 B29C67/24 B29C67/242 B29C70/50 B29C71/0009 B29C2043/3433 B29C2043/463 B29C2791/006 B29C2795/007 B29K2001/00 B29K2003/00 B29K2005/00 B29K2089/00 B29K2105/06 B29K2105/12 B29K2105/16 B29K2995/006 B29L2024/00 B29L2031/608 B29L2031/712 B29L2031/7132 B31B2201/2612 B31B2217/082 B31D1/005 B32B5/02 B32B5/18 B32B9/00 B32B13/02 B32B27/04 B32B27/20 B32B37/00 B32B37/12 B65D43/162 B65D65/38 B65D65/466 B65D2565/385 C04B26/00 C04B26/02 C04B26/28 C08J5/18 C08J2303/02 C08J2323/02 C08L1/286 C08L3/02 C08L5/12 E05D1/02 E05Y2900/602 B29C47/8805

European: B05B11/00B5 B27N3/00B B27N3/00R B28B1/00 B28B1/52 B28B11/00 B28B11/00E B28B23/00 B28B23/00Z B28B23/00Z1 B28B3/12C B28B3/20 B29C43/00B B29C43/22 B29C43/22B B29C43/24 B29C43/34 B29C43/46 B29C44/04A B29C45/00E B29C47/00B B29C47/50 B29C47/52B B29C49/00B B29C49/06B2B B29C51/00B B29C51/04 B29C51/10 B29C53/06B B29C55/18 B29C67/24 B29C67/24C B29C70/50 B29C71/00C B31B1/32 B31B17/00 B31D1/00H1 B32B13/02 B32B27/04 B32B27/20 B32B37/00 B32B37/14B B32B5/02 B32B5/18 B32B9/00 B65D43/16B B65D65/38 B65D65/46C C04B26/00 C04B26/02 C04B26/28 C08J5/18 C08L1/28F C08L3/02 C08L5/12 E05D1/02 L05B11/30 L05C5/02E L29C43/00 L29C43/08 L29C43/34B L29C43/46 L29C43/46A2 L29C47/00J10 L29C47/00J5 L29C47/00J6 L29C47/00L7 L29C47/02 L29C49/00F L29C49/04 L29C49/06 L29C51/04 L29C51/08 L29C51/08B L29C51/10 L29C53/58 L29C791/00E4 L29C795/00D L29K1/00 L29K105/06 L29K105/12 L29K105/16 L29K3/00 L29K5/00 L29K89/00 L29K995/00F14B L29L24/00 L29L31/60C L29L31/712 L29L31/7132 L31B201/26A1A L31B217/08A L32B37/12 L65D565/38Y7 M08J303/02 M08J323/02 P05D1/02 P05Y900/602

Family:

Publication number	Publication date	Application number	Application date
AT299793 E	20050815	AT19970922292T	19970409
AU199728005 A1	19971029	AU19970028005	19970409
AU712982 B2	19991118	AU19970028005	19970409
BRPI9710428 A	19990817	BR1997PI10428	19970409
CA2248982 AA	19980915	CA19972248982	19970409
CA2248982 C	20020730	CA19972248982	19970409
DE69733779 D1	20050825	DE19976033779	19970409
DE69733779 T2	20060524	DE19976033779T	19970409
EP1007320 A1	20000614	EP19970922292	19970409
EP1007320 A4	20010314	EP19970922292	19970409
EP1007320 B1	20050720	EP19970922292	19970409
JP2000508258 T2	20000704	JP19970536442T	19970409
JP3296565 B2	20020702	JP19970536442T	19970409
KR19990087469 A	19991227	KR19987006895	19980903
NZ332697 A	20000623	NZ19970332697	19970409

Priority:

US19960631676 19960409 WO1997US05794 19970409

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Assignee(s): (std): KHASHOGGI E IND ; E KHASHOGGI INDUSTRIES ; E KHASHOGGI INDUSTRIES LLC

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Agent(s): FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; CASSAN MACLEAN

Designated states: AM AT AZ BE BY CH DE DK ES FI FR GB GR IE IT KE LI LU MC NL PT SD SE SZ

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AT299793 E	20050815	LSGT	+	granted / extensions (spc, cpc, pte)	
AT299793 E	20060315	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	REF DOCUMENT NUMBER : 1007320 COUNTRY OF REF DOCUMENT : EP
AT299793 E	20090115	LSLE	-REN	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
AU199728005 A1	19971029	LSPB	+	published / reissued	
AU712982 B2	19991118	LSGT	+	granted / extensions (spc, cpc, pte)	
AU712982 B2	20000316	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
BRPI9710428 A	19990817	LSPB	+	published / reissued	
BRPI9710428 A	20050524	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	
CA2248982 AA	19980915	LSPB	+	published / reissued	
CA2248982 AA	19980915	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2248982 AA	19990713	LSES	+EEER	EXAMINATION REQUEST	
CA2248982 AA	20090409	LSLE	-MKLA	LAPSED	
CA2248982 C	20020730	LSGT	+	granted / extensions (spc, cpc, pte)	
DE69733779 D1	20060810	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE69733779 D1	20090219	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE69733779 T2	20060524	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1007320 A1	20000614	LSPB	+	published / reissued	
EP1007320 A1	20000614	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19981106
EP1007320 A1	20000920	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : E. KHASHOGGI INDUSTRIES, LLC
EP1007320 A1	20010314	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20010131
EP1007320 A1	20010314	LSRE	RIC1	CLASSIFICATION (CORRECTION)	TEXT : 7B 29C 47/00 A, 7B 28B 1/52 B, 7B 28B 23/00 B, 7B 29C 43/24 B
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EP1007320 A1	20050729	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP

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EP1007320 A1	20070424	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20070424 YEAR OF FEE PAYMENT : 11
EP1007320 A1	20070426	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20070426 YEAR OF FEE PAYMENT : 11
EP1007320 A1	20070426	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IE PAYMENT DATE : 20070426 YEAR OF FEE PAYMENT : 11
EP1007320 A1	20070427	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20070427 YEAR OF FEE PAYMENT : 11
EP1007320 A1	20070430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20070430 YEAR OF FEE PAYMENT : 11
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EP1007320 A1	20080530	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GR PAYMENT DATE : 20070430 YEAR OF FEE PAYMENT : 11
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EP1007320 A1	20081128	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1007320 A1	20081208	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EBP
EP1007320 A1	20081224	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20080409
EP1007320 A1	20090105	LSLE	-NLV4	NL: LAPSED OR ANULLED DUE TO NON-PAYMENT OF THE ANNUAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20081101
EP1007320 A1	20090121	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
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EP1007320 B1	20050720	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2000508258 T2	20000704	LSPB	+	published / reissued	
JP3296565 B2	20020702	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3296565 B2	20050426	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP3296565 B2	20080412	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
KR19990087469 A	19991227	LSPB	+	published / reissued	
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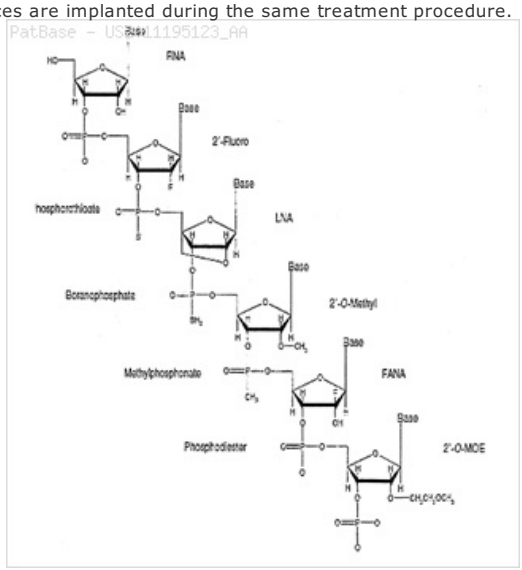
ABANDONED

33) Family number: 44214506 (US2011195123A)

Title: METHODS, COMPOSITIONS AND SYSTEMS FOR LOCAL DELIVERY OF DRUGS

Abstract: Source: US2011195123A Implantable medical device eluting drug locally and in prolonged period is provided, including several types of such a device, the treatment modes of implementation and methods of implantation. The device comprising of **polymeric** substrate, such as a matrix for example, that is used as the device body, and drugs, and in some cases additional scaffolding materials, such as metals or additional polymers, and materials to enhance visibility and imaging. The selection of drug is based on the advantageous of releasing drug locally and in prolonged period, where drug is released directly to the extracellular matrix (ECM) of the diseased area such as tumor, inflammation, degeneration or for symptomatic objectives, or to injured smooth muscle cells, or for prevention. One kind of drug is the gene silencing drugs based on RNA interference (RNAi), including but not limited to si RNA, sh RNA, or antisense RNA/DNA, ribozyme and nucleoside analogs. The modes of implantation in some embodiments are existing implantation procedures that are developed and used today for other treatments, including brachytherapy and needle biopsy. In such cases the dimensions of the new implant described in this invention are similar to the original implant. Typically a few devices are implanted during the same treatment procedure.

Classifications:
International (IPC 8-9): A61K31/7052 A61K31/7088 A61K31/7105 A61K31/711 A61K31/712 A61K31/7125 A61K31/713 A61K31/74 A61K38/00 A61K45/00 A61K45/06 A61K47/24 A61K47/28 A61K47/30 A61K47/32 A61K47/34 A61K47/36 A61K47/38 A61K47/42 A61K47/46 A61K47/48 A61K48/00 A61K9/00 A61K9/20 A61L27/00 A61L31/00 A61P25/00 A61P25/04 A61P25/28 A61P29/00 A61P31/00 A61P35/00 A61P37/00 C12N15/113 (Advanced/Invention); A61K9/20 (Core/Invention); A61K (Subclass/Invention)
International (IPC 1-7): A61K9/20
CPC: A61K9/0024 A61K47/34
European: A61K47/34 A61K9/00M5D
US: 424/422 424/423 424/484 424/484P 424/486 424/488 514/21.1 514/21.100S 514/44.00AS 514/44A 514/52 514/52S



Family:

Publication number	Publication date	Application number	Application date
AU2009265170 AA	20100107	AU20090265170	20090628
BRPI0910198 A2	20160112	BR2009PI10198	20090628
CN102137658 A	20110727	CN200980133730	20090628
DE602009027867 D1	20150108	DE200960027867T	20090628
EP2323630 A2	20110525	EP20090772985	20090628
EP2323630 B1	20141119	EP20090772985	20090628
IL210185 A0	20110331	IL20090210185	20090628
IN00293KN2011 A	20110401	IN2011KN00293	20110119
JP2011526619 T2	20111013	JP20110515712T	20090628
US2011195123 AA	20110811	US20090000656	20090628
US8999945 BB	20150407	US20090000656	20090628
WO10001325 A2	20100107	WO2009IB52778	20090628
WO10001325 A3	20101202	WO2009IB52778	20090628

Priority:

EP20090772985 20090628 US20080129477P 20080630 WO2009IB52778 20090628 US20090000656 20090628

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU2009265170 AA	20100107	LSPB	+	published / reissued	
AU2009265170 AA	20130502	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
BRPI0910198 A2	20160112	LSPB	+	published / reissued	

BRPI0910198 A2	20160510	LSRV	-B11A	DISMISSAL ACC. ART.33 OF IPL - EXAMINATION NOT REQUESTED WITHIN 36 MONTHS OF FILING	
BRPI0910198 A2	20160809	LSRV	-B11Y	DEFINITIVE DISMISSAL ACC. ARTICLE 33 OF IPL - EXTENSION OF TIME LIMIT FOR REQUEST OF EXAMINATION EXPIRED	
CN102137658 A	20110727	LSPB	+	published / reissued	
CN102137658 A	20110727	LSPB	+C06	PUBLICATION	
CN102137658 A	20130320	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
EP2323630 A2	20110525	LSPB	+	published / reissued	
EP2323630 A2	20110525	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20110414
EP2323630 A2	20120926	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20120823
EP2323630 A2	20140730	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20140703
EP2323630 A2	20141119	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2323630 A2	20141128	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP2323630 A2	20150325	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : VDEP EFFECTIVE DATE : 20141119
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EP2323630 A2	20151030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20150721 YEAR OF FEE PAYMENT : 7

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EP2323630 A2	20160629	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 8
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EP2323630 B1	20141119	LSGT	+	granted / extensions (spc, cpc, pte)	
IN00293KN2011 A	20110401	LSPB	+	published / reissued	
JP2011526619 T2	20111013	LSPB	+	published / reissued	
JP2011526619 T2	20120629	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120628

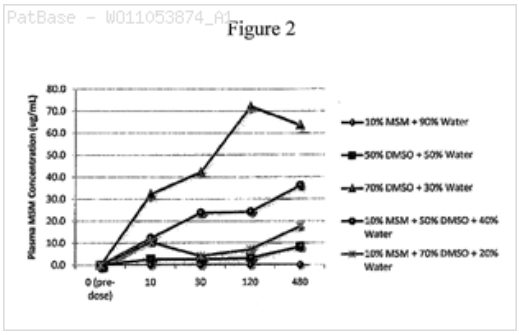
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JP2011526619 T2	20131023	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20131022
JP2011526619 T2	20140225	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20140224
JP2011526619 T2	20141008	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20141007
JP2011526619 T2	20150624	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20150623
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US2011195123 AA	20110103	LSAS	AS	ASSIGNMENT	OWNER NAME : SILENSEED LTD, ISRAEL DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SHEMI, AMOTZ; REEL/FRAME:025572/0719 EFFECTIVE DATE : 20101208
US8999945 BB	20150407	LSGT	+	granted / extensions (spc, cpc, pte)	
WO10001325 A2	20100107	LSPB	+	published / reissued	
WO10001325 A2	20110131	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011103001 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO10001325 A3	20101222	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 210185 COUNTRY OF REF DOCUMENT : IL
WO10001325 A3	20101222	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13000656 COUNTRY OF REF DOCUMENT : US
WO10001325 A3	20101227	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011515712 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO10001325 A3	20101231	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
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WO10001325 A3	20110131	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011103001 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO10001325 A3	20110131	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2011103001 COUNTRY OF REF DOCUMENT : RU
WO10001325 A3	20110203	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009265170 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20090628 KIND CODE OF REF DOCUMENT : A
WO10001325 A3	20160112	LSNP	ENP	ENTRY INTO THE	REF DOCUMENT NUMBER :

NATIONAL PHASE IN:	PI0910198 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20101229

34) Family number: 48843524 (US2011105623A)

Title: USE OF METHYLSULFONYLMETHANE (MSM) TO MODULATE MICROBIAL ACTIVITY

Abstract: Source: US2011105623A Disclosed herein are methods of use of methylsulfonylmethane (MSM) to modulate microbial activity, such as to enhance or inhibit the activity of microorganisms. In one example, MSM (such as about 0.5 percent to 5 percent MSM) is used to enhance fermentation efficiency, such as to enhance fermentation efficiency associated with the production of beer, cider, wine, a biofuel, dairy product or any combination thereof. Also disclosed are in vitro methods for enhancing the growth of one or more probiotic microorganisms and methods of enhancing growth of a microorganism in a diagnostic test sample. Methods of inhibiting microbial activity are also disclosed. In one particular example, a method of inhibiting microbial activity includes selecting a medium that is susceptible to H1N1 influenza contamination; and contacting the medium with MSM at a concentration of about 10 percent to about 16 percent of weight by volume, thereby inhibiting H1N1 influenza microbial activity.



Classifications:
International (IPC 8-9): A01N31/00 A01N41/10 A01N57/00 A01P1/00 A01P3/00 A21D8/04 A23C9/13 A23C9/152 A23G1/00 A23G1/30 A23L1/00 A61K A61K31/10 A61K31/133 A61K31/165 A61K31/17 A61K31/337 A61K31/352 A61K31/381 A61K31/397 A61K31/424 A61K31/43 A61K31/431 A61K31/437 A61K31/4409 A61K31/496 A61K31/4965 A61K31/545 A61K31/665 A61K31/7008 A61K31/7036 A61K35/00 A61K39/085 A61K45/06 A61K47/02 A61K47/20 A61K9/00 A61K9/06 A61K9/08 A61K9/10 A61K9/107 A61K9/12 A61K9/14 A61K9/16 A61K9/20 A61K9/22 A61K9/28 A61K9/48 A61K9/70 A61P17/00 A61P19/02 A61P31/00 A61P31/04 A61P31/06 A61P31/10 A61P31/16 A61P43/00 C07C315/06 C07C317/04 C07D499/21 C07D499/44 C07D499/74 C07D503/10 C12C11/00 C12G1/00 C12G3/10 C12N1/00 C12N1/18 C12N1/20 C12N1/38 C12N7/06 C12P C12P7/02 C12P7/06 C12P7/56 C12Q1/02 (Advanced/Invention);
A61K9/52 (Advanced/Non-invention);
A01N A61K C12P (Subclass/Invention)
CPC: A61K31/133 A61K31/17 A61K31/4409 A61K31/496 A61K31/4965 A61K31/7036 A61K9/0053 A01N41/10 A61K31/43 A61K31/431 A61K2300/00 A61K9/0014 A61K31/437 A61K45/06 C12N1/18 C12N1/20 C12P7/06 C12P7/56 Y02E50/17 Y02E50/343 C12N1/38 A61K31/10 C12G1/00 A61K39/085
European: A61K31/10 A61K31/437 A61K45/06 A61K9/00M18 A61K9/00M3 Y02E50/17 Y02E50/34B
US: 424/43 424/43S 424/463 424/463P 424/474 424/474S 435/155 435/238 435/238P 435/244 435/244S 435/252.3 435/29 435/29S 514/192 514/192S 514/196 514/197 514/197S 514/200 514/200S 514/210.09 514/210.090S 514/210.15 514/210.150S 514/254.11 514/255.06 514/354 514/37 514/456 514/456S 514/669 514/706 514/711 514/711S

Family:

Publication number	Publication date	Application number	Application date
AU2010281739 AA	20110526	AU20100281739	20101029
AU2010281739 BB	20110609	AU20100281739	20101029
AU2010313228 AA	20110505	AU20100313228	20101029
AU2010313228 BB	20140529	AU20100313228	20101029
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Priority:

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Probable Assignee: BIOGENIC INNOVATIONS LLC

Assignee(s): (std): VARELMAN JEFF ; KELLER TONY ; COZEAN COLETTE ; TANDEM ABELA DEV GROUP LLC ; KELLER ANTHONY L ; KELLER ANTHONY ; COZEAN JESSE ; ABELA PHARMACEUTICALS INC ; BENJAMIN RODNEY ; BENJAMIN RODNEY L ; BIOGENIC INNOVATIONS LLC ; BIOGENTIC INNOVATIONS LLC ; VARELMAN JEFFREY

Assignee(s): TANDEM ABELA DEVELOPMENT GROUP LLC ; CARDINAL ASSOCIATES INC

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
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AU2010281739 AA	20111006	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
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NZ600134 A	20140829	LSPB	+	published / reissued	
NZ600134 A	20141224	LSGT	+PSEA	PATENT SEALED	
NZ600134 A	20141224	LSFE	+RENW	RENEWAL (RENEWAL FEES ACCEPTED)	DESCRIPTION : PATENT RENEWED FOR 3 YEARS UNTIL 29 OCT 2017 BY FISHER ADAMS KELLY EFFECTIVE DATE : 20141210
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NZ600145 A	20140926	LSFE	+RENW	RENEWAL (RENEWAL FEES ACCEPTED)	DESCRIPTION : PATENT RENEWED FOR 3 YEARS UNTIL 29 OCT 2017 BY CPA GLOBAL EFFECTIVE DATE : 20140903
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					DATES FROM 20101029 TO 20101101; REEL/FRAME:025417/0308
US2011105623 AA	20110308	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOGENIC INNOVATIONS, LLC, WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BENJAMIN, RODNEY; VARELMAN, JEFFREY; KELLER, ANTHONY L.; SIGNING DATES FROM 20101029 TO 20101101; REEL/FRAME:025950/0585
US2011136210 AA	20110609	LSPB	+	published / reissued	
US2011136210 AA	20110318	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOGENIC INNOVATIONS, LLC, WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BENJAMIN, RODNEY; VARELMAN, JEFFREY; KELLER, ANTHONY L.; SIGNING DATES FROM 20101029 TO 20101101; REEL/FRAME:025983/0906
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US2011152231 AA	20120417	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOGENIC INNOVATIONS, LLC, WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BENJAMIN, RODNEY; VARELMAN, JEFFREY; KELLER, ANTHONY L.; SIGNING DATES FROM 20120410 TO 20120413; REEL/FRAME:028058/0806
US2012149672 AA	20120614	LSPB	+	published / reissued	
US2012207827 AA	20120816	LSPB	+	published / reissued	
US2012220667 AA	20120830	LSPB	+	published / reissued	
US2012220667 AA	20120417	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOGENIC INNOVATIONS, LLC, WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BENJAMIN, RODNEY; VARELMAN, JEFFREY; KELLER, ANTHONY L.; SIGNING DATES FROM 20101029 TO 20101101; REEL/FRAME:028062/0132
US2012264726 AA	20121018	LSPB	+	published / reissued	
US2012264726 AA	20121116	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOGENIC INNOVATIONS, LLC, WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CARDINAL ASSOCIATES, INC.; REEL/FRAME:029315/0549 EFFECTIVE DATE : 20121116
US2012264726 AA	20121116	LSAS	AS	ASSIGNMENT	OWNER NAME : CARDINAL ASSOCIATES, INC., WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ABELA PHARMACEUTICALS, INC.; REEL/FRAME:029315/0495 EFFECTIVE DATE : 20120818
US2012264726 AA	20130702	LSAS	AS	ASSIGNMENT	OWNER NAME : TANDEM-ABELA DEVELOPMENT GROUP, LLC, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:COZEAN, COLETTE; BENJAMIN, RODNEY; KELLER, ANTHONY; AND OTHERS; SIGNING DATES FROM 20120410 TO 20120413; REEL/FRAME:030731/0650

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US8546373 BB	20130702	LSAS	AS	ASSIGNMENT	OWNER NAME : ABELA PHARMACEUTICALS, INC., CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:TANDEM-ABELA DEVELOPMENT GROUP, LLC; REEL/FRAME:030746/0397 EFFECTIVE DATE : 20120417

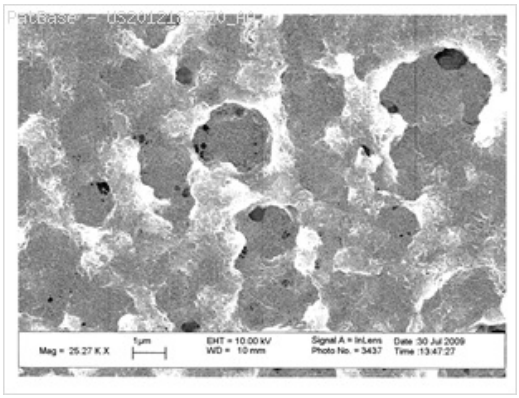
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WO11053875 A1	20120423	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13503625 COUNTRY OF REF DOCUMENT : US
WO11053875 A1	20120430	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

35) Family number: 50263643 (US2012183770A)

Title: MODIFIED CARBON NANOTUBES, METHODS FOR PRODUCTION THEREOF AND PRODUCTS OBTAINED THEREFROM

Abstract: Source: US2012183770A The present invention relates to the exfoliation and dispersion of carbon nanotubes resulting in high aspect ratio, surface-modified carbon nanotubes that are readily dispersed in various media. A method is disclosed for their production in high yield. Further modifications by surface active or modifying agents are also disclosed. Application of the carbon nanotubes of this invention as composites with materials such as elastomers, thermosets and thermoplastics are also described.



Classifications:

International (IPC 8-9): A61K47/48 A61K49/00 A61K51/12 B01F17/00 B29C70/06 B29C70/28 B60C1/00 B82Y30/00 B82Y40/00 C01B31/02 C01B32/158 C01B32/168 C01B32/17 C01B32/174 C07C305/02 C07C51/16 C07C51/305 C07C63/48 C08J3/02 C08J3/20 C08J3/21 C08J3/22 C08J3/24 C08J5/00 C08K3/04 C08K3/36 C08K5/00 C08K7/04 C08K7/06 C08K7/08 C08K7/24 C08K9/00 C08K9/04 C08L101/00 C08L15/00 C08L21/00 C08L21/02 C08L63/00 C08L9/10 C08L91/00 C09C1/44 H01G11/36 H01G9/035 (Advanced/Invention); B82Y30/00 B82Y40/00 C08K5/42 C08L7/00 C08L9/06 C08L9/08 (Advanced/Non-invention)

CPC: C08K9/02 C08K2201/004 C01B31/0253 C01B2202/34 C01B2202/36 C08K9/04 Y10T428/2918 B60C1/00 B82Y30/00 B82Y40/00 C01B31/022 C01B31/0273 C08J5/005 C08K5/42 C08K7/24 C08K2201/011 C08L7/00 C08L9/06 C08L9/08 Y02T10/862 C08K7/22 C08K7/06 C08L21/02 C08L9/10 C08K7/08 A61K47/48961 A61K49/0076 A61K51/1217 A61K47/48792 C08K5/0008 C08C1/14 C08J3/2053 C08J2321/02 C08K2201/016 C08K3/04 C01P2004/54 B01F17/0007 A61K51/1275

European: B60C1/00 B82Y30/00 B82Y40/00 C01B31/02B4 C01B31/02B4D C01B31/02B4D6 C08K3/04 C08K7/24 M01B202/34 M01B202/36 M08K201/011 M08L7/00 M08L9/06 M08L9/08 Y02T10/86B

US: 1/1 252/506 252/506S 252/62.2 252/62.200S 424/1.61 428/367 428/367P 523/155 523/468 523/468S 524/241 524/251 524/300 524/315 524/319 524/365 524/394 524/495 524/575 558/37 558/37S 562/408 562/408S 562/488 562/488S 977/743 977/743S 977/748 977/748S 977/750 977/750S 977/752 977/752S 977/779 977/779S 977/832 977/832S 977/847 977/847S

Family:

Publication number	Publication date	Application number	Application date
CA2803136 AA	20121218	CA20112803136	20110620
CA2834697 AA	20131030	CA20112834697	20111212
CN103189308 A	20130703	CN201180037867	20110620
CN103313934 A	20130918	CN201180065089	20111212
CN103313935 A	20130918	CN201180065092	20111212
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EP2651820 A1	20131023	EP20110802026	20111212
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JP2014501290 A2	20140120	JP20130543678	20111212
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JP2014505125 A2	20140227	JP20130543677	20111212
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KR20130125380 A	20131118	KR20137017381	20111212
KR20130125381 A	20131118	KR20137017382	20111212
KR20140045309 A	20140416	KR20137018434	20111212
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SG190926 A1	20130731	SG20130041553	20111212
TW201202135 A	20120116	TW20110121680	20110621
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TW201237082 A	20120916	TW20110145783	20111212
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US2013261221 AA	20131003	US20110992848	20111212
US2013281612 AA	20131024	US20110993206	20111212
US2016108202 AA	20160421	US20150924246	20151027
US2016339125 AA	20161124	US20160225215	20160801
US2017050158 AA	20170223	US20160288553	20161007
US9212273 BB	20151215	US20110993206	20111212
US9353240 BB	20160531	US20150924246	20151027
US9422413 BA	20160823	US20160166931	20160527
US9493626 BA	20161115	US20160225215	20160801
WO11163129 A2	20111229	WO2011US41078	20110620
WO11163129 A3	20120614	WO2011US41078	20110620
WO12080158 A1	20120621	WO2011EP72425	20111212

WO12080159 A1	20120621	WO2011EP72426	20111212
WO12080160 A1	20120621	WO2011EP72427	20111212

Priority:

JP20130516655T 20110620	JP20130543678T 20111212	US20100357420P 20100622
US20100423033P 20101214	JP20160045743 20160309	JP20160072220 20160331
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WO2011EP72427 20111212	WO2011EP72426 20111212	WO2011EP72425 20111212

Probable Assignee: MOLECULAR REBAR DESIGN LLC

Assignee(s): (std): DESIGNED NANOTUBES LLC ; HESTER KENNETH W ; SWOGGER KURT W ; STYRON EUROPE GMBH ; BOSNYAK CLIVE P ; MOLECULAR REBAR DESIGN LLC ; MOLECULAR LEVER DESIGN LLC

Assignee(s): BOSNYAK ENTERPRISES LLC ; SWOGGER PII LLC ; BLACK DIAMOND STRUCTURES LLC

Inventor(s): (std): BOSNYAK CLIVE P ; SWOGGER KURT W ; KURT W SWOGGER ; KENNETH W HESTER ; HESTER KENNETH W ; CLIVE P BOSNYAK

Agent(s): KIRBY EADES GALE BAKER; SMART AND BIGGAR; JANSEN CORNELIS MARINUS; HOFFMANN EITLE; OHMORI NORIO; KOBAYASHI HIROSHI; FURUHASHI NOBUSHIGE; MARKS AND CLERK SINGAPORE LLP; GREGORY L; ANDREWS KURTH LLP; DUNSTAN AMY ULFERS ET AL; KLUSMANN PETER ET AL; KLUSMANN PETER HOFFMANN EITLE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2803136 AA	20121218	LSPB	+	published / reissued	
CA2803136 AA	20160627	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20160617
CA2834697 AA	20131030	LSPB	+	published / reissued	
CA2834697 AA	20161219	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20161209
CN103189308 A	20130703	LSPB	+	published / reissued	
CN103189308 A	20130703	LSPB	+C06	PUBLICATION	
CN103313934 A	20130918	LSPB	+	published / reissued	
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CN103313934 A	20141217	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
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CN103313935 A	20130918	LSPB	+C06	PUBLICATION	
CN103313935 A	20140514	LSRE	C53	CORRECTION OF PATENT FOR INVENTION OR PATENT APPLICATION	
CN103313935 A	20141224	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
CN103459313 A	20131218	LSPB	+	published / reissued	
CN103459313 A	20131218	LSPB	+C06	PUBLICATION	
EP2585402 A2	20130501	LSPB	+	published / reissued	
EP2585402 A2	20130501	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130118
EP2585402 A2	20140108	LSAS	RAP1	TRANSFER OF	OWNER NAME : MOLECULAR

				RIGHTS OF AN EP PUBLISHED APPLICATION	REBAR DESIGN LLC
EP2585402 A2	20140514	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20140414
EP2651819 A1	20131023	LSPB	+	published / reissued	
EP2651819 A1	20131023	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130625
EP2651819 A1	20150211	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MOLECULAR REBAR DESIGN, LLC
EP2651819 A1	20160518	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20160414
EP2651820 A1	20131023	LSPB	+	published / reissued	
EP2651820 A1	20131023	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130715
EP2651820 A1	20140108	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MOLECULAR REBAR DESIGN LLC
EP2651820 A1	20140319	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : SWOGGER, KURT, W.
EP2651820 A1	20140319	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : BOSNYAK, CLIVE, P.
EP2651820 A1	20160518	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20160414
EP2651821 A1	20131023	LSPB	+	published / reissued	
EP2651821 A1	20131023	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130610
EP2651821 A1	20150211	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MOLECULAR REBAR DESIGN, LLC
EP2651821 A1	20160713	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20160613
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IN05454CN2013 A	20160617	LSPB	+	published / reissued	
IN05619CN2013 A	20160617	LSPB	+	published / reissued	
JP2013534897 T2	20130909	LSPB	+	published / reissued	
JP2013534897 T2	20140618	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20140617
JP2013534897 T2	20140618	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20140617
JP2013534897 T2	20150107	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150106
JP2013534897 T2	20150310	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20150310
JP2013534897 T2	20150325	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20150310
JP2013534897 T2	20150706	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150706
JP2013534897 T2	20150826	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150825

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JP2013534897 T2	20160303	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
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JP2014501290 T2	20140120	LSPB	+	published / reissued	
JP2014501290 T2	20141115	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20141114
JP2014501290 T2	20141209	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20141208
JP2014501290 T2	20150715	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150714
JP2014501290 T2	20160201	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2014501290 T2	20160210	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20160209
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JP2014505125 T2	20141209	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20141208
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JP2016169149 A2	20160923	LSPB	+	published / reissued	
JP5902193 B2	20160413	LSGT	+	granted / extensions (spc, cpc, pte)	
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KR20130125380 A	20161222	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20130125381 A	20131118	LSPB	+	published / reissued	
KR20140045309 A	20140416	LSPB	+	published / reissued	
SG10201600280Y A1	20160226	LSPB	+	published / reissued	
SG190751 A1	20130731	LSPB	+	published / reissued	
SG190926 A1	20130731	LSPB	+	published / reissued	
TW201202135 A	20120116	LSPB	+	published / reissued	
TW201233719 A	20120816	LSPB	+	published / reissued	
TW201237082 A	20120916	LSPB	+	published / reissued	
TW201237085 A	20120916	LSPB	+	published / reissued	
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US2012183770 AA	20130510	LSAS	AS	ASSIGNMENT	OWNER NAME : SWOGGER P.I.I., LLC, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DESIGNED NANOTUBES, LLC; REEL/FRAME:030393/0978 EFFECTIVE DATE : 20121031
US2012183770 AA	20130510	LSAS	AS	ASSIGNMENT	OWNER NAME : BOSNYAK, CLIVE P., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DESIGNED NANOTUBES, LLC; REEL/FRAME:030393/0978 EFFECTIVE DATE : 20121031
US2012183770 AA	20130514	LSAS	AS	ASSIGNMENT	OWNER NAME : BOSNYAK ENTERPRISES, LLC, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BOSNYAK, CLIVE P.; REEL/FRAME:030414/0209 EFFECTIVE DATE : 20121108

US2012183770 AA	20130517	LSAS	AS	ASSIGNMENT	OWNER NAME : MOLECULAR REBAR DESIGN, LLC, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SWOGGER P.I.I., LLC; BOSNYAK ENTERPRISES, LLC; REEL/FRAME:030436/0836 EFFECTIVE DATE : 20121231
US2012183770 AA	20141208	LSAS	AS	ASSIGNMENT	OWNER NAME : BLACK DIAMOND STRUCTURES, LLC, TEXAS DESCRIPTION : LICENSE; ASSIGNOR:MOLECULAR REBAR DESIGN, LLC; REEL/FRAME:034426/0861 EFFECTIVE DATE : 20141208
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US2013261221 AA	20130610	LSAS	AS	ASSIGNMENT	OWNER NAME : STYRON EUROPE GMBH, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOSNYAK, CLIVE P.; SWOGGER, KURT W.; SIGNING DATES FROM 20130531 TO 20130604; REEL/FRAME:030578/0434
US2013261221 AA	20141103	LSAS	AS	ASSIGNMENT	OWNER NAME : MOLECULAR REBAR DESIGN, LLC, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:STYRON EUROPE GMBH; REEL/FRAME:034087/0982 EFFECTIVE DATE : 20140820
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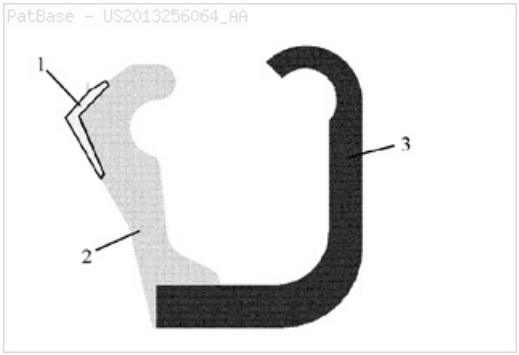
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WO11163129 A3	20121221	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013516655 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11163129 A3	20121224	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11163129 A3	20130121	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20137001598 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
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WO12080158 A1	20130715	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20137018434 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
WO12080158 A1	20131030	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2834697 COUNTRY OF REF DOCUMENT : CA
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WO12080159 A1	20130703	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20137017382 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
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WO12080160 A1	20130611	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13993206 COUNTRY OF REF DOCUMENT : US
WO12080160 A1	20130613	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013543678 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
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36) Family number: 51039916 (US2013256064A)

Title: LUBRICANT SYSTEM AND METHOD OF FORMING THE SAME

Abstract: Source: US2013256064A A lubricant system is disclosed that is formed by contacting a fibrous network with oil and/or lubricating fluid having an affinity for the fibrous network. The fibrous network comprises oleophilic **fibers** having a diameter between 50 nm and 10 microns and a length that is at least times the diameter. In addition, the oleophilic **fibers** have an affinity for the oil and/or lubricating fluid.



Classifications:
International (IPC 8-9): B01D15/00 B01J20/00 B01J20/24 B01J20/26 B01J20/28 B01J20/32 B82Y30/00 C10M143/04 C10M171/06 C10N20/02 C10N20/06 C10N50/10 D01F6/00 F16C19/00 F16C33/20 F16C33/56 F16C33/66 F16N7/12 (Advanced/Invention); C10N20/02 C10N20/06 C10N50/10 (Advanced/Non-invention)
CPC: C10M143/04 F16N7/12 B01J20/26 B01J20/24 B01J20/28007 B01J20/28023 B01J20/3208 B01J2220/445 B01J2220/46 B82Y30/00 C10M171/06 C10M2201/02 C10M2203/10 C10M2203/102 C10M2203/1025 C10M2205/02 C10M2205/022 C10M2205/024 C10M2205/028 C10M2205/04 C10M2205/14 C10M2205/16 C10M2205/18 C10M2207/022 C10M2207/28 C10M2207/40 C10M2209/04 C10M2209/062 C10M2209/08 C10M2209/084 C10M2209/10 C10M2209/102 C10M2209/103 C10M2209/104 C10M2209/12 C10M2213/02 C10M2213/062 C10M2217/022 C10M2217/024 C10M2217/026 C10M2217/028 C10M2217/04 C10M2217/044 C10M2217/045 C10M2217/046 C10M2221/02 C10M2221/04 C10M2229/02 C10M2229/04 C10N2220/022 C10N2220/082 C10N2220/086 C10N2220/10 C10N2220/14 C10N2240/02 C10N2250/08 C10N2250/10 C10N2250/14 C10N2270/00 F16C33/56 F16C33/6611 F16C33/6655 Y10T428/298
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US: 1/1 184/102 184/102 252/194 428/401 508/100 508/110 508/181 508/216 508/307 508/451 508/491 508/568 508/579 508/591 526/303.1

Family:

Publication number	Publication date	Application number	Application date
CN103180420 A	20130626	CN201180051577	20111024
CN103180421 A	20130626	CN201180051691	20111024
CN103180421 B	20150722	CN201180051691	20111024
CN103189485 A	20130703	CN201180051596	20111024
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CN103282472 A	20130904	CN201180051535	20111024
CN103282472 B	20160316	CN201180051535	20111024
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US2013256064 AA	20131003	US20110880576	20111024
US2013256065 AA	20131003	US20110881389	20111024
US2013274159 AA	20131017	US20110880749	20111024
US2013296206 AA	20131107	US20110881451	20111024
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WO12055825 A1	20120503	WO2011EP68574	20111024
WO12055827 A1	20120503	WO2011EP68577	20111024
WO12055882 A1	20120503	WO2011EP68679	20111025

Priority:

US20100406416P 20101025 US20100418081P 20101130 US20100426083P 20101222
US20100421985P 20101210 US20110880576 20111024 US20110880749 20111024
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US20110881451 20111024 US20110881493 20111025

Probable Assignee: SKF AB

Assignee(s): (std): BONGAERTS JEROEN ; DE VRIES ALEXANDER ; LUGT PIET ; SCHAAKE RICHARD ; SANZ ALEJANDRO ; MULLER DRIES ; SKF AB ; MEIJER DICK ; PASARIBU RIHARD

Assignee(s): SKF A B ; AB SKF ; AKTIEBOLAGET SKF

Inventor(s): (std): BONGAERTS JEROEN ; DE VRIES ALEXANDER ; LUGT PIET ; MEIJER DICK ; MULLER DRIES ; PASARIBU RIHARD ; SANZ ALEJANDRO ; SCHAAKE RICHARD

Agent(s): BUROE SVEN PETER; BRYAN; SKF USA INC PATENT DEPARTMENT; BUROE PETER ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN103180420 A	20130626	LSPB	+	published / reissued	
CN103180420 A	20130626	LSPB	+C06	PUBLICATION	
CN103180420 A	20161012	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
CN103180421 A	20130626	LSPB	+	published / reissued	
CN103180421 A	20130626	LSPB	+C06	PUBLICATION	
CN103180421 A	20150722	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103180421 B	20150722	LSGT	+	granted / extensions (spc, cpc, pte)	
CN103189485 A	20130703	LSPB	+	published / reissued	
CN103189485 A	20130703	LSPB	+C06	PUBLICATION	
CN103189485 A	20161130	LSDW	-C20	PATENT RIGHT OR UTILITY MODEL DEEMED TO BE ABANDONED OR IS ABANDONED	
CN103189552 A	20130703	LSPB	+	published / reissued	
CN103189552 A	20130703	LSPB	+C06	PUBLICATION	
CN103189552 A	20161012	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
CN103282472 A	20130904	LSPB	+	published / reissued	
CN103282472 A	20130904	LSPB	+C06	PUBLICATION	
CN103282472 A	20160316	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103282472 B	20160316	LSGT	+	granted / extensions (spc, cpc, pte)	
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EP2633013 A1	20130904	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130506
EP2633013 A1	20150826	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20150722
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EP2633014 A1	20150826	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20150722
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US2013256064 AA	20130618	LSAS	AS	ASSIGNMENT	OWNER NAME : AKTIEBOLAGET SKF, SWEDEN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BONGAERTS, JEROEN; DE VRIES, ALEXANDER; LUGT, PIET; AND OTHERS; SIGNING DATES FROM 20130523 TO 20130527; REEL/FRAME:030634/0347
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US2013256065 AA	20130620	LSAS	AS	ASSIGNMENT	OWNER NAME : AKTIEBOLAGET SKF, SWEDEN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BONGAERTS, JEROEN; VRIES, ALEXANDER DE; LUGT, PIET; AND OTHERS; SIGNING DATES FROM 20130523 TO 20130527; REEL/FRAME:030648/0480
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US2013302609 AA	20130620	LSAS	AS	ASSIGNMENT	OWNER NAME : AKTIEBOLAGET SKF, SWEDEN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BONGAERTS, JEROEN; VRIES, ALEXANDER DE; LUGT, PIET; AND OTHERS; SIGNING DATES FROM 20130523 TO 20130527; REEL/FRAME:030653/0419
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WO12055821 A1	20130425	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

WO12055821 A1	20130627	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13881451 COUNTRY OF REF DOCUMENT : US
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WO12055823 A1	20130425	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12055823 A1	20130620	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13881389 COUNTRY OF REF DOCUMENT : US
WO12055825 A1	20120503	LSPB	+	published / reissued	
WO12055825 A1	20130425	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12055825 A1	20130618	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13880576 COUNTRY OF REF DOCUMENT : US
WO12055827 A1	20120503	LSPB	+	published / reissued	
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WO12055827 A1	20130618	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13880749 COUNTRY OF REF DOCUMENT : US
WO12055882 A1	20120503	LSPB	+	published / reissued	
WO12055882 A1	20130425	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12055882 A1	20130620	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13881493 COUNTRY OF REF DOCUMENT : US

37) Family number: 33081391 (US2008146445A)

Title: NEMATICIDAL COMPOSITIONS

Abstract: Source: US2008146445A The present invention concerns nematicidal compounds, their formulation as nematicidal composition and their use for controlling nematodes, preferably plant parasitic nematodes.

Classifications:

International (IPC 8-9): A01N A01N25/00 A01N25/10 A01N25/26 A01N25/34 A01N37/06 A01N37/12 A01N37/18 A01N37/28 A01N37/34 A01N37/38 A01N37/44 A01N41/12 A01N43/08 A01N43/12 A01N43/30 A01N43/32 A01N43/40 A01N43/50 A01N43/52 A01N43/54 A01N43/56 A01N43/653 A01N43/66 A01N43/68 A01N43/76 A01N43/80 A01N43/82 A01N43/824 A01N43/84 A01N47/04 A01N47/34 A01N47/36 A01N47/38 A01N49/00 A01N51/00 A01N53/00 A01N53/04 A01N53/08 A01N55/00 A01N57/12 A01N57/20 A01N57/28 A01N59/00 A01P5/00 (Advanced/Invention);
A01N37/06 A01N37/28 A01N37/34 A01N43/08 A01N43/30 A01N43/50 A01N43/653 A01N43/76 A01N43/80 A01N43/824 A01N43/84 A01N47/04 A01N47/34 A01N51/00 A01N53/04 A01N53/08 A01N55/00 A01N57/20 A01P3/00 (Advanced/Non-invention);
A01N25/10 A01N25/26 A01N25/34 A01N37/06 A01N37/12 A01N37/18 A01N37/28 A01N37/34 A01N37/36 A01N37/44 A01N41/00 A01N43/00 A01N43/02 A01N43/34 A01N43/48 A01N43/64 A01N43/72 A01N47/00 A01N47/02 A01N47/28 A01N49/00 A01N51/00 A01N53/00 A01N55/00 A01N57/00 A01N59/00 A01P5/00 (Core/Invention);
A01N37/06 A01N37/28 A01N37/34 A01N43/02 A01N43/64 A01N43/72 A01N47/02 A01N47/28 A01N51/00 A01N53/00 A01N55/00 A01N57/00 A01P3/00 (Core/Non-invention);
A01N A01P (Subclass/Invention)

International (IPC 1-7): A01N37/28 A01N37/38 A01N43/08 A01N43/30 A01N43/40 A01N43/52 A01N43/80 A01N43/82 A01N47/04 A01N47/38 A01N49/00 A01N51/00 A01N55/00 A01N57/20 A01P5/00

CPC: A01N57/20 A01N37/06 A01N37/28 A01N37/34 A01N37/40 A01N37/44 A01N43/08 A01N43/30 A01N43/40 A01N43/50 A01N43/52 A01N43/54 A01N43/56 A01N43/653 A01N43/66 A01N43/68 A01N43/76 A01N43/80 A01N43/82 A01N43/84 A01N47/02 A01N47/04 A01N47/34 A01N47/36 A01N47/38 A01N49/00 A01N51/00 A01N53/00 A01N55/00

European: A01N37/06 A01N37/28 A01N37/34 A01N37/40 A01N37/44 A01N43/08 A01N43/30 A01N43/40 A01N43/50 A01N43/52 A01N43/54 A01N43/56 A01N43/653 A01N43/66 A01N43/68 A01N43/76 A01N43/80 A01N43/82 A01N43/84 A01N47/02 A01N47/04 A01N47/34 A01N47/36 A01N47/38 A01N49/00 A01N51/00 A01N53/00 A01N55/00 A01N57/20

US: 504/100 504/101 504/101S 514/114 514/114S 514/237.5 514/237.500S 514/272 514/272S 514/275 514/275S 514/357 514/357S 514/363 514/363S 514/391 514/402 514/402S 514/464 514/464S 514/472 514/472S 514/606 514/606S 514/615 514/615S

Family:

Publication number	Publication date	Application number	Application date
CR9170 A	20071031	CR20070009170	20070606
CY1112950 T1	20160413	CY20121100697T	20120803
DE602005034365 D1	20120719	DE200560034365T	20051216
DK1941798 T3	20120827	DK20050153818T	20051216
EP1835807 A1	20070926	EP20050820616	20051216
EP1938691 A2	20080702	EP20080153825	20051216
EP1938691 A3	20090722	EP20080153825	20051216
EP1941798 A2	20080709	EP20080153818	20051216
EP1941798 A3	20090805	EP20080153818	20051216
EP1941798 B1	20120523	EP20080153818	20051216
EP1941799 A2	20080709	EP20080153822	20051216
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EP1969939 A2	20080917	EP20080153808	20051216
EP1969939 A3	20081203	EP20080153808	20051216
EP1969940 A2	20080917	EP20080153829	20051216
EP1969940 A3	20081210	EP20080153829	20051216
EP2460408 A1	20120606	EP20110176048	20051216
ES2387927 T3	20121004	ES20080153818T	20051216
IL183305 A0	20070920	IL20050183305	20051216
JP2008524152 T2	20080710	JP20070545965T	20051216
JP2009137999 A2	20090625	JP20090018292	20090129
JP4326575 B2	20090909	JP20070545965T	20051216
JP5139342 B2	20130206	JP20090018292	20090129
MA29132 B1	20080102	MA20070029997	20070615
MX2007006534 A1	20070725	MX20070006534	20051216
PT1941798 T	20120822	PT20080153818T	20051216
SI1941798 T1	20121231	SI20050031560T	20051216
TN2007000222 A1	20081121	TN20070000222	20070612
TNSN07222 A1	20081121	TN2007SN00222	20070612
US2008146445 AA	20080619	US20050793261	20051216
US2009209605 AA	20090820	US20090432167	20090429
WO06063848 A1	20060622	WO2005EP13574	20051216
ZA200704271 A	20091125	ZA20070004271	20070524

Priority:

EP20050820616 20051216 EP20080153818 20051216 JP20070545965 20051216
US20050793261 20051216 US20070793261 20070615 US20090432167 20090429
US20040636605P 20041217 US20050709095P 20050818 JP20070545965T 20051216
WO2005EP13574 20051216

Probable Assignee: DEVGEN NV

Assignee(s): (std): DE KERPEL JAN OCTAAF ; DEVGEN NV ; LEYSEN DIRK

Assignee(s): DEVGEN N V

Inventor(s): (std): DE KERPEL JAN OCTAAF ; DIRK LEYSEN ; JAN OCTAAF DE KERPEL ; KERPEL JAN OCTAAF DE ; LEYSEN DIRK

Agent(s): DE CLERCQ ANN G Y; DE CLERCQ ANN G Y ET AL; BOUNAGA SAKINA; WOLF GREENFIELD AND SACKS PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA

UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CR9170 A	20071031	LSPB	+	published / reissued	
CR9170 A	20140923	LSWD	FA	ABANDONMENT OR WITHDRAWAL (GRANTING PROCEDURE)	
DK1941798 T3	20120827	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1835807 A1	20070926	LSPB	+	published / reissued	
EP1835807 A1	20070926	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20070710
EP1835807 A1	20080109	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20071213
EP1835807 A1	20080716	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : LEYSEN, DIRK
EP1835807 A1	20080716	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : DE KERPEL, JAN, OCTAAF
EP1835807 A1	20121024	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20120918
EP1938691 A2	20080702	LSPB	+	published / reissued	
EP1938691 A2	20080702	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080331
EP1938691 A2	20090218	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : DE KERPEL, JAN, OCTAAF
EP1938691 A2	20090218	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : LEYSEN, DIRK
EP1938691 A2	20091014	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090914
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EP1941798 A2	20090218	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : DE KERPEL, JAN, OCTAAF
EP1941798 A2	20090218	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : LEYSEN, DIRK
EP1941798 A2	20090826	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090727
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EP1941798 A2	20120531	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP1941798 A2	20120808	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : RO REF LEGAL EVENT CODE : EPE
EP1941798 A2	20120829	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3
EP1941798 A2	20121004	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2387927 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 EFFECTIVE DATE : 20121004
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EP1941798 A2	20121029	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20120401740 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20120920
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EP1941798 A2	20121130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IS DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120923
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EP1941798 A2	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BG PAYMENT DATE : 20121212 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CZ PAYMENT DATE : 20121210 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID	REF COUNTRY CODE : IE PAYMENT DATE : 20121220

				TO NATIONAL OFFICE	YEAR OF FEE PAYMENT : 08
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EP1941798 A2	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20121220 YEAR OF FEE PAYMENT : 08
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EP1941798 A2	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20120523
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EP1941798 A2	20130228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SK PAYMENT DATE : 20121211 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20121220 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20121220 YEAR OF FEE PAYMENT : 08
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EP1941798 A2	20130228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : TR PAYMENT DATE : 20121129 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20121221 YEAR OF FEE PAYMENT : 08
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EP1941798 A2	20130329	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20121212 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130429	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HU REF LEGAL EVENT CODE : AG4A REF DOCUMENT NUMBER : E014915 COUNTRY OF REF DOCUMENT : HU
EP1941798 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20121220 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20121219 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : HU PAYMENT DATE : 20130104 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130130 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20121226 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : HU PAYMENT DATE : 20130104 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20121226 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130130 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20121220 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20121219 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130501	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20130226
EP1941798 A2	20130531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20121220 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20121220 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130627	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602005034365 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20130226
EP1941798 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20121231

				INFORM. FROM NAT. OFFICE TO EPO	
EP1941798 A2	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CY PAYMENT DATE : 20121210 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CY PAYMENT DATE : 20121210 YEAR OF FEE PAYMENT : 08
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20131211 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BG PAYMENT DATE : 20131212 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SK PAYMENT DATE : 20131216 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20130617 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20131219 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20131219 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20131220 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CZ PAYMENT DATE : 20131210 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20131230 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20131219 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20131219 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20131226 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20131219 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : TR PAYMENT DATE : 20131126 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : RO PAYMENT DATE : 20131125 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20131212 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SI PAYMENT DATE : 20131205 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : HU PAYMENT DATE : 20131220 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20131213 YEAR OF FEE PAYMENT : 09

EP1941798 A2	20140331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20131219 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140530	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20121216
EP1941798 A2	20140530	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20131220 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20140530	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CY PAYMENT DATE : 20131209 YEAR OF FEE PAYMENT : 09
EP1941798 A2	20141231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20141124 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20141205 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : RO PAYMENT DATE : 20141119 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20141215 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CZ PAYMENT DATE : 20141211 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20141124 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SK PAYMENT DATE : 20141127 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20141126 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20141125 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20141127 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : TR PAYMENT DATE : 20141124 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BG PAYMENT DATE : 20141113 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150227	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20141124 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150227	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20141209 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150227	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : HU PAYMENT DATE : 20141125 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150227	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20141125 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150227	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20141124 YEAR OF FEE PAYMENT : 10

EP1941798 A2	20150227	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SI PAYMENT DATE : 20141125 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20141218 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20141222 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20141205 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20150529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CY PAYMENT DATE : 20141118 YEAR OF FEE PAYMENT : 10
EP1941798 A2	20151124	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20151124 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20151124 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20151125 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20151125 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BG PAYMENT DATE : 20151113 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20151125 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20151209 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CY PAYMENT DATE : 20151118 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20151124 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CZ PAYMENT DATE : 20151126 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20151211 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SI PAYMENT DATE : 20151126 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SK PAYMENT DATE : 20151127 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20151207 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : HU PAYMENT DATE : 20151124 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL	REF COUNTRY CODE : FR PAYMENT DATE : 20151124 YEAR OF FEE PAYMENT : 11

				OFFICE	
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20151207 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : RO PAYMENT DATE : 20151119 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20151126 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20151230 YEAR OF FEE PAYMENT : 11
EP1941798 A2	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20151210 YEAR OF FEE PAYMENT : 11
EP1941798 B1	20120523	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1941799 A2	20080709	LSPB	+	published / reissued	
EP1941799 A2	20080709	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080331
EP1941799 A2	20081008	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20080904
EP1941799 A2	20090218	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : DE KERPEL, JAN, OCTAAF
EP1941799 A2	20090218	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : LEYSEN, DIRK
EP1941799 A2	20090520	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
EP1941799 A2	20121031	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20120413
EP1969939 A2	20080917	LSPB	+	published / reissued	
EP1969939 A2	20080917	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080331
EP1969939 A2	20081224	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20081120
EP1969939 A2	20090218	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : DE KERPEL, JAN, OCTAAF
EP1969939 A2	20090218	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : LEYSEN, DIRK
EP1969939 A2	20090812	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
EP1969939 A2	20110504	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20101111
EP1969940 A2	20080917	LSPB	+	published / reissued	
EP1969940 A2	20080917	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080331
EP1969940 A2	20090218	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : LEYSEN, DIRK
EP1969940 A2	20090218	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : DE KERPEL, JAN, OCTAAF
EP1969940 A2	20090225	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090123
EP1969940 A2	20090819	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
EP1969940 A2	20091202	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20090603
EP2460408 A1	20120606	LSPB	+	published /	

				reissued	
EP2460408 A1	20120606	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20110819
EP2460408 A1	20151209	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20150701
ES2387927 T3	20121004	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2008524152 T2	20080710	LSPB	+	published / reissued	
JP2009137999 A2	20090625	LSPB	+	published / reissued	
JP2009137999 A2	20111004	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20111004
JP2009137999 A2	20120303	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120302
JP2009137999 A2	20120417	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120417
JP2009137999 A2	20120831	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120830
JP2009137999 A2	20121015	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2009137999 A2	20121023	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20121023
JP2009137999 A2	20121025	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP2009137999 A2	20121122	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20121115
JP2009137999 A2	20121122	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP2009137999 A2	20121126	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20151122 YEAR OF FEE PAYMENT : 3
JP4326575 B2	20090909	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4326575 B2	20080729	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080729
JP4326575 B2	20081108	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20081014
JP4326575 B2	20090130	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090129
JP4326575 B2	20090303	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090303
JP4326575 B2	20090502	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090501
JP4326575 B2	20090526	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	

JP4326575 B2	20090602	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20090602
JP4326575 B2	20090604	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4326575 B2	20090618	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20090609
JP4326575 B2	20090619	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120619 YEAR OF FEE PAYMENT : 3
JP4326575 B2	20090619	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4326575 B2	20120423	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120619 YEAR OF FEE PAYMENT : 3
JP4326575 B2	20120619	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130619 YEAR OF FEE PAYMENT : 4
JP4326575 B2	20150602	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP5139342 B2	20130206	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5139342 B2	20111004	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20111004
JP5139342 B2	20120303	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120302
JP5139342 B2	20120417	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120417
JP5139342 B2	20120831	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120830
JP5139342 B2	20121015	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP5139342 B2	20121023	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20121023
JP5139342 B2	20121025	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP5139342 B2	20121122	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20121115
JP5139342 B2	20121122	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
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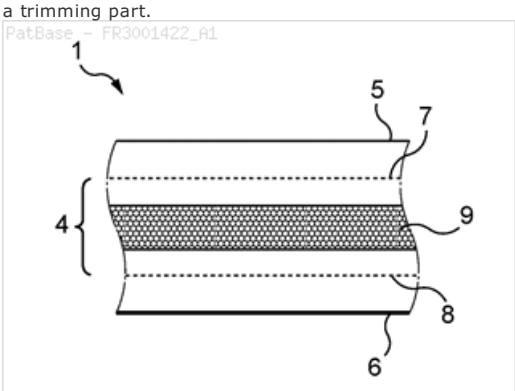
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MA29132 B1	20080102	LSGT	+	granted / extensions (spc, cpc, pte)	
MX2007006534 A1	20070725	LSPB	+	published / reissued	
MX2007006534 A1	20130214	LSGT	+FG	GRANT OR REGISTRATION	
PT1941798 T	20120822	LSGT	+	granted / extensions (spc, cpc, pte)	
SI1941798 T1	20121231	LSGT	+	granted / extensions (spc, cpc, pte)	
TN2007000222 A1	20081121	LSPB	+	published / reissued	
TNSN07222 A1	20081121	LSPB	+	published / reissued	
US2008146445 AA	20080619	LSPB	+	published / reissued	
US2008146445 AA	20070822	LSAS	AS	ASSIGNMENT	OWNER NAME : DEVGEN N.V., BELGIUM DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:DE KERPEL, JAN OCTAAF; LEYSEN, DIRK; REEL/FRAME:019731/0416; SIGNING DATES FROM 20070813 TO 20070814
US2009209605 AA	20090820	LSPB	+	published / reissued	
US2009209605 AA	20120224	LSAS	AS	ASSIGNMENT	OWNER NAME : DEVGEN NV, BELGIUM DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:DE KERPEL, JAN OCTAAF; LEYSEN, DIRK; SIGNING DATES FROM 20070813 TO 20070814; REEL/FRAME:027759/0728
WO06063848 A1	20060622	LSPB	+	published / reissued	
WO06063848 A1	20070213	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007545965 COUNTRY OF REF DOCUMENT : JP
WO06063848 A1	20070511	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12007501012 COUNTRY OF REF DOCUMENT : PH
WO06063848 A1	20070517	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 183305 COUNTRY OF REF DOCUMENT : IL
WO06063848 A1	20070601	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : MX/A/2007/006534 COUNTRY OF REF DOCUMENT : MX
WO06063848 A1	20070615	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 11793261 COUNTRY OF REF DOCUMENT : US
WO06063848 A1	20070619	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO06063848 A1	20070710	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2005820616 COUNTRY OF REF DOCUMENT : EP
WO06063848 A1	20070926	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2005820616 COUNTRY OF REF DOCUMENT : EP
ZA200704271 A	20091125	LSGT	+	granted / extensions (spc, cpc, pte)	

38) Family number: 57132573 (FR3001422B)

Title: PIECE DE GARNITURE POUR VEHICULES, COMPORTANT UN PANNEAU NON TISSE AIGUILLETE POURVU DE FIBRES NATURELLES VEGETALES ET DE FIBRES DE POLYMERE

Abstract: Source: FR3001422A L'invention concerne une piece de garniture pour vehicules, comportant un panneau non tisse aiguillete 9, des fibres de lin et des fibres de polymere bicomposees comportant chacune une ame formee par un premier **acide** polylactique et une enveloppe formee par un second **acide** polylactique, laquelle enveloppe est menagee autour de ladite ame; ledit premier **acide** polylactique presente une premiere temperature de fusion et ledit second **acide** polylactique presente une seconde temperature de fusion inferieure a ladite premiere temperature de fusion; ledit panneau non tisse aiguillete 9 est compose d'environ 15 percent a environ 60 percent, en masse, de fibres de lin et d'environ 40 percent a environ 85 percent, en masse, de fibres de polymere bicomposees; et ledit panneau non tisse aiguillete 9 presente un taux de cristallinite massique desdites fibres de polymere bicomposees compris entre environ 10 percent et environ 40 percent. The trimming part comprises a panel (9) equipped with **natural** vegetable **fibers** and polymer **fibers** comprising **polylactic** **acid**. The panel is a needle punched nonwoven fabric panel. The vegetable **natural** **fibers** are flax **fibers** and bicomponent polymer **fibers**, and comprise a core formed by a first **polylactic** **acid** and an envelope formed by a second **polylactic** **acid**. The envelope is placed around the core. The needle punched nonwoven fabric panel comprises 50 mass percent of flax **fibers** and 50 mass percent of polymer **fibers**. A mass crystallinity rate of the polymer **fibers** is 36 percent. The trimming part comprises a panel (9) equipped with **natural** vegetable **fibers** and polymer **fibers** comprising **polylactic** **acid**. The panel is a needle punched nonwoven fabric panel. The vegetable **natural** **fibers** are flax **fibers** and bicomponent polymer **fibers**, and comprise a core formed by a first **polylactic** **acid** and an envelope formed by a second **polylactic** **acid**. The envelope is placed around the core. The first **polylactic** **acid** has a first melting point of 155-165[deg] C. The second **polylactic** **acid** has a second melting point lower than the first melting point. The needle punched nonwoven fabric panel comprises 50 mass percent of flax **fibers** and 50 mass percent of polymer **fibers**. A mass crystallinity rate of the polymer **fibers** is 36 percent. The second melting point is 130[deg] C. The first **polylactic** **acid** has a first fusion threshold of 158[deg] C and a second fusion threshold of 165[deg] C. The panel has a tensile strength of 2-25 MPa and an elongation of 5-25 percent. The trimming part has an acoustic absorption coefficient of 10-90 percent for a frequency of 200-6000 Hz, and further comprises an aspect layer (6) covering a face of the panel. Independent claims are included for: (1) a needle punched nonwoven fabric panel; and (2) a method for manufacturing a trimming part.

Classifications:
International (IPC 8-9): B60R13/02 D04H1/4266 D04H1/485 (Advanced/Invention)
CPC: D04H1/4266 D04H1/4326 D04H1/4374 D04H1/4382 D04H1/46 D04H1/425 D04H13/00 B32B5/022 B32B5/024 B32B5/26 B32B2262/0276 B32B2262/065 B32B2262/12 B32B2307/54 B32B2605/003



Family:

Publication number	Publication date	Application number	Application date
FR3001422 A1	20140801	FR20130050709	20130128
FR3001422 B1	20160311	FR20130050709	20130128

Priority:
FR20130050709 20130128

Probable Assignee: HOWA TRAMICO
Assignee(s): (std): HOWA TRAMICO ; UNIV ROUEN
Assignee(s): DE ROUEN UNIV
Inventor(s): (std): DARGENT ERIC ; DELBREILH LAURENT ; MOUGNARD LAURENT ; RUPERT LUCIE
Inventor(s): LUCIE RUPERT ; LAURENT DELBREILH ; LAURENT MOUGNARD ; ERIC DARGENT
Agent(s): SANTARELLI

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
FR3001422 A1	20140801	LSPB	+	published / reissued	
FR3001422 A1	20151218	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
FR3001422 A1	20161125	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 5
FR3001422 B1	20160311	LSGT	+	granted / extensions (spc, cpc, pte)	

39) Family number: 55707184 (US2016038645A)

Title: **POLYMERIC** MESH WITH SELECTIVE PERMEABILITY, FOR THE REPAIR AND REGENERATION OF TISSUES

Abstract: Source: US2016038645A The present application describes a **polymeric** mesh for the repair and regeneration of tissues from an organism that comprises pores wherein at least 70 percent of the pores of the said mesh have a size smaller than the one required to confine the cells of the said tissues, and wherein at least 70 percent of the pores of the said mesh has a size superior than the one needed for the passage of interstitial fluids of the said tissues; the degradation time of the said **polymeric** mesh within the organism is at least 8 weeks; the said **polymeric** mesh has an apparent tensile strength superior than 1 MPa; the said **polymeric** mesh has an apparent elastic modulus superior than 0.1 MPa. The mesh described in this application allows that the "new tissue" formed presents very similar properties to the ones of the damaged tissue. Thus, the **polymeric** mesh for the repair and regeneration of tissues described in this application can be used in medicine in combination or not with surgical methods, namely in the treatment of diseases that involve the repair and regeneration of tissues, particularly when the tissue to treat is cartilage, periodontal ligament, esophagus or skin.

Classifications:
International (IPC 8-9): A61L15/20 A61L15/22 A61L15/26 A61L15/28 A61L15/64 A61L27/18 A61L27/20 A61L27/26 A61L27/54 A61L27/56 A61L27/58 (Advanced/Invention)
CPC: A61L27/56 A61L2430/10 A61L27/60 A61L27/20 A61L27/18 A61L27/26 A61L15/20 A61L15/64 A61L15/28 A61L15/26 A61L15/225 A61L2430/12 A61L2300/406 A61L27/58 A61L27/54 A61L2430/06 A61L2430/22
US: 424/133.1 424/443 442/1 442/49 442/50 514/165 514/166 514/20.5 514/420 514/567 514/568 514/570 514/629

Family:

Publication number	Publication date	Application number	Application date
EP2878314 A2	20150603	EP20130783091	20130729
US2016038645 AA	20160211	US20130411433	20130729
WO14016816 A2	20140130	WO2013IB56218	20130729
WO14016816 A3	20140320	WO2013IB56218	20130729

Priority:

PT20120106464 20120727 WO2013IB56218 20130729

Probable Assignee: ASSOCIATION FOR ADVANCEMENT OF TISSUE ENGINEERING AND CELL BASED TECHNOLOGIES AND THERAPIES A4TEC

Assignee(s): (std): ASS FOR ADVANCEMENT OF TISSUE ENGINEERING AND CELL BASED TECHNOLOGIES AND THERAP ; ASS FOR ADVANCEMENT OF TISSUE ENGINEERING AND CELL BASED TECHNOLOGIES AND THERAPIES A4TEC

Assignee(s): ASSOCIATION FOR ADVANCEMENT OF TISSUE ENGINEERING AND CELL BASED TECHNOLOGIES AND THERAPIES A4TEC ; ASSOCIATION FOR ADVANCEMENT OF TISSUE ENGINEERING AND ; ASSOCIATION FOR ADVANCEMENT OF TISSUE ENGINEERING AND CELL BASED TECHNOLOGIES AND THERAP

Inventor(s): (std): GONCALVES DOS REIS RUI LUIS ; GONCALVES DOS REIS RUIS LUIS ; MELEIRO ALVES DAS NEVES NUNO JO O ; MELEIRO ALVES DAS NEVES NUNO JOAO ; PEREIRA MARTINS ALBINO MANUEL ; PEREIRA MATRINS ALBINO MANUEL ; SOUSA DIAS ALVES DA SILVA MARTA LUISA

Agent(s): SILVESTRE DE ALMEIDA FERREIRA LUIS HUMBERTO; VIEIRA PEREIRA FERREIRA MARIA SILVINA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP2878314 A2	20150603	LSPB	+	published / reissued	
EP2878314 A2	20150603	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150226
EP2878314 A2	20170125	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20170103
US2016038645 AA	20160211	LSPB	+	published / reissued	
US2016038645 AA	20141226	LSAS	AS	ASSIGNMENT	OWNER NAME : ASSOCIATION FOR THE ADVANCEMENT OF TISSUE ENGINEER DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PEREIRA MARTINS, ALBINO MANUEL; SOUSA DIAS ALVES DA SILVA, MARTA LUISA; GONCALVES DOS REIS, RUI LUIS; AND OTHERS; SIGNING DATES FROM 20141219 TO 20141222; REEL/FRAME:034586/0796
US2016038645 AA	20150112	LSAS	AS	ASSIGNMENT	OWNER NAME : ASSOCIATION FOR THE ADVANCEMENT OF TISSUE ENGINEER DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE ASSIGNEE NAME PREVIOUSLY RECORDED AT REEL: 034586 FRAME: 0796.ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT; ASSIGNORS:PEREIRA MARTINS, ALBINO MANUEL; SOUSA DIAS ALVES DA SILVA,

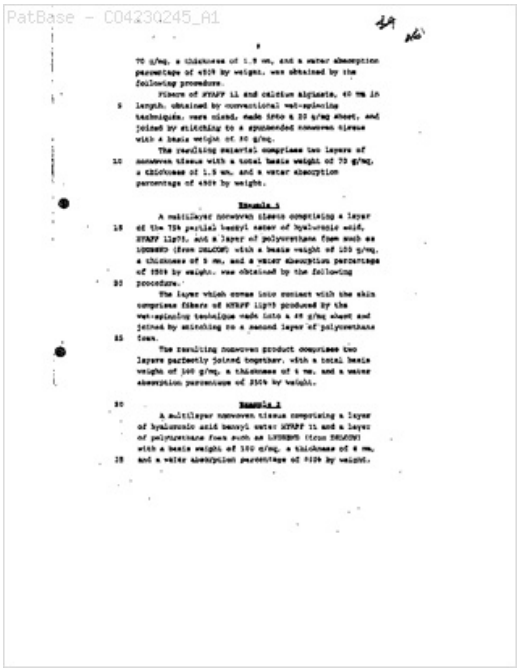
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WO14016816 A2	20140130	LSPB	+	published / reissued	

40) Family number: 43685311 (CO4230245A)

Title: GASA NO TEJIDA DE CAPAS MULTIPLES QUE CONTIENE UNA CAPA SUPERFICIAL QUE COMPRENDE AL MENOS UN ESTER DE ACIDO HIALU- RONICO Non-woven gauze multilayer CONTAINED a surface layer comprising at least one hyaluronic **acid** ester RONICO (Machine translation)

Abstract: Source: CO4230245A 1. UN MATERIAL NO TEJIDO DE CAPAS MULTIPLES, COM- PRENDIENDO UNA CAPA DE SUPERFICIE LA CUAL ENTRA EN CONTACTO CON LA PIEL, Y UNO O MAS CAPAS LAS CUALES ENTRAN EN CONTACTO CON LA PIEL EN DONDE DICHA CAPA DE SUPERFICIE LA CUAL ENTRA EN CONTACTO CON LA PIEL ES UN MIEMBRO SELECCIONADO DEL GRUPO QUE CON- SISTE DE UNA CAPA DE SUPERFICIE COMPRENDIENDO AL MENOS UN DERIVADO DE ACIDO HIALURONICO, UNA CAPA DE SUPERFICIE COMPRENDIENDO UNA MEZCLA DE AL MENOS UNO DE DICHOS DERIVADOS DE ACIDO HIALURONICO AL MENOS UN POLIMERO **NATURAL**, POLIMERO SEMI-SINTETICO O POLIMERO SINTETICO, Y UNA CAPA DE SUPERFICIE COMPRENDIENDO UNA MEMBRANA PERFORADA BIO-COMPATI- BLE **NATURAL**, SINTETICA O SEMI-SINTETICA COMPATIBLE CON EL CRECIMIENTO CELULAR SOBRE SU SUPERFICIE. 1. A nonwoven multilayer, comprising a surface layer WHICH COMES IN CONTACT WITH SKIN, AND ONE OR MORE LAYERS WHICH COME INTO CONTACT WITH SKIN wherein said surface layer WHICH COMES IN CONTACT SKIN is a member selected from the group consisting of a surface layer comprising at least one hyaluronic **acid** derivative, a surface layer comprising a mixture of at least one of said hyaluronic **acid** derivatives at least one **natural** polymer, POLYMER SEMI-synthetic or synthetic polymer, and a surface layer comprising a perforated membrane compatible BIO-**NATURAL**, SYNTHETIC OR SEMI-SYNTHETIC COMPATIBLE with cell growth on its surface.

Classifications:
International (IPC 8-9): A61L15/00 (Advanced/Invention); A61L15/00 (Core/Invention)
International (IPC 1-7): A61L15/00



Family:

Publication number	Publication date	Application number	Application date
CO4230245 A1	19951019	CO19940033319	19940729

Priority:
EP19940000397 19940211

Probable Assignee: FIDIA ADVANCED BIOPOLYMERS SRL
Assignee(s): (std): FIDIA ADVANCED BIOPOLYMERS SRL
Assignee(s): FIDIA ADVANCED BIOPOLYMERS SRL FAB ; FIDIA ADVANCED BIOPOLYMERS S R L F A B
Inventor(s): (std): DORIGATTI FRANCO ; GALLEGARO LANFRANCO
Inventor(s): LANFRANCO GALLEGARO ; FRANCO DORIGATTI
Agent(s): ERNESTO CAVELIER

Legal status (INPADOC)

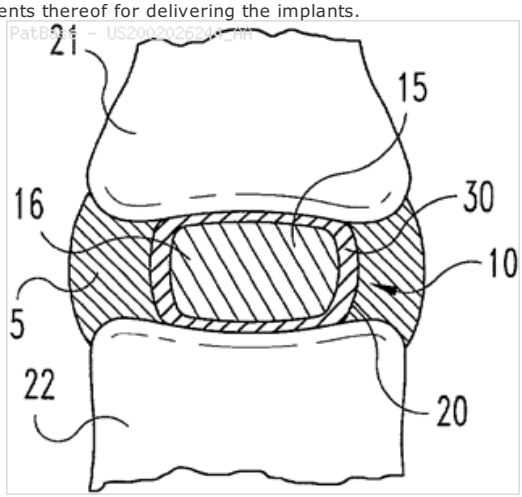
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Patent	Date recorded	Event group	Code	Event	Details
CO4230245 A1	19951019	LSPB	+	published / reissued	

41) Family number: 29636925 (US2002026244A)

Title: INTERVERTEBRAL DISC NUCLEUS IMPLANTS AND METHODS

Abstract: Source: US2002026244A Nucleus pulposus implants that are resistant to migration in and/or expulsion from an intervertebral disc space are provided. In one form of the invention, an implant includes a load bearing elastic body surrounded in the disc space by an anchoring, preferably resorbable, outer shell. In certain forms of the invention, the elastic body is surrounded by a supporting member, such as a band or jacket, and the supporting member is surrounded by the outer shell. Kits for forming such implants are also provided. In another form of the invention, an implant is provided that has locking features and optional shape memory characteristics. In yet another aspect of the invention, nucleus pulposus implants are provided that have shape memory characteristics and are configured to allow short-term manual, or other deformation without permanent deformation, cracks, tears, breakage or other damage. Methods of forming and implanting the implants are also described, as are delivery devices and components thereof for delivering the implants.



Classifications:
International (IPC 8-9): A61B17/56 A61B17/58 A61B17/60 A61B17/88 A61F2/00 A61F2/44 A61F2/46 A61L27/00 A61L27/14 A61L27/16 A61L27/22 A61L27/52 A61L27/54 (Advanced/Invention); A61B17/02 A61F2/00 A61F2/02 A61F2/28 A61F2/30 (Advanced/Non-invention);
A61B17/56 A61F2/44 A61F2/46 A61L27/00 (Core/Invention); A61B17/02 A61F2/00 A61F2/02 A61F2/28 A61F2/30 (Core/Non-invention)
International (IPC 1-7): A61B17/56 A61B17/58 A61F2/00 A61F2/44 A61F2/46 A61F9/00 A61L27/00 A61L27/14 A61M29/00
CPC: A61F2/441 A61B2017/0256 A61F2/30965 A61F2/442 A61F2/4611 A61F2002/2817 A61F2002/30062 A61F2002/30092 A61F2002/30133 A61F2002/30179 A61F2002/302 A61F2002/30224 A61F2002/30291 A61F2002/30563 A61F2002/30596 A61F2002/30604 A61F2002/30677 A61F2002/30838 A61F2002/30891 A61F2002/30906 A61F2002/30909 A61F2002/30925 A61F2002/30957 A61F2002/4415 A61F2002/444 A61F2002/4495 A61F2002/4627 A61F2210/0004 A61F2210/0014 A61F2230/0015 A61F2230/0058 A61F2230/0065 A61F2230/0069 A61F2230/0091 A61F2/30767 A61F2002/30056 A61F2002/3008 A61F2002/30719 A61F2002/30827 A61F2002/4622 A61F2002/4628 A61F2250/0032 A61F2250/0092 A61F2250/0098 A61F2310/00017 A61F2310/00023
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Family:

Publication number	Publication date	Application number	Application date
AT310475 E	20051215	AT20010964506T	20010830
AT390899 E	20080415	AT20010010361T	20010830
AU2001285351 AA	20020313	AU20010285351	20010830
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AU200185351 A5	20020313	AU20010085351	20010830
AU2002322717 AA	20030318	AU20020322717	20020725
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WO0217824 A2	20020307	WO2001US26989	20010830
WO0217824 A3	20030306	WO2001US26989	20010830
WO0217824 B1	20030703	WO2001US26989	20010830
WO03020169 A2	20030313	WO2002US23919	20020725
WO03020169 A3	20040304	WO2002US23919	20020725
WO05051246 A2	20050609	WO2004US38750	20041118
WO05051246 A3	20051103	WO2004US38750	20041118

Priority:

AU20010285351	20010830	CA20012419978	20010830	CA20012549320	20010830
US20010943411	20010830	EP20010964506	20010830	US20000650525	20000830
CA20012549329	20010830	CA20012549361	20010830	CA20012549687	20010830
US20070694056	20070330	US20050178945	20050711	US20050050524	20050203
US20050030337	20050106	US20050050548	20050203	US20030459630	20030611
US20010943441	20010830	US20040948485	20040923	US20040948659	20040923
US20020253453	20020924	US20090426082	20090417	US20030717687	20031120
WO2002US23919	20020725	WO2001US26989	20010830	US20090608379	20091208
US20100925438	20101021				

Probable Assignee: WARSAW ORTHOPEDIC INC

Assignee(s): (std): JUSTIS JEFF R ; LIM ROY ; LIM ROY K ; SDGI HOLDINGS INC ; TRIEU HAI H ; TRIEU HAL H ; WARSAW ORTHOPEDIC INC

Assignee(s): SEMINIS VEGETABLE SEEDS INC

Inventor(s): (std): JUSTIS JEFF R ; LIM ROY ; LIM ROY K ; TRIE HAI H ; TRIEU H ; TRIEU HAI H ; TRIEU HAL H

Inventor(s): TRIEU HAL ; HAI H TRIE ; HAI H TRIEU ; JUSTIS JEFF ; TRIEU HAI

Agent(s): FB RICE; SMART AND BIGGAR; HUGHES ANDREA MICHELLE; KOBAYASHI YASUSHI; CHIBA AKIO; SAKUMA SHIGERU; MASUI CHUJI; KANDA FUJIHIRO; ONO SHINJIRO; HASHIMOTO MASAO; TAKEUCHI SHIGEO; SHAMOTO ICHIO; TOMITA HIROYUKI; UCHIDA HIROSHI; ITO TAKAMI; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP, BANK ONE TOWER/CENTER; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP BANK ONE TOWER CENTER; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP; MEDTRONIC ATTN NOREEN C JOHNSON IP LEGAL DEPARTMENT; MEDTRONIC,ATTN: NOREEN JOHNSON - IP LEGAL DEPARTMENT; MEDTRONIC ATTN NOREEN JOHNSON IP LEGAL DEPARTMENT; HAYNES AND BOONE LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AT310475 E	20051215	LSGT	+	granted / extensions (spc, cpc, pte)	
AT310475 E	20060515	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT390899 E	20080415	LSGT	+	granted / extensions (spc, cpc, pte)	
AT390899 E	20081015	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU2001285351 AA	20020313	LSPB	+	published / reissued	
AU2001285351 BB	20041202	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2001285351 BB	20050407	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2001285351 BB	20060928	LSAS	PC	ASSIGNMENT REGISTERED	OWNER NAME : WARSAW ORTHOPEDIC, INC. DESCRIPTION : FORMER OWNER WAS: SDGI HOLDINGS, INC.
AU2001285351 BB	20090326	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU200185351 A5	20020313	LSPB	+	published / reissued	
AU2002322717 AA	20030318	LSPB	+	published / reissued	
AU2002322717 AA	20040610	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2)	

				(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
AU2005200342 AA	20050217	LSPB	+	published / reissued	
AU2005200342 AA	20061012	LSAS	PC1	ASSIGNMENT BEFORE GRANT (SECT. 113)	OWNER NAME : WARSAW ORTHOPEDIC, INC. DESCRIPTION : FORMER APPLICANT(S): SDGI HOLDINGS, INC.
AU2005200342 AA	20080508	LSLE	-MK4	APPLICATION LAPSED SECTION 142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
CA2419978 AA	20030218	LSPB	+	published / reissued	
CA2419978 AA	20030218	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2419978 AA	20030909	LSES	+EEER	EXAMINATION REQUEST	
CA2419978 AA	20090831	LSLE	-MKLA	LAPSED	
CA2419978 C	20071016	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2549320 AA	20020307	LSPB	+	published / reissued	
CA2549320 AA	20060817	LSES	+EEER	EXAMINATION REQUEST	
CA2549320 AA	20080902	LSLE	-FZDE	DEAD	
CA2549329 AA	20020307	LSPB	+	published / reissued	
CA2549329 AA	20060817	LSES	+EEER	EXAMINATION REQUEST	
CA2549329 AA	20090831	LSLE	-FZDE	DEAD	
CA2549361 AA	20020307	LSPB	+	published / reissued	
CA2549361 AA	20060817	LSES	+EEER	EXAMINATION REQUEST	
CA2549361 AA	20080902	LSLE	-FZDE	DEAD	
CA2549687 AA	20020307	LSPB	+	published / reissued	
CA2549687 AA	20071227	LSLE	-FZDE	DEAD	
DE60115254 D1	20061214	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60115254 D1	20070208	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	OWNER NAME : WARSAW ORTHOPEDIC, INC., WARSAW, IND., US
DE60115254 D1	20090702	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE60115254 T2	20060810	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60133494 D1	20090423	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60133494 T2	20090430	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1313412 A2	20030528	LSPB	+	published / reissued	
EP1313412 A2	20030528	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20030327
EP1313412 A2	20050202	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20041216
EP1313412 A2	20050615	LSRE	RTI1	TITLE (CORRECTION)	TEXT : INTERVERTEBRAL DISC NUCLEUS IMPLANTS
EP1313412 A2	20051123	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20051123
EP1313412 A2	20051123	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE

					PRESCRIBED TIME-LIMIT LAPSED DATE : 20051123
EP1313412 A2	20051123	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20051123
EP1313412 A2	20051123	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20051123
EP1313412 A2	20051123	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1313412 A2	20051130	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1313412 A2	20051229	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1313412 A2	20060223	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20060223
EP1313412 A2	20060223	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20060223
EP1313412 A2	20060223	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20060223
EP1313412 A2	20060424	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20060424
EP1313412 A2	20060501	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT	REF COUNTRY CODE : EP
EP1313412 A2	20060516	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2252281 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) :
EP1313412 A2	20060830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20060830

EP1313412 A2	20060831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20060831
EP1313412 A2	20061102	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20060824
EP1313412 A2	20061130	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : CH OWNER : WARSAW ORTHOPEDIC, INC. REF LEGAL EVENT CODE : PUE OLDPARTY : SDGI HOLDINGS, INC.#SUITE 300, 300 DELAWARE AVENUE#WILMINGTON, DE 19801 (US) -TRANSFER TO- WARSAW ORTHOPEDIC, INC.#2500 SILVEUS CROSSING#WARSAW, IN 46581 (US)
EP1313412 A2	20070530	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1313412 A2	20070807	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20070807 YEAR OF FEE PAYMENT : 7
EP1313412 A2	20070831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20070831 YEAR OF FEE PAYMENT : 7
EP1313412 A2	20071124	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20070709 YEAR OF FEE PAYMENT : 7
EP1313412 A2	20080102	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20070705 YEAR OF FEE PAYMENT : 7
EP1313412 A2	20080131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20070814 YEAR OF FEE PAYMENT : 7
EP1313412 A2	20080430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20070803 YEAR OF FEE PAYMENT : 7
EP1313412 A2	20080625	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : CH OWNER : WARSAW ORTHOPEDIC, INC. REF LEGAL EVENT CODE : PFA OLDPARTY : WARSAW ORTHOPEDIC, INC.#2500 SILVEUS CROSSING#WARSAW, IN 46581 (US) -TRANSFER TO- WARSAW ORTHOPEDIC, INC.#2500 SILVEUS CROSSING#WARSAW, IN 46581 (US)
EP1313412 A2	20080731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20060830
EP1313412 A2	20080731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : TR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20051123
EP1313412 A2	20081128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA	COUNTRY OF REF DOCUMENT : CY NOTIFICATIONOFLAPSE :

				POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20051123
EP1313412 A2	20090331	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1313412 A2	20090429	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20080830
EP1313412 A2	20090605	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20090430
EP1313412 A2	20090630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20080831
EP1313412 A2	20090630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20080831
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EP1313412 A2	20090831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20080901
EP1313412 A2	20090831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20080830
EP1313412 A2	20091027	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20080901
EP1313412 A2	20091130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GB NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20080830
EP1313412 A2	20100129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20080901
EP1313412 B1	20051123	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1563808 A1	20050817	LSPB	+	published / reissued	
EP1563808 A1	20060412	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20060215
EP1563808 A1	20060510	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
EP1563808 A1	20061011	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : WARSAW ORTHOPEDIC, INC.
EP1563808 A1	20080402	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1563808 A1	20080430	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP

EP1563808 A1	20080430	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1563808 A1	20080901	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2303972 KIND CODE OF REF DOCUMENT : T3
EP1563808 A1	20081001	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT	
EP1563808 A1	20081128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080402
EP1563808 A1	20081128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080903
EP1563808 A1	20081128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080402
EP1563808 A1	20081128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080402
EP1563808 A1	20090130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080402
EP1563808 A1	20090130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080702
EP1563808 A1	20090227	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080402
EP1563808 A1	20090311	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20090106
EP1563808 A1	20090331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20080831
EP1563808 A1	20090331	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1563808 A1	20090630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT

				POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	OF DUE FEES EFFECTIVE DATE : 20080831
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EP1563808 A1	20090930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20080830
EP1563808 A1	20091027	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20080901
EP1563808 A1	20091030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CY DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080402
EP1563808 A1	20091030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090806 YEAR OF FEE PAYMENT : 09
EP1563808 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20090831 YEAR OF FEE PAYMENT : 09
EP1563808 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090708 YEAR OF FEE PAYMENT : 09
EP1563808 A1	20100226	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20080901
EP1563808 A1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20080830
EP1563808 A1	20100831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : TR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080402
EP1563808 A1	20101130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20080703
EP1563808 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100831 YEAR OF FEE PAYMENT : 10
EP1563808 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100819 YEAR OF FEE PAYMENT : 10
EP1563808 A1	20101231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100708 YEAR OF FEE PAYMENT : 10
EP1563808 A1	20111130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110811 YEAR OF FEE PAYMENT : 11

EP1563808 A1	20111130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110722 YEAR OF FEE PAYMENT : 11
EP1563808 A1	20111130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110831 YEAR OF FEE PAYMENT : 11
EP1563808 A1	20130424	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20120830
EP1563808 A1	20130517	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20130430
EP1563808 A1	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120830
EP1563808 A1	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130301
EP1563808 A1	20130830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120831
EP1563808 A1	20130926	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 60133494 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20130301
EP1563808 B1	20080402	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2252281 T3	20060516	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2303972 T3	20080901	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2004507318 T2	20040311	LSPB	+	published / reissued	
JP2004507318 T2	20061012	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A712 EFFECTIVE DATE : 20061011
US2002026244 AA	20020228	LSPB	+	published / reissued	
US2002026244 AA	20010830	LSAS	AS	ASSIGNMENT	OWNER NAME : SDGI HOLDINGS, INC., DELAWARE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:TRIEU, HAI H.; REEL/FRAME:012137/0192 EFFECTIVE DATE : 20010829
US2002026244 AA	20061201	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; REEL/FRAME:018573/0086 EFFECTIVE DATE : 20061201
US2002026244 AA	20061201	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC.,INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; REEL/FRAME:018573/0086 EFFECTIVE DATE : 20061201
US2002026244 AA	20061201	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC.,INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; REEL/FRAME:18573/86 EFFECTIVE DATE : 20061201
US2002026244 AA	20061201	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC.,INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS,

					INC.; US-ASSIGNMENT DATABASE UPDATED:20100309; REEL/FRAME:18573/86 EFFECTIVE DATE : 20061201
US2002026244 AA	20061201	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC.,INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; US-ASSIGNMENT DATABASE UPDATED:20100316; REEL/FRAME:18573/86 EFFECTIVE DATE : 20061201
US2002026244 AA	20061201	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC.,INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; US-ASSIGNMENT DATABASE UPDATED:20100413; REEL/FRAME:18573/86 EFFECTIVE DATE : 20061201
US2002026244 AA	20061201	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC.,INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; US-ASSIGNMENT DATABASE UPDATED:20100420; REEL/FRAME:18573/86 EFFECTIVE DATE : 20061201
US2002026244 AA	20141007	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC, INDIANA DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT T0 REMOVE APPLICATION NUMBER PREVIOUSLY RECORDED AT REEL: 018573 FRAME: 0086. ASSIGNOR(S) HEREBY CONFIRMS THE MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; REEL/FRAME:033904/0891 EFFECTIVE DATE : 20061201
US2003023311 AA	20030130	LSPB	+	published / reissued	
US2003199984 AA	20031023	LSPB	+	published / reissued	
US2004117019 AA	20040617	LSPB	+	published / reissued	
US2005131540 AA	20050616	LSPB	+	published / reissued	
US2005131541 AA	20050616	LSPB	+	published / reissued	
US2005131541 AA	20050812	LSAS	AS	ASSIGNMENT	OWNER NAME : SEMINIS VEGETABLE SEEDS, INC., CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOOGSTRATEN, JACOBUS GERARDUS JOANNES; BRAUN III, CARL; REEL/FRAME:016881/0072; SIGNING DATES FROM 20050718 TO 20050803
US2005154463 AA	20050714	LSPB	+	published / reissued	
US2005154463 AA	20050106	LSAS	AS	ASSIGNMENT	OWNER NAME : SDGI HOLDINGS, INC., DELAWARE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:TRIEU, HAI H.; REEL/FRAME:016159/0211 EFFECTIVE DATE : 20041230
US2005278029 AA	20051215	LSPB	+	published / reissued	
US2006064171 AA	20060323	LSPB	+	published / reissued	
US2006064172 AA	20060323	LSPB	+	published / reissued	
US2007198025 AA	20070823	LSPB	+	published / reissued	
US2007198025 AA	20070330	LSAS	AS	ASSIGNMENT	OWNER NAME : SDGI HOLDINGS, INC., DELAWARE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TRIEU, HAI H.; JUSTIS, JEFF R.; LIM, ROY; REEL/FRAME:019092/0896; SIGNING DATES FROM 20031117 TO 20031119

US2009204220 AA	20090813	LSPB	+	published / reissued	
US2010114107 AA	20100506	LSPB	+	published / reissued	
US2011040342 AA	20110217	LSPB	+	published / reissued	
US6620196 BA	20030916	LSGT	+	granted / extensions (spc, cpc, pte)	
US6620196 BA	20000830	LSAS	AS	ASSIGNMENT	OWNER NAME : SDGI HOLDINGS, INC., DELAWARE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:TRIEU, HAI H.; REEL/FRAME:011081/0768 EFFECTIVE DATE : 20000828
US6620196 BA	20070104	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SDGI HOLDINGS, INC.; REEL/FRAME:018720/0500 EFFECTIVE DATE : 20060428
US6620196 BA	20070220	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6620196 BA	20110218	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6620196 BA	20150916	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6620196 BA	20151103	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20150916
US6893466 BB	20050517	LSGT	+	granted / extensions (spc, cpc, pte)	
US6893466 BB	20080918	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6893466 BB	20121002	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6893466 BB	20161117	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US7204851 BB	20070417	LSGT	+	granted / extensions (spc, cpc, pte)	
US7204851 BB	20031120	LSAS	AS	ASSIGNMENT	OWNER NAME : SDGI HOLDINGS, INC., DELAWARE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TRIEU, HAI H.; JUSTIS, JEFF R.; LIM, ROY; REEL/FRAME:014741/0930; SIGNING DATES FROM 20031119 TO 20031120
US7204851 BB	20080211	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; REEL/FRAME:020487/0391 EFFECTIVE DATE : 20060428
US7204851 BB	20080211	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC.,INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; REEL/FRAME:020487/0391 EFFECTIVE DATE : 20060428
US7204851 BB	20080211	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC.,INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; US-ASSIGNMENT DATABASE UPDATED:20100323; REEL/FRAME:20487/391 EFFECTIVE DATE : 20060428
US7204851 BB	20100922	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7204851 BB	20141017	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7503936 BB	20090317	LSGT	+	granted / extensions (spc, cpc, pte)	
US7503936 BB	20130317	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7503936 BB	20130507	LSLE	-FP	EXPIRED DUE TO	EFFECTIVE DATE : 20130317

				FAILURE TO PAY MAINTENANCE FEE	
US7520900 BB	20090421	LSGT	+	granted / extensions (spc, cpc, pte)	
US7520900 BB	20121022	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7520900 BB	20161021	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7618461 BB	20091117	LSGT	+	granted / extensions (spc, cpc, pte)	
US7618461 BB	20101026	LSRE	CC	CERTIFICATE OF CORRECTION	
US7618461 BB	20130314	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7857818 BB	20101228	LSGT	+	granted / extensions (spc, cpc, pte)	
US7857818 BB	20070330	LSAS	AS	ASSIGNMENT	OWNER NAME : SDGI HOLDINGS, INC., DELAWARE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TRIEU, HAI H.; JUSTIS, JEFF R.; LIM, ROY; REEL/FRAME:019092/0896; SIGNING DATES FROM 20031117 TO 20031119
US7857818 BB	20070330	LSAS	AS	ASSIGNMENT	OWNER NAME : SDGI HOLDINGS, INC., DELAWARE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TRIEU, HAI H.; JUSTIS, JEFF R.; LIM, ROY; SIGNING DATES FROM 20031117 TO 20031119; REEL/FRAME:019092/0896
US7857818 BB	20101013	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA DESCRIPTION : MERGER; ASSIGNOR:SDGI HOLDINGS, INC.; REEL/FRAME:025131/0017 EFFECTIVE DATE : 20060828
US7857818 BB	20140630	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7938860 BB	20110510	LSGT	+	granted / extensions (spc, cpc, pte)	
US7938860 BB	20120103	LSRE	CC	CERTIFICATE OF CORRECTION	
US7938860 BB	20150510	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7938860 BB	20150630	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20150510
WO0217824 A2	20020307	LSPB	+	published / reissued	
WO0217824 A3	20030217	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2001285351 COUNTRY OF REF DOCUMENT : AU
WO0217824 A3	20030218	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2419978 COUNTRY OF REF DOCUMENT : CA
WO0217824 A3	20030227	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002522802 COUNTRY OF REF DOCUMENT : JP
WO0217824 A3	20030327	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2001964506 COUNTRY OF REF DOCUMENT : EP
WO0217824 A3	20030528	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001964506 COUNTRY OF REF DOCUMENT : EP
WO0217824 A3	20030703	LSRE	+B	LATER PUBLICATION OF AMENDED CLAIMS	DESCRIPTION : 20021029
WO0217824 A3	20030710	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE :

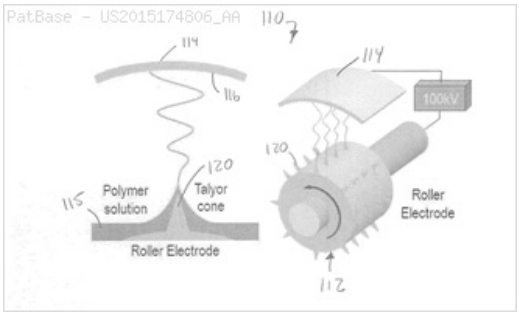
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WO0217824 A3	20050317	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001285351 COUNTRY OF REF DOCUMENT : AU
WO0217824 A3	20051123	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001964506 COUNTRY OF REF DOCUMENT : EP
WO03020169 A2	20030313	LSPB	+	published / reissued	
WO03020169 A3	20060515	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO03020169 A3	20060515	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : JP
WO05051246 A2	20050609	LSPB	+	published / reissued	
WO05051246 A3	20060523	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO05051246 A3	20060523	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE

42) Family number: 55762238 (US2015174806A)

Title: FABRICATION OF NANOFIBERS AS DRY ADHESIVES AND APPLICATIONS OF THE SAME

Abstract: Source: US2015174806A A method of forming a dry adhesive by includes forming an electrospun non-woven of a spinnable polymer, wherein the polymer **fiber** forming the non-woven is aligned. A dry adhesive is provided that comprises aligned **polymeric** nanofibers. The **polymeric** nanofibers may be formed from a mixture of highly spinnable material is combined with an adhesive component to further enhance the adhesion onto substrates. The non-woven can further be processed by plastic deformation to create microprotrusions.

Classifications:
International (IPC 8-9): B28B7/22 B29C47/00 B32B37/00 C09J7/00 D01D5/00 D01F1/10 D01F6/44 D01F6/88 D04H1/00 D04H1/70 D04H1/728 D04H1/74 (Advanced/Invention);
B29K35/00 B29L7/00 (Advanced/Non-invention)
CPC: B29C47/0004 D10B2331/02 B29K2035/00 B29L2007/00 C09J5/00 C09J2201/626 C09J2400/263 Y10T29/49801 Y10T29/53526 Y10T428/24132 D04H1/74 D01D5/0023 D01D5/003 D01D5/0007 D01D5/0038 D01F1/10 D01F6/44 D01F6/88 D04H1/728 Y10T442/609 Y10T442/643
US: 264/6 29/419.1 29/819 428/114 442/335 442/366



Family:

Publication number	Publication date	Application number	Application date
AU2013299786 AA	20140213	AU20130299786	20130806
CA2880289 AA	20150127	CA20132880289	20130806
CN104520485 A	20150415	CN201380041231	20130806
EP2880209 A1	20150610	EP20130828438	20130806
EP2880209 A4	20160406	EP20130828438	20130806
US2015174806 AA	20150625	US20130419358	20130806
US2015252223 AA	20150910	US20150720117	20150522
US9511528 BB	20161206	US20130419358	20130806
WO14025793 A1	20140213	WO2013US53807	20130806

Priority:

US20120679818P 20120806 US20130419358 20130806 WO2013US53807 20130806
US20150720117 20150522 US20150419358 20150203 US20140015570P 20140623

Probable Assignee: UNIV OF AKRON

Assignee(s): (std): CHEN PEI ; NAJEM JOHNNY F ; WONG SHING CHUNG JOSH ; UNIV AKRON ; UNIV OF AKRON

Assignee(s): NATIONAL SCIENCE FOUNDATION ; OF AKRON UNIV

Inventor(s): (std): CHEN PEI ; NAJEM JOHNNY F ; WONG SHING CHUNG JOSH ; NAJEM JOHHNY F

Agent(s): COLLISON AND CO; SIM AND MCBURNEY; TETZNER MICHAEL; RENNER KENNER GREIVE BOBAK TAYLOR AND WEBER; WEBER MARK ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU2013299786 AA	20140213	LSPB	+	published / reissued	
AU2013299786 AA	20161013	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
CA2880289 AA	20150127	LSPB	+	published / reissued	
CN104520485 A	20150415	LSPB	+	published / reissued	
CN104520485 A	20150415	LSPB	+C06	PUBLICATION	
EP2880209 A1	20150610	LSPB	+	published / reissued	
EP2880209 A1	20150610	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150224
EP2880209 A1	20151021	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : NAJEM, JOHNNY F
EP2880209 A1	20160406	LSES	+RA4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160309

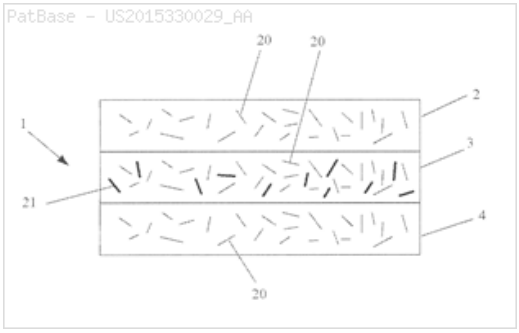
EP2880209 A1	20160406	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D01D 5/00 20060101ALI20160303BHEP
EP2880209 A1	20160406	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 1/00 20060101AFI20160303BHEP
EP2880209 A1	20160406	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B28B 7/22 20060101ALI20160303BHEP
EP2880209 A1	20160413	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : NAJEM, JOHNNY F.
EP2880209 A1	20160413	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : CHEN, PEI
EP2880209 A1	20160413	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : WONG, SHING-CHUNG JOSH
US2015174806 AA	20150625	LSPB	+	published / reissued	
US2015174806 AA	20150203	LSAS	AS	ASSIGNMENT	OWNER NAME : THE UNIVERSITY OF AKRON, OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WONG, SHING-CHUNG JOSH; NAJEM, JOHNNY F; CHEN, PEI; SIGNINGDATES FROM 20150107 TO 20150108; REEL/FRAME:034876/0807
US2015252223 AA	20150910	LSPB	+	published / reissued	
US2015252223 AA	20150602	LSAS	AS	ASSIGNMENT	OWNER NAME : THE UNIVERSITY OF AKRON, OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:WONG, SHING-CHUNG JOSH; REEL/FRAME:035764/0807 EFFECTIVE DATE : 20150602
US2015252223 AA	20160906	LSAS	AS	ASSIGNMENT	OWNER NAME : NATIONAL SCIENCE FOUNDATION, VIRGINIA DESCRIPTION : CONFIRMATORY LICENSE; ASSIGNOR:UNIVERSITY OF AKRON; REEL/FRAME:039917/0936 EFFECTIVE DATE : 20160815
US9511528 BB	20161206	LSGT	+	granted / extensions (spc, cpc, pte)	
WO14025793 A1	20140213	LSPB	+	published / reissued	
WO14025793 A1	20150127	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2880289 COUNTRY OF REF DOCUMENT : CA
WO14025793 A1	20150203	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14419358 COUNTRY OF REF DOCUMENT : US
WO14025793 A1	20150206	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14025793 A1	20150319	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013299786 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20130806 KIND CODE OF REF DOCUMENT : A

43) Family number: 60812536 (US2015330029A)

Title: FLUSHABLE WIPE AND METHOD OF FORMING THE SAME

Abstract: Source: US2015330029A A multi-ply flushable wipe includes a ply having first and second exterior layers and a middle layer disposed therebetween. Each of the exterior layers includes at least 50 percent by weight **natural** **fibers**. When foam-formed, the middle layer includes at least 25 percent by weight **natural** **fibers**. In embodiments, the middle layer may include at least 75 percent by weight **natural** **fibers**. The middle layer also includes synthetic **fibers** that have a length within the range of 1 mm and 20 mm. The wipe may have a length weight weighted average **fiber** length of less than 4 mm and a wet CD strength of greater than 20 N/m. Each ply of the wipe may be formed by wetlaying the first and second exterior layers and a foam formed middle layer to form a web, imprinting the web with a structured fabric, and drying the web. The plies are then attached using a binder.

Classifications:
International (IPC 8-9): A47L13/16 A61K8/02 A61K8/03 A61K8/18 B32B29/00 B32B29/02 B32B3/30 B32B5/24 B32B5/26 D21H17/36 D21H27/00 D21H27/32 D21H27/40 (Advanced/Invention)
CPC: D21H27/40 A47L13/16 B32B5/26 B32B5/245 B32B3/30 B32B29/007 B32B29/02 D21H27/32 D21H27/007 D21H17/36 B32B2262/08 B32B2262/065 B32B2262/067 B32B2262/0276 B32B2262/02 B32B2262/0223 B32B2262/0253 B32B2555/00 B32B2307/718 B32B2307/54 B32B5/02 B32B5/06 B32B5/08 B32B5/22 B32B2260/021 B32B2260/046 B32B2262/06 B32B2262/14 B32B2307/7163 B32B2432/00
US: 15/104.93 15/209.1 162/111 162/124



Family:

Publication number	Publication date	Application number	Application date
CA2949097 AA	20161114	CA20152949097	20150518
US2015330029 AA	20151119	US20150715350	20150518
WO15176063 A1	20151119	WO2015US31411	20150518

Priority:
US20140994563P 20140516 US20150715350 20150518 WO2015US31411 20150518

Probable Assignee: FIRST QUALITY TISSUE LLC

Assignee(s): (std): FIRST QUALITY TISSUE LLC

Assignee(s): MILLER BYRD TYLER IV ; PENCE JUSTIN C ; SEALEY JAMES E ; RAMARATNAM KARTHIK ; ANDRUKH TARAS Z

Inventor(s): (std): ANDRUKH TARAS Z ; MILLER BYRD TYLER IV ; MILLER IV BYRD TYLER ; PENCE JUSTIN C ; PENCE JUSTIN S ; RAMARATNAM KARTHIK ; SEALEY II JAMES E ; SEALEY JAMES E

Agent(s): SMART AND BIGGAR; KENNETH GEORGE P ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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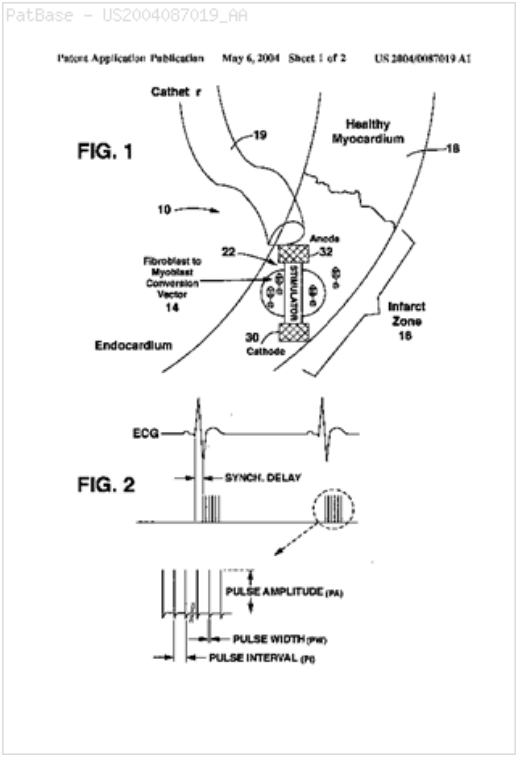
Patent	Date recorded	Event group	Code	Event	Details
CA2949097 AA	20161114	LSPB	+	published / reissued	
US2015330029 AA	20151119	LSPB	+	published / reissued	
US2015330029 AA	20150721	LSAS	AS	ASSIGNMENT	OWNER NAME : FIRST QUALITY TISSUE, LLC, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RAMARATNAM, KARTHIK; MILLER, BYRD TYLER, IV; ANDRUKH, TARAS Z.; AND OTHERS; SIGNING DATES FROM 20150706 TO 20150717; REEL/FRAME:036140/0186
WO15176063 A1	20151119	LSPB	+	published / reissued	
WO15176063 A1	20161114	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2949097 COUNTRY OF REF DOCUMENT : CA
WO15176063 A1	20161116	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

44) Family number: 32846609 (US2004087019A)

Title: METHOD AND SYSTEM FOR MYOCARDIAL INFARCTION REPAIR

Abstract: Source: US2004087019A An implantable system is provided that includes: a cell repopulation source comprising genetic material, undifferentiated and/or differentiated contractile cells, or a combination thereof capable of forming new contractile tissue in and/or near an infarct zone of a patient's myocardium; and an electrical stimulation device for electrically stimulating the new contractile tissue in and/or near the infarct zone of the patient's myocardium or otherwise damaged or diseased myocardial tissue.

Classifications:
International (IPC 8-9): A61K35/34 A61K48/00 A61K9/127 A61L27/00 A61M36/04 A61N1/08 A61N1/30 A61N1/32 A61N1/36 A61N1/362 A61N63/00 A61P9/10 C12N5/02 C12N5/077 (Advanced/Invention);
A61N1/18 A61N1/372 A61N1/375 (Advanced/Non-invention);
A61K35/34 A61K48/00 A61K9/127 A61L27/00 A61M36/00 A61N1/36 A61P9/00 (Core/Invention)
International (IPC 1-7): A01N63/00 A61K35/34 A61K48/00 A61K9/127 A61L27/00 A61M36/00 A61N1/08 A61N1/36 A61P9/10 C12N5/00 C12N5/02 C12N5/10
CPC: A61N1/36042 A61N1/326 A61N1/362 A61N1/37205 A61N1/3756 C12N5/0657 A61N1/327
European: A61N1/32P A61N1/362 A61N1/36T C12N5/06B13H K61N1/32P K61N1/32S K61N1/372A K61N1/375E
US: 424/422 424/422S 424/93.1 424/93.100P 435/395 435/395P 600/16 604/20 604/20P 607/3 607/3S 607/50 607/50P 607/50S



Family:

Publication number	Publication date	Application number	Application date
AT337046 E	20060915	AT20000978392T	20001103
AT454186 E	20100115	AT20000017378T	20001103
AU200115860 A5	20020322	AU20010015860	20001103
AU2001215860 AA	20020322	AU20010215860	20001103
AU2001215860 BB	20060112	AU20010215860	20001103
AU2001215860 CA	20060907	AU20010215860	20001103
AU2002220258 AA	20030902	AU20020220258	20011106
CA2421451 AA	20030228	CA20002421451	20001103
DE60030334 D1	20061005	DE20006030334	20001103
DE60030334 T2	20070830	DE20006030334T	20001103
DE60043678 D1	20100225	DE20006043678	20001103
DK1315537 T3	20061227	DK20000978392T	20001103
EP1315537 A1	20030604	EP20000978392	20001103
EP1315537 B1	20060823	EP20000978392	20001103
EP1451306 A1	20040901	EP20010275149	20011106
EP1728532 A1	20061206	EP20060017378	20001103
EP1728532 B1	20100106	EP20060017378	20001103
ES2270880 T3	20070416	ES20000978392T	20001103
JP2004508110 T2	20040318	JP20020524570T	20001103
JP4860893 B2	20120125	JP20020524570T	20001103
US2004087019 AA	20040506	US20030692878	20031024
US2004253209 AA	20041216	US20040824011	20040414
US2006095089 AA	20060504	US20050300176	20051214
US2007106201 AA	20070510	US20060561386	20061118
US6151525 A	20001121	US19980145743	19980902
US6671558 BA	20031230	US20000706531	20001103
US6775574 BA	20040810	US20000654185	20000901
US7031775 BB	20060418	US20030692878	20031024
US7155288 BB	20061226	US20050300176	20051214
WO0220088 A1	20020314	WO2000US30544	20001103
WO03064637 A1	20030807	WO2001US47229	20011106
WO03064637 C2	20040219	WO2001US47229	20011106

Priority:

AU20000015860	20001103	AU20010215860	20001103	JP20000524570	20001103
CA20002421451	20001103	EP20000978392	20001103	HK20030108867	20031204
US20040824011	20040414	US20050300176	20051214	US20030692878	20031024
US20000706531	20001103	US20000654185	20000901	US19980145743	19980902
US19970064703P	19971107	JP20020524570	20001103	US20060561386	20061118

WO2000US30544 20001103 WO2001US47229 20011106

Probable Assignee: MEDTRONIC INC

Assignee(s): (std): DONOVAN MAURA G ; MEDTRONIC INC ; SOYKAN ORHAN

Assignee(s): ORHAN SOYKAN ; MAURA G DONOVAN

Inventor(s): (std): DONOVAN G ; DONOVAN MAURA ; DONOVAN MAURA G ; SOYKAN ORHAN ; SOYKAN ORHAN N

Inventor(s): ORHAN SOYKAN ; MAURA G DONOVAN

Agent(s): FB RICE; SMART AND BIGGAR; HUGHES ANDREA MICHELLE; MASUI CHUJI; SHAMOTO ICHIO; KOBAYASHI YASUSHI; TOMITA HIROYUKI; CHIBA AKIO; MEDTRONIC INC; KENNETH J

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT337046 E	20060915	LSGT	+	granted / extensions (spc, cpc, pte)	
AT337046 E	20070215	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT454186 E	20100115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT454186 E	20100715	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU200115860 A5	20020322	LSPB	+	published / reissued	
AU2001215860 AA	20020322	LSPB	+	published / reissued	
AU2001215860 BB	20060112	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2001215860 BB	20040701	LSRE	DA3	AMENDMENTS MADE SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS: DELETE THE CO-APPLICANTS/PATENTEES MAURA G DONOVAN AND ORHAN SOYKAN
AU2001215860 BB	20060316	LSRE	DA2	APPLICATIONS FOR AMENDMENT SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS AS SHOWN IN THE STATEMENT(S) FILED 27 FEB 2006.
AU2001215860 BB	20060511	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2001215860 BB	20060907	LSRE	DA3	AMENDMENTS MADE SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS AS SHOWN IN THE STATEMENT(S) FILED 27 FEB 2006
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AU2002220258 AA	20030902	LSPB	+	published / reissued	
CA2421451 AA	20030228	LSPB	+	published / reissued	
CA2421451 AA	20030228	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2421451 AA	20050902	LSES	+EEER	EXAMINATION REQUEST	
CA2421451 AA	20101101	LSLE	-FZDE	DEAD	
CA2421451 AA	20110124	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20101101
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DE60030334 T2	20070830	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60043678 D1	20110127	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DK1315537 T3	20061227	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1315537 A1	20030604	LSPB	+	published / reissued	

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EP1315537 A1	20040602	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MEDTRONIC INC.
EP1315537 A1	20040818	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : SOYKAN, ORHAN
EP1315537 A1	20040818	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : DONOVAN, MAURA G.
EP1315537 A1	20040825	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20040709
EP1315537 A1	20060322	LSRE	RTI1	TITLE (CORRECTION)	DESCRIPTION : SYSTEM FOR MYOCARDIAL INFARCTION REPAIR
EP1315537 A1	20060726	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MEDTRONIC, INC.
EP1315537 A1	20060823	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20060823
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EP1315537 A1	20060915	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP1315537 A1	20070416	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2270880 KIND CODE OF REF DOCUMENT : T3
EP1315537 A1	20070518	LSWD	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : WD REF DOCUMENT NUMBER : 1058159 COUNTRY OF REF DOCUMENT : HK
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EP1315537 A1	20110711	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EBP
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				NON-PAYMENT OF RENEWAL FEE	
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EP1315537 A1	20120131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20111125 YEAR OF FEE PAYMENT : 12
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EP1315537 A1	20140822	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20140731
EP1315537 A1	20140827	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1315537 A1	20140828	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 60030334 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20140603
EP1315537 A1	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20131104
EP1315537 A1	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140603
EP1315537 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM.	REF COUNTRY CODE : IE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES

				FROM NAT. OFFICE TO EPO	EFFECTIVE DATE : 20131103
EP1315537 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20131202
EP1315537 B1	20060823	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1451306 A1	20040901	LSPB	+	published / reissued	
EP1451306 A1	20040901	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20040607
EP1451306 A1	20070117	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20061214
EP1451306 A1	20071219	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20070626
EP1728532 A1	20061206	LSPB	+	published / reissued	
EP1728532 A1	20070711	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20070530
EP1728532 A1	20070815	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
EP1728532 A1	20071128	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20071031
EP1728532 A1	20100106	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1728532 A1	20100115	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1728532 A1	20100217	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1728532 A1	20100506	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : VDEP EFFECTIVE DATE : 20100106
EP1728532 A1	20100630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100106
EP1728532 A1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100417
EP1728532 A1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100106
EP1728532 A1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100506
EP1728532 A1	20100930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100106
EP1728532 A1	20101215	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20101007

EP1728532 A1	20101231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100106
EP1728532 A1	20101231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CY DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100106
EP1728532 A1	20101231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100407
EP1728532 A1	20101231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100106
EP1728532 A1	20110131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100106
EP1728532 A1	20110131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20101028 YEAR OF FEE PAYMENT : 11
EP1728532 A1	20110131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20101109 YEAR OF FEE PAYMENT : 11
EP1728532 A1	20110228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20101130 YEAR OF FEE PAYMENT : 11
EP1728532 A1	20110331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100106
EP1728532 A1	20110630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20101130
EP1728532 A1	20110630	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1728532 A1	20110727	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20101103
EP1728532 A1	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20101130
EP1728532 A1	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20101130
EP1728532 A1	20111130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT

				POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	OF DUE FEES EFFECTIVE DATE : 20101103
EP1728532 A1	20120131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20111123 YEAR OF FEE PAYMENT : 12
EP1728532 A1	20120131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20111128 YEAR OF FEE PAYMENT : 12
EP1728532 A1	20120928	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20101103
EP1728532 A1	20121031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : TR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20100106
EP1728532 A1	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20121126 YEAR OF FEE PAYMENT : 13
EP1728532 A1	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20121128 YEAR OF FEE PAYMENT : 13
EP1728532 A1	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20121206 YEAR OF FEE PAYMENT : 13
EP1728532 A1	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20121126 YEAR OF FEE PAYMENT : 13
EP1728532 A1	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20121128 YEAR OF FEE PAYMENT : 13
EP1728532 A1	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20121206 YEAR OF FEE PAYMENT : 13
EP1728532 A1	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20131118 YEAR OF FEE PAYMENT : 14
EP1728532 A1	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20131127 YEAR OF FEE PAYMENT : 14
EP1728532 A1	20140131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20131125 YEAR OF FEE PAYMENT : 14
EP1728532 A1	20150602	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 60043678 COUNTRY OF REF DOCUMENT : DE
EP1728532 A1	20150826	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1728532 A1	20150828	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20150731
EP1728532 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150602
EP1728532 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20141103

EP1728532 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20141201
EP1728532 B1	20100106	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2270880 T3	20070416	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2004508110 T2	20040318	LSPB	+	published / reissued	
JP2004508110 T2	20100810	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100809
JP2004508110 T2	20101210	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20101209
JP2004508110 T2	20110826	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110825
JP2004508110 T2	20110914	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20110913
JP2004508110 T2	20111018	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2004508110 T2	20111021	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20111020
JP2004508110 T2	20111027	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP2004508110 T2	20111110	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20111104
JP2004508110 T2	20111111	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP2004508110 T2	20111114	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20141111 YEAR OF FEE PAYMENT : 3
JP4860893 B2	20120125	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4860893 B2	20071106	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20071105
JP4860893 B2	20071114	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20071113
JP4860893 B2	20100810	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100809
JP4860893 B2	20101210	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20101209
JP4860893 B2	20110426	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20110425
JP4860893 B2	20110826	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110825
JP4860893 B2	20110914	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20110913
JP4860893 B2	20111018	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4860893 B2	20111021	LSGT	+A01	WRITTEN DECISION	DESCRIPTION : JAPANESE

				TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20111020
JP4860893 B2	20111027	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4860893 B2	20111110	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20111104
JP4860893 B2	20111111	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4860893 B2	20111114	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20141111 YEAR OF FEE PAYMENT : 3
JP4860893 B2	20141111	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
US2004087019 AA	20040506	LSPB	+	published / reissued	
US2004253209 AA	20041216	LSPB	+	published / reissued	
US2004253209 AA	20040809	LSAS	AS	ASSIGNMENT	OWNER NAME : MEDTRONIC, INC., MINNESOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SOYKAN, ORHAN; DONOVAN, MAURA G.; REEL/FRAME:015678/0322 EFFECTIVE DATE : 20040809
US2006095089 AA	20060504	LSPB	+	published / reissued	
US2007106201 AA	20070510	LSPB	+	published / reissued	
US6151525 A	20001121	LSGT	+	granted / extensions (spc, cpc, pte)	
US6151525 A	19981026	LSAS	AS	ASSIGNMENT	OWNER NAME : MEDTRONIC, INC., MINNESOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SOYKAN, ORHAN; DONOVAN, MAURA G.; REEL/FRAME:009541/0055 EFFECTIVE DATE : 19981020
US6151525 A	20040329	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6151525 A	20080417	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6151525 A	20121121	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6151525 A	20130108	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20121121
US6671558 BA	20031230	LSGT	+	granted / extensions (spc, cpc, pte)	
US6671558 BA	20070517	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6671558 BA	20080115	LSRE	CC	CERTIFICATE OF CORRECTION	
US6671558 BA	20110523	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6671558 BA	20151230	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6671558 BA	20160216	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151230
US6775574 BA	20040810	LSGT	+	granted / extensions (spc, cpc, pte)	
US6775574 BA	20080107	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6775574 BA	20120210	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6775574 BA	20160810	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	

US6775574 BA	20160927	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160810
US7031775 BB	20060418	LSGT	+	granted / extensions (spc, cpc, pte)	
US7031775 BB	20090922	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7031775 BB	20140418	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7031775 BB	20140610	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20140418
US7155288 BB	20061226	LSGT	+	granted / extensions (spc, cpc, pte)	
US7155288 BB	20080101	LSRE	CC	CERTIFICATE OF CORRECTION	
US7155288 BB	20100521	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7155288 BB	20141226	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7155288 BB	20150217	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20141226
WO0220088 A1	20020314	LSPB	+	published / reissued	
WO0220088 A1	20030218	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2001215860 COUNTRY OF REF DOCUMENT : AU
WO0220088 A1	20030228	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2421451 COUNTRY OF REF DOCUMENT : CA
WO0220088 A1	20030303	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002524570 COUNTRY OF REF DOCUMENT : JP
WO0220088 A1	20030401	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2000978392 COUNTRY OF REF DOCUMENT : EP
WO0220088 A1	20030604	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2000978392 COUNTRY OF REF DOCUMENT : EP
WO0220088 A1	20030710	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0220088 A1	20060428	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001215860 COUNTRY OF REF DOCUMENT : AU
WO0220088 A1	20060823	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2000978392 COUNTRY OF REF DOCUMENT : EP
WO03064637 A1	20030807	LSPB	+	published / reissued	
WO03064637 C2	20040607	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2001275149 COUNTRY OF REF DOCUMENT : EP
WO03064637 C2	20040901	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001275149 COUNTRY OF REF DOCUMENT : EP
WO03064637 C2	20060117	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO03064637 C2	20060117	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : JP
WO03064637 C2	20070626	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001275149 COUNTRY OF REF DOCUMENT

: EP

45) Family number: 62801213 (WO16102244A1)

Title: **FIBER**-REINFORCEMENT OF FOAM MATERIALS, CONSISTING OF INTERCONNECTED SEGMENTS

Abstract: The present invention relates to a molded body made of a foam material, at least one **fiber** (F) being located partly within the molded body, i.e. being surrounded by the foam material. The two ends of the respective **fiber** (F) which are not surrounded by the foam material thus protrude on one side of the corresponding molded body. The foam material comprises at least two interconnected foam material segments.

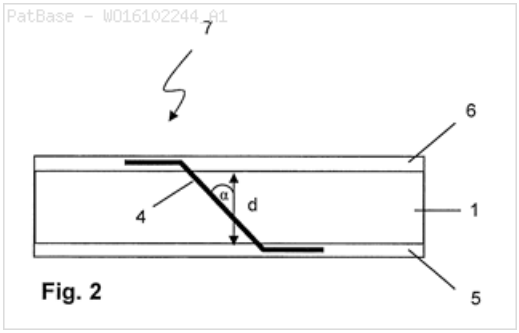


Fig. 2

Classifications:
International (IPC 8-9): B29C44/56 C08J9/33 C08J9/36 (Advanced/Invention); B32B3/18 B32B5/18 B32B5/24 B32B5/32 B32B7/08 C08J9/00 C08J9/12 C08J9/14 (Advanced/Non-invention)
CPC: C08J9/0061 B32B3/18 B32B5/18 B32B5/24 B32B5/32 B32B7/08 C08J9/122 C08J9/127 C08J9/141 C08J9/142 C08J9/149 C08J9/33 C08J9/36 C08J2201/03 C08J2203/06 C08J2203/12 C08J2203/14 C08J2203/202 C08J2207/00 C08J2300/16 C08J2323/06 C08J2323/12 C08J2325/08 C08J2325/10 C08J2325/12 C08J2325/14 C08J2327/06 C08J2333/00 C08J2367/02 C08J2367/04 C08J2371/00 C08J2371/12 C08J2377/00 C08J2379/08 C08J2381/04 C08J2381/06 C08J2400/30 C08J2471/12 B29C44/352 B29C44/50 B29C44/569 B29C47/90 B29K2105/12 B29L2009/00 B29L2031/08 B29C47/0019 B29K2105/04 B29C44/505 B32B5/022 B32B5/024 B32B5/08 B32B5/20 B32B5/245 B32B2260/021 B32B2260/046 B32B2262/0269 B32B2262/065 B32B2262/101 B32B2262/103 B32B2262/105 B32B2262/106 B32B2262/14 B32B2266/0214 B32B2266/0228 B32B2266/025 B32B2266/0264 B32B2266/0292 B32B2266/08 B32B2307/542 B32B2307/546 B32B2307/581 B32B2307/584 B32B2307/706 B32B2307/718 B32B2307/732 B32B2603/00 B32B2605/00 B32B2607/00

Family:

Publication number	Publication date	Application number	Application date
WO16102244 A1	20160630	WO2015EP79805	20151215

Priority:

EP20140199629 20141222

Probable Assignee: BASF SE

Assignee(s): (std): BASF SE

Inventor(s): (std): ARBTER RENE ; DAUN GREGOR ; DIEHLMANN TIM ; GUTMANN PETER ; HARTENSTEIN MARKUS ; KIRGIS ANDREAS ; LONGO SCHEDEL DANIELA ; MARTIN MARC CLAUDE ; MORINO ALESSIO ; RUCKDAESCHEL HOLGER ; SAMPATH BANGARU DHARMAPURI SRIRAMULU ; STEIN ROBERT ; TERRENOIRE ALEXANDRE

Agent(s): ELLWANGER ARNDT

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
WO16102244 A1	20160630	LSPB	+	published / reissued	

46) Family number: 62801217 (WO16102246A1)

Title: **FIBER**-REINFORCED MOLDED BODIES MADE OF EXPANDED PARTICLE FOAM MATERIAL

Abstract: The present invention relates to a molded body made of an expanded particle foam material, at least one **fiber** (F) being located partly within the molded body, i.e. being surrounded by the expanded particle foam material. The two ends of the respective **fiber** (F) which are not surrounded by the expanded particle foam material thus protrude on one side of the corresponding molded body. The invention also relates to a panel which comprises at least one such molded body and at least one additional layer (S1). The invention further relates to methods for the production of the molded bodies from expanded particle foam material or of the panels according to the invention and to the use thereof, for example as rotor blades in wind turbines.

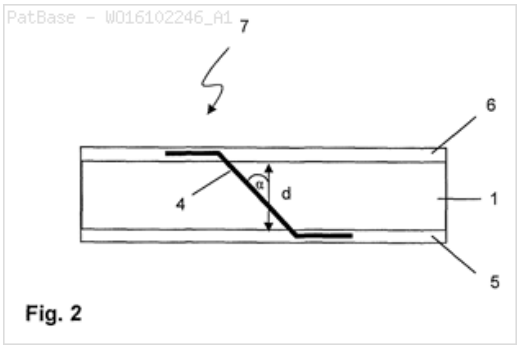


Fig. 2

Classifications:
International (IPC 8-9): B29C44/56 C08J9/36 (Advanced/Invention); B32B5/18 B32B5/24 B32B7/08 C08J9/00 C08J9/12 C08J9/14 C08J9/16 C08J9/232 (Advanced/Non-invention)
CPC: C08J9/0061 B32B5/18 B32B5/24 B32B7/08 C08J9/122 C08J9/127 C08J9/141 C08J9/16 C08J9/232 C08J9/36 C08J2201/03 C08J2201/034 C08J2203/06 C08J2203/14 C08J2203/202 C08J2207/00 C08J2300/16 C08J2323/06 C08J2323/12 C08J2325/06 C08J2325/08 C08J2325/10 C08J2325/12 C08J2325/14 C08J2327/16 C08J2333/00 C08J2367/04 C08J2369/00 C08J2371/12 C08J2377/00 C08J2379/08 C08J2381/06 C08J2471/12 B29C44/3461 B29C44/352 B29C44/569 B29K2105/12 B29L2009/00 B29L2031/08 B29B9/065 B29C47/0042 B29C47/92 B32B5/022 B32B5/024 B32B5/08 B32B5/20 B32B5/245 B32B27/065 B32B2260/021 B32B2260/046 B32B2262/0269 B32B2262/065 B32B2262/101 B32B2262/103 B32B2262/105 B32B2262/106 B32B2262/14 B32B2266/0214 B32B2266/0228 B32B2266/025 B32B2266/0264 B32B2266/0292 B32B2266/08 B32B2307/542 B32B2307/546 B32B2307/581 B32B2307/584 B32B2307/706 B32B2307/718 B32B2307/732 B32B2603/00 B32B2605/00 B32B2607/00

Family:

Publication number	Publication date	Application number	Application date
WO16102246 A1	20160630	WO2015EP79808	20151215

Priority:

EP20140199626 20141222

Probable Assignee: BASF SE

Assignee(s): (std): BASF SE

Inventor(s): (std): ARBTER RENE ; GUTMANN PETER ; HEBETTE CHRISTOPHE LEON MARIE ; RUCKDAESCHEL HOLGER ; SAMPATH BANGARU DHARMAPURI SRIRAMULU ; STEIN ROBERT ; STOLL RAGNAR ; TERRENOIRE ALEXANDRE

Agent(s): ELLWANGER ARNDT

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
WO16102246 A1	20160630	LSPB	+	published / reissued	

47) Family number: 62801216 (WO16102245A1)

Title: **FIBER**-REINFORCEMENT OF BLOWING-AGENT CONTAINING FOAM MATERIALS

Abstract: The present invention relates to a method for producing a molded body from a blowing-agent containing foam material, which comprises at least one **fiber** (F), said at least one **fiber** (F) being partly introduced into the blowing-agent containing foam material. The two ends of the respective **fiber** (F) which are not surrounded by the foam material thus protrude on one side of the corresponding molded body. The invention further relates to a molded body as such. The invention also relates to a panel which comprises at least one such molded body produced according to the method of the invention, and at least one additional layer (S1). The invention further relates to the production of the panels according to the invention and to the use thereof, for example as rotor blades in wind turbines.

Classifications:
International (IPC 8-9): B29C44/56 C08J9/14 C08J9/36 (Advanced/Invention); B32B5/18 B32B5/24 B32B7/08 C08J9/00 (Advanced/Non-invention)
CPC: C08J9/36 B32B5/18 B32B5/24 B32B7/08 C08J9/0061 C08J9/14 C08J2201/03 C08J2207/00 C08J2300/16 C08J2300/22 C08J2300/26 C08J2323/06 C08J2323/12 C08J2325/08 C08J2325/10 C08J2325/12 C08J2325/14 C08J2327/06 C08J2333/00 C08J2367/02 C08J2367/04 C08J2371/00 C08J2371/12 C08J2377/00 C08J2379/08 C08J2381/04 C08J2381/06 B29C44/352 B29C44/569 B29C47/90 B29K2105/12 B29L2009/00 B29L2031/08 B29K2105/04 B29C44/505 B32B5/022 B32B5/024 B32B5/08 B32B5/20 B32B5/245 B32B27/065 B32B2260/021 B32B2260/046 B32B2262/0269 B32B2262/065 B32B2262/101 B32B2262/103 B32B2262/105 B32B2262/106 B32B2262/14 B32B2266/0214 B32B2266/0228 B32B2266/025 B32B2266/0264 B32B2266/0292 B32B2266/08 B32B2307/542 B32B2307/546 B32B2307/581 B32B2307/584 B32B2307/706 B32B2307/718 B32B2307/732 B32B2603/00 B32B2605/00 B32B2607/00

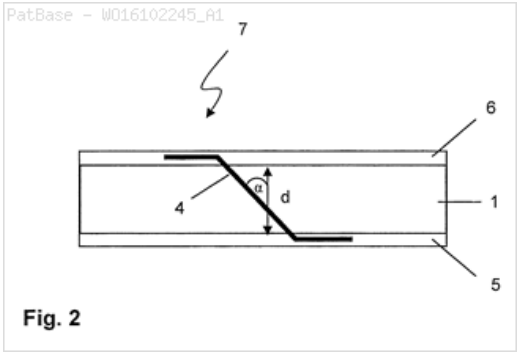


Fig. 2

Family:

Publication number	Publication date	Application number	Application date
WO16102245 A1	20160630	WO2015EP79806	20151215

Priority:
EP20140199631 20141222

Probable Assignee: BASF SE

Assignee(s): (std): BASF SE

Inventor(s): (std): ARBTER RENE ; DAUN GREGOR ; DIEHLMANN TIM ; GUTMANN PETER ; HARTENSTEIN MARKUS ; KICIAK THOMAS ; KIRGIS ANDREAS ; LONGO SCHEDEL DANIELA ; MARTIN MARC CLAUDE ; MERKEL PETER ; MORINO ALESSIO ; RUCKDAESCHEL HOLGER ; SAMPATH BANGARU DHARMAPURI SRIRAMULU ; STEIN ROBERT ; TERRENOIRE ALEXANDRE

Agent(s): ELLWANGER ARNDT

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
WO16102245 A1	20160630	LSPB	+	published / reissued	

48) Family number: 62801212 (WO16102243A1)

Title: **FIBER** REINFORCEMENT FOR ANISOTROPIC FOAMS

Abstract: The invention relates to a molded body made of extruded foam, characterized in that at least one fibre (F) is located with a fibre section (FB2) within the molded body and is enclosed by the extruded foam, while a fibre section (FB1) of the fibre (F) protrudes from a first flank of the molded body and a fibre section (FB3) of the fibre (F) protrudes from a second flank of the molded body and characterized in that the extruded foam is produced using an extrusion method which comprises the following steps: I) providing a polymer melt in an extruder; II) introducing at least one foaming agent into the polymer melt provided in step I), thus obtaining a foamable polymer melt; III) extrusion of the foamable polymer melt obtained in step II) from the extruder through at least one nozzle opening in a region of lower pressure, wherein the foamable polymer melt expands, thus obtaining an expanded foam; and IV) calibrating the expanded foam from step III) in that the expanded foam is passed through a shaping tool, thus obtaining the extruded foam.

Classifications:

International (IPC 8-9): B29C44/56 C08J9/36 (Advanced/Invention); B32B5/18 B32B5/24 B32B7/08 C08J9/00 C08J9/12 C08J9/14 (Advanced/Non-invention)

CPC: C08J9/36 B32B5/18 B32B5/24 B32B7/08 C08J9/0061 C08J9/122 C08J9/127 C08J9/141 C08J9/142 C08J9/149 C08J2201/03 C08J2203/06 C08J2203/12 C08J2203/14 C08J2203/202 C08J2205/052 C08J2207/00 C08J2300/16 C08J2323/06 C08J2323/12 C08J2325/08 C08J2325/10 C08J2325/12 C08J2325/14 C08J2327/06 C08J2333/00 C08J2367/02 C08J2367/04 C08J2369/00 C08J2371/00 C08J2371/12 C08J2377/00 C08J2379/08 C08J2381/04 C08J2381/06 C08J2471/12 B29C44/3446 B29C44/352 B29C44/569 B29C47/90 B29K2105/12 B29L2009/00 B29L2031/08 B29C47/0019 B29K2105/04 B29C44/505 B32B5/022 B32B5/024 B32B5/08 B32B5/20 B32B5/245 B32B27/065 B32B2260/021 B32B2260/046 B32B2262/0269 B32B2262/065 B32B2262/101 B32B2262/103 B32B2262/105 B32B2262/106 B32B2262/14 B32B2266/0214 B32B2266/0228 B32B2266/025 B32B2266/0264 B32B2266/0292 B32B2266/08 B32B2307/542 B32B2307/546 B32B2307/581 B32B2307/584 B32B2307/706 B32B2307/718 B32B2307/732 B32B2603/00 B32B2605/00 B32B2607/00

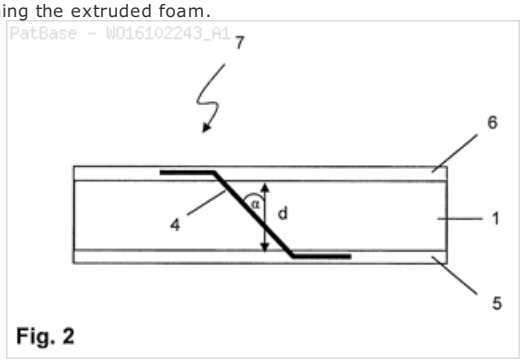


Fig. 2

Family:

Publication number	Publication date	Application number	Application date
WO16102243 A1	20160630	WO2015EP79803	20151215

Priority:

EP20140199628 20141222

Probable Assignee: BASF SE

Assignee(s): (std): BASF SE

Inventor(s): (std): ARBTER RENE ; DAUN GREGOR ; DIEHLMANN TIM ; GUTMANN PETER ; HARTENSTEIN MARKUS ; KICIAK THOMAS ; KIRGIS ANDREAS ; LONGO SCHEDEL DANIELA ; MARTIN MARC CLAUDE ; MERKEL PETER ; MORINO ALESSIO ; RUCKDAESCHEL HOLGER ; SAMPATH BANGARU DHARMAPURI SRIRAMULU ; STEIN ROBERT ; TERRENOIRE ALEXANDRE

Agent(s): ELLWANGER ARNDT

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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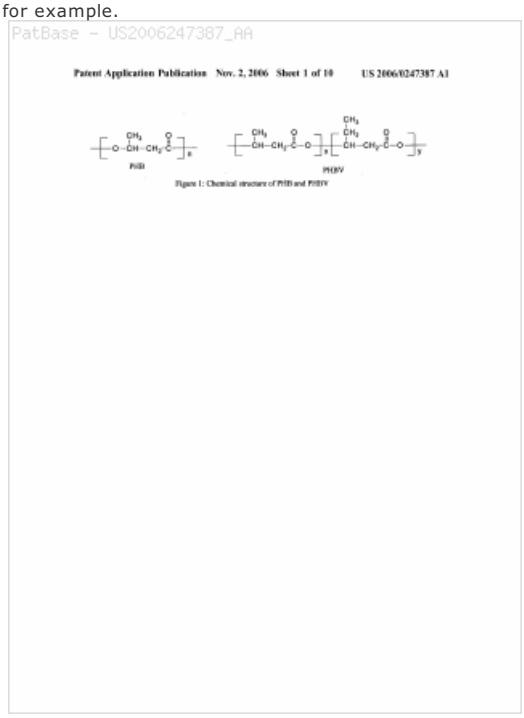
Patent	Date recorded	Event group	Code	Event	Details
WO16102243 A1	20160630	LSPB	+	published / reissued	

49) Family number: 33585718 (US2006247387A)

Title: HYPERBRANCHED POLYMER MODIFIED BIOPOLYMERS, THEIR BIOBASED MATERIALS AND PROCESS FOR THE PREPARATION THEREOF

Abstract: Source: US2006247387A Compositions of biodegradable polymers and hyperbranched dendritic polymer (HBP) are described. The compositions can also include anhydride modified HBP. The resulting compositions have superior elongation at break and can be as cast or blown films for packaging, for example.

Classifications:
International (IPC 8-9): B29B17/00 B29C47/00 C08G63/91 C08L69/00 (Advanced/Invention); C08L69/00 (Core/Invention)
CPC: C08J5/18 C08J2367/04 C08K3/346 C08K5/09 C08L67/04 C08L97/02 C08L101/005 C08L2205/16
European: C08J5/18 C08L101/00B C08L67/04 M08J367/04 M08K3/34B M08K5/09 M08L101/00B M08L205/16 M08L97/02
US: 524/445 524/445S 525/410 525/411 525/413 525/413P 525/415 525/437 525/444 525/450



Family:

Publication number	Publication date	Application number	Application date
US2006247387 AA	20061102	US20060414716	20060428
US7579413 BB	20090825	US20060414716	20060428
WO06119020 A2	20061109	WO2006US16236	20060428
WO06119020 A3	20071025	WO2006US16236	20060428

Priority:
US20050676657P 20050429 US20060414716 20060428 US20060774848P 20060217

Probable Assignee: BOARD OF TRUSTEES OF MICHIGAN STATE UNIV

Assignee(s): (std): MOHANTY AMAR ; RAHUL BHARDWAJ ; UNIV MICHIGAN STATE

Assignee(s): NATIONAL SCIENCE FOUNDATION ; BOARD OF TRUSTEES OF MICHIGAN STATE UNIV ; BOARD OF TRUSTEES OF MICHIGAN STATE UNIVERSITY ; MICHIGAN STATE UNIVERSITY

Inventor(s): (std): BHARDWAJ RAHUL ; MOHANTY AMAR ; MOHANTY AMAR K ; RAHUL BHARDWAJ

Agent(s): IAN C MCLEOD MCLEOD AND MOYNE PC; IAN C

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2006247387 AA	20061102	LSPB	+	published / reissued	
US7579413 BB	20090825	LSGT	+	granted / extensions (spc, cpc, pte)	
US7579413 BB	20060428	LSAS	AS	ASSIGNMENT	OWNER NAME : BOARD OF TRUSTEES OF MICHIGAN STATE UNIVERSITY, MI DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MOHANTY, AMAR K.; BHARDWAJ, RAHUL; REEL/FRAME:017849/0571 EFFECTIVE DATE : 20060428
US7579413 BB	20100104	LSAS	AS	ASSIGNMENT	OWNER NAME : NATIONAL SCIENCE FOUNDATION, VIRGINIA DESCRIPTION : CONFIRMATORY LICENSE; ASSIGNOR:MICHIGAN STATE

					UNIVERSITY; REEL/FRAME:023730/0493 EFFECTIVE DATE : 20091022
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US7579413 BB	20100520	LSAS	AS	ASSIGNMENT	OWNER NAME : NATIONAL SCIENCE FOUNDATION,VIRGINIA DESCRIPTION : CONFIRMATORY LICENSE; ASSIGNOR:MICHIGAN STATE UNIVERSITY; US-ASSIGNMENT DATABASE UPDATED:20100520; REEL/FRAME:24411/216 EFFECTIVE DATE : 20091027
US7579413 BB	20130225	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7579413 BB	20140225	LSRE	CC	CERTIFICATE OF CORRECTION	
US7579413 BB	20140725	LSAS	AS	ASSIGNMENT	OWNER NAME : NATIONAL SCIENCE FOUNDATION, VIRGINIA DESCRIPTION : CONFIRMATORY LICENSE; ASSIGNOR:MICHIGAN STATE UNIVERSITY; REEL/FRAME:033418/0437 EFFECTIVE DATE : 20091027
WO06119020 A2	20061109	LSPB	+	published / reissued	
WO06119020 A3	20071030	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO06119020 A3	20071129	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : RU

50) Family number: 42771188 (US2009004712A)

Title: DRYING APPARATUS AND METHODS FOR ETHANOL PRODUCTION

Abstract: Source: US2009004712A The apparatus and methods disclosed herein relate to the production of dried co-products from stillage produced by an ethanol production facility. In various aspects, the apparatus and methods disclosed herein relate to an ethanol production facility that produces ethanol and stillage from grain, and a pulse combustion dryer in communication with the ethanol production facility to receive stillage therefrom and adapted to dry the stillage into a dried material

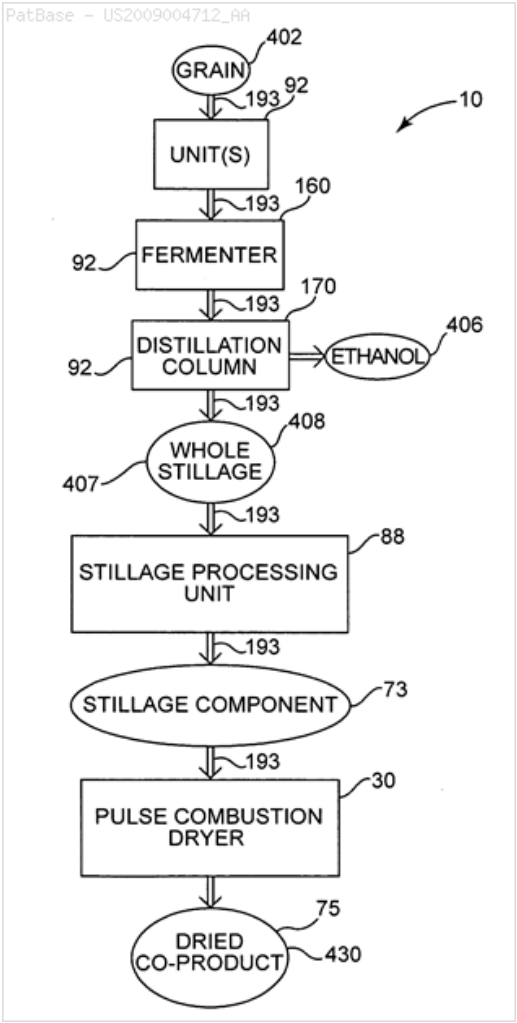
Classifications:

International (IPC 8-9): A23K1/06 A23K10/38 A23L1/10 A23L1/236 A23L27/30 A23L7/10 C08J11/04 C08J9/00 C08J9/12 C08K11/00 C08K13/08 C08K3/16 C08K3/22 C08K3/26 C08K3/34 C08K3/38 C08K5/00 C08K7/02 C08L1/00 C08L1/02 C08L101/16 C08L23/06 C08L23/22 C08L25/04 C08L25/06 C08L3/00 C08L3/02 C08L3/04 C08L67/02 C08L67/04 C08L89/00 C08L97/00 C08L97/02 C09K3/00 C12F3/00 C12F3/10 C12P7/06 D21H13/10 F26B17/00 F26B17/10 F26B19/00 F26B21/00 F26B23/02 F26B3/02 F26B3/10 (Advanced/Invention);
A23K1/06 C08J11/00 C09K3/00 C12P7/02 F26B17/00 F26B21/00 F26B23/00 F26B3/02 (Core/Invention)

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European: C12F3/10 F26B23/02C Y02E50/17

US: 1/1 252/182.11 252/182.110S 252/182.24 252/182.27 252/500 264/126 34/191 34/191P 34/191S 34/282 34/365 34/365S 34/478 34/478S 34/523 34/579 34/579S 426/18 426/20 426/21 426/31 426/548 426/656 426/656P 426/7 428/297.4 428/301.4 428/304.4 428/534 432/14 432/14S 432/58 432/58S 435/161 435/161P 435/18 435/22 435/254.2 435/41 521/143 521/146 521/149 521/40 521/44 521/79 521/81 521/84.1 521/92 523/122 524/13 524/14 524/15 524/17 524/35 524/404 524/424 524/425 524/430 524/431 524/433 524/436 524/438 524/445 524/447 524/449 524/451 524/456 524/47 524/502 524/513 524/52 524/538 524/599 524/605 524/9 525/368



Family:

Publication number	Publication date	Application number	Application date
US2009004712 AA	20090101	US20080215214	20080625
US2009269477 AA	20091029	US20090398984	20090305
US2009281203 AA	20091112	US20090466336	20090514
US2011173835 AA	20110721	US20110079213	20110404
US2012291306 AA	20121122	US20120563208	20120731
US2013253082 AA	20130926	US20130892347	20130513
US2013267631 AA	20131010	US20130892354	20130513
US2013303641 AA	20131114	US20130863758	20130416
US2014080946 AA	20140320	US20130087229	20131122
US2014357745 AA	20141204	US20140460011	20140814
US2015247036 AA	20150903	US20150716198	20150519
US2016032103 AA	20160204	US20150865577	20150925
US2016264763 AA	20160915	US20160161935	20160523
US2016264766 AA	20160915	US20160161854	20160523
US7937850 BB	20110510	US20090398984	20090305
US8256134 BB	20120904	US20080215214	20080625
US8449986 BB	20130528	US20090466336	20090514
US8598256 BB	20131203	US20130892354	20130513
US8697156 BB	20140415	US20110079213	20110404
US8765827 BB	20140701	US20130863758	20130416
US8772379 BB	20140708	US20130892347	20130513
US8809425 BB	20140819	US20130087229	20131122
US9034954 BB	20150519	US20140460011	20140814
US9163142 BB	20151020	US20150716198	20150519
US9346955 BB	20160524	US20150865577	20150925
US9587098 BB	20170307	US20160161854	20160523
US9587099 BB	20170307	US20160161935	20160523

Priority:

US20070937073P 20070625 US20080053196P 20080514 US20080215214 20080625
US20080068191P 20080305 US20090398984 20090305 US20090398894 20090305
US20090466336 20090514 US20110079213 20110404 US20120563208 20120731
US20130892347 20130513 US20130892354 20130513 US20130863758 20130416
US20130087229 20131122 US20140460011 20140814 US20150716198 20150519
US20150865577 20150925 US20160161935 20160523 US20160161854 20160523

Probable Assignee: GS CLEANTECH CORP

Assignee(s): (std): JIREH HOLDINGS LLC J ; MIRKO DAVID A ; REHKOPF JAMES A ; TATE JEFFREY L ; RIEBEL MICHAEL J ; GS CLEANTECH CORP ; PULSE HOLDINGS LLC ; SCOUT MATERIALS LLC

Assignee(s): YA GLOBAL INVESTMENTS LP ; J JIREH HOLDINGS LLC ; REIBEL MICHAEL J ; GENAREX FD LLC

Inventor(s): (std): MIRKO DAVID A ; REHKOPF JAMES A ; RIEBEL MICHAEL J ; TATE JEFFREY L

Agent(s): CYR AND ASSOCIATES PA; BEN; CLISE BILLION AND CYR PA; CANTOR COLBURN LLP; BILLION AND ARMITAGE; BENJAMIN C

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2009004712 AA	20090101	LSPB	+	published / reissued	
US2009004712 AA	20080902	LSAS	AS	ASSIGNMENT	OWNER NAME : J. JIREH HOLDINGS LLC, ARIZONA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:REHKOPF, JAMES A.; MIRKO, DAVID A.; TATE, JEFFREY L.; REEL/FRAME:021481/0093; SIGNING DATES FROM 20080819 TO 20080825
US2009004712 AA	20110912	LSAS	AS	ASSIGNMENT	OWNER NAME : PULSE HOLDINGS LLC, ARIZONA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:J. JIREH HOLDINGS LLC; REEL/FRAME:026890/0682 EFFECTIVE DATE : 20110308
US2009269477 AA	20091029	LSPB	+	published / reissued	
US2009269477 AA	20090909	LSAS	AS	ASSIGNMENT	OWNER NAME : J. JIREH HOLDINGS LLC, ARIZONA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TATE, JEFFREY L.; REHKOPF, JAMES A.; MIRKO, DAVID A.; REEL/FRAME:023204/0957; SIGNING DATES FROM 20090312 TO 20090319
US2009281203 AA	20091112	LSPB	+	published / reissued	
US2011173835 AA	20110721	LSPB	+	published / reissued	
US2012291306 AA	20121122	LSPB	+	published / reissued	
US2013253082 AA	20130926	LSPB	+	published / reissued	
US2013253082 AA	20140312	LSAS	AS	ASSIGNMENT	OWNER NAME : GS CLEANTECH CORPORATION, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RIEBEL, MICHAEL J.; TATE, JEFFREY L.; SIGNING DATES FROM 20140310 TO 20140311; REEL/FRAME:032410/0867
US2013267631 AA	20131010	LSPB	+	published / reissued	
US2013267631 AA	20130731	LSAS	AS	ASSIGNMENT	OWNER NAME : GS CLEANTECH CORPORATION, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RIEBEL, MICHAEL J.; TATE, JEFFREY L.; SIGNING DATES FROM 20130719 TO 20130729; REEL/FRAME:030914/0753
US2013303641 AA	20131114	LSPB	+	published / reissued	
US2013303641 AA	20130730	LSAS	AS	ASSIGNMENT	OWNER NAME : GS CLEANTECH CORPORATION, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RIEBEL, MICHAEL J.; TATE, JEFFREY L.; REEL/FRAME:030905/0447 EFFECTIVE DATE : 20130729

US2014080946 AA	20140320	LSPB	+	published / reissued	
US2014080946 AA	20140701	LSAS	AS	ASSIGNMENT	OWNER NAME : GS CLEANTECH CORPORATION, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RIEBEL, MICHAEL J.; TATE, JEFFREY L.; SIGNING DATES FROM 20140521 TO 20140627; REEL/FRAME:033217/0304
US2014357745 AA	20141204	LSPB	+	published / reissued	
US2014357745 AA	20150414	LSAS	AS	ASSIGNMENT	OWNER NAME : GS CLEANTECH CORPORATION, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RIEBEL, MICHAEL J.; TATE, JEFFREY L.; REEL/FRAME:035402/0951 EFFECTIVE DATE : 20150413
US2015247036 AA	20150903	LSPB	+	published / reissued	
US2015247036 AA	20150916	LSAS	AS	ASSIGNMENT	OWNER NAME : GS CLEANTECH CORPORATION, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RIEBEL, MICHAEL J.; TATE, JEFFREY L.; REEL/FRAME:036577/0850 EFFECTIVE DATE : 20150914
US2016032103 AA	20160204	LSPB	+	published / reissued	
US2016032103 AA	20160209	LSAS	AS	ASSIGNMENT	OWNER NAME : GS CLEANTECH CORPORATION, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RIEBEL, MICHAEL J.; TATE, JEFFREY L.; SIGNING DATES FROM 20160204 TO 20160207; REEL/FRAME:037690/0268
US2016032103 AA	20160518	LSAS	AS	ASSIGNMENT	OWNER NAME : GENAREX FD LLC, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GS CLEANTECH CORPORATION; REEL/FRAME:038629/0286 EFFECTIVE DATE : 20160517
US2016264763 AA	20160915	LSPB	+	published / reissued	
US2016264766 AA	20160915	LSPB	+	published / reissued	
US7937850 BB	20110510	LSGT	+	granted / extensions (spc, cpc, pte)	
US7937850 BB	20090909	LSAS	AS	ASSIGNMENT	OWNER NAME : J. JIREH HOLDINGS LLC, ARIZONA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TATE, JEFFREY L.; REHKOPF, JAMES A.; MIRKO, DAVID A.; REEL/FRAME:023204/0957; SIGNING DATES FROM 20090312 TO 20090319
US7937850 BB	20090909	LSAS	AS	ASSIGNMENT	OWNER NAME : J. JIREH HOLDINGS LLC, ARIZONA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TATE, JEFFREY L.; REHKOPF, JAMES A.; MIRKO, DAVID A.; SIGNING DATES FROM 20090312 TO 20090319; REEL/FRAME:023204/0957
US7937850 BB	20110912	LSAS	AS	ASSIGNMENT	OWNER NAME : PULSE HOLDINGS LLC, ARIZONA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:J. JIREH HOLDINGS LLC; REEL/FRAME:026890/0682 EFFECTIVE DATE : 20110308
US7937850 BB	20141029	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8256134 BB	20120904	LSGT	+	granted / extensions	

				(spc, cpc, pte)	
US8256134 BB	20080902	LSAS	AS	ASSIGNMENT	OWNER NAME : J. JIREH HOLDINGS LLC, ARIZONA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:REHKOPF, JAMES A.; MIRKO, DAVID A.; TATE, JEFFREY L.; REEL/FRAME:021481/0093; SIGNING DATES FROM 20080819 TO 20080825
US8256134 BB	20080902	LSAS	AS	ASSIGNMENT	OWNER NAME : J. JIREH HOLDINGS LLC, ARIZONA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:REHKOPF, JAMES A.; MIRKO, DAVID A.; TATE, JEFFREY L.; SIGNING DATES FROM 20080819 TO 20080825; REEL/FRAME:021481/0093
US8256134 BB	20110912	LSAS	AS	ASSIGNMENT	OWNER NAME : PULSE HOLDINGS LLC, ARIZONA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:J. JIREH HOLDINGS LLC; REEL/FRAME:026890/0682 EFFECTIVE DATE : 20110308
US8256134 BB	20151211	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8449986 BB	20130528	LSGT	+	granted / extensions (spc, cpc, pte)	
US8449986 BB	20110912	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PULSE HOLDINGS LLC, ARIZONA OLDPARTY : CHANGE OF NAME; ASSIGNOR:J. JIREH HOLDINGS LLC; REEL/FRAME:026890/0682 EFFECTIVE DATE : 20110308
US8449986 BB	20120123	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIBEL, MICHAEL J., MINNESOTA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PULSE HOLDINGS LLC; REEL/FRAME:027577/0204 EFFECTIVE DATE : 20120120
US8449986 BB	20120207	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : J. JIREH HOLDINGS LLC, ARIZONA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RIEBEL, MICHAEL J.; TATE, JEFFREY L.; SIGNING DATES FROM 20090603 TO 20090615; REEL/FRAME:027662/0196
US8449986 BB	20130108	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCOUT MATERIALS LLC, DELAWARE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RIEBEL, MICHAEL J.; REEL/FRAME:029585/0105 EFFECTIVE DATE : 20130107
US8449986 BB	20150430	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GS CLEANTECH CORPORATION, GEORGIA OLDPARTY : NUNC PRO TUNC ASSIGNMENT; ASSIGNOR:SCOUT MATERIALS LLC; REEL/FRAME:035536/0996 EFFECTIVE DATE : 20150429
US8449986 BB	20160518	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GENAREX FD LLC, GEORGIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GS CLEANTECH CORPORATION; REEL/FRAME:038629/0450 EFFECTIVE DATE : 20160517
US8598256 BB	20131203	LSGT	+	granted / extensions (spc, cpc, pte)	
US8598256 BB	20130731	LSAS	AS	ASSIGNMENT	OWNER NAME : GS CLEANTECH CORPORATION, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RIEBEL, MICHAEL J.;

					TATE, JEFFREY L.; SIGNING DATES FROM 20130719 TO 20130729; REEL/FRAME:030914/0753
US8598256 BB	20160518	LSAS	AS	ASSIGNMENT	OWNER NAME : GENAREX FD LLC, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GS CLEANTECH CORPORATION; REEL/FRAME:038629/0007 EFFECTIVE DATE : 20160517
US8697156 BB	20140415	LSGT	+	granted / extensions (spc, cpc, pte)	
US8765827 BB	20140701	LSGT	+	granted / extensions (spc, cpc, pte)	
US8765827 BB	20160518	LSAS	AS	ASSIGNMENT	OWNER NAME : GENAREX FD LLC, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GS CLEANTECH CORPORATION; REEL/FRAME:038629/0339 EFFECTIVE DATE : 20160517
US8772379 BB	20140708	LSGT	+	granted / extensions (spc, cpc, pte)	
US8772379 BB	20160518	LSAS	AS	ASSIGNMENT	OWNER NAME : GENAREX FD LLC, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GS CLEANTECH CORPORATION; REEL/FRAME:038629/0379 EFFECTIVE DATE : 20160517
US8809425 BB	20140819	LSGT	+	granted / extensions (spc, cpc, pte)	
US8809425 BB	20160518	LSAS	AS	ASSIGNMENT	OWNER NAME : GENAREX FD LLC, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GS CLEANTECH CORPORATION; REEL/FRAME:038629/0083 EFFECTIVE DATE : 20160517
US9034954 BB	20150519	LSGT	+	granted / extensions (spc, cpc, pte)	
US9034954 BB	20160518	LSAS	AS	ASSIGNMENT	OWNER NAME : GENAREX FD LLC, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GS CLEANTECH CORPORATION; REEL/FRAME:038629/0122 EFFECTIVE DATE : 20160517
US9163142 BB	20151020	LSGT	+	granted / extensions (spc, cpc, pte)	
US9163142 BB	20160209	LSAS	AS	ASSIGNMENT	OWNER NAME : YA GLOBAL INVESTMENTS, L.P., NEW JERSEY DESCRIPTION : SECURITY AGREEMENT; ASSIGNORS:GREENSHIFT CORPORATION; VIRIDIUS CAPITAL LLC; GS CLEANTECH CORPORATION; AND OTHERS; REEL/FRAME:037752/0763 EFFECTIVE DATE : 20151231
US9163142 BB	20160329	LSRE	CC	CERTIFICATE OF CORRECTION	
US9163142 BB	20160518	LSAS	AS	ASSIGNMENT	OWNER NAME : GENAREX FD LLC, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GS CLEANTECH CORPORATION; REEL/FRAME:038629/0190 EFFECTIVE DATE : 20160517
US9346955 BB	20160524	LSGT	+	granted / extensions (spc, cpc, pte)	

US9587098 BB	20170307	LSGT	+	granted / extensions (spc, cpc, pte)
US9587099 BB	20170307	LSGT	+	granted / extensions (spc, cpc, pte)

51) Family number: 20337351 (US5705536A)

Title: Foamed starch polymer

Abstract: Source: US5705536A PCT No. PCT/EP94/01946 Sec. 371 Date Jun. 27, 1996 Sec. 102(e) Date Jun. 27, 1996 PCT Filed Jun. 15, 1994 PCT Pub. No. WO95/04104 PCT Pub. Date Feb. 9, 1995In order to produce a substantially biologically degradable polymer foam, a thermoplastic or disaggregated starch or a polymer mixture of thermoplastic or disaggregated starch with at least one biologically degradable hydrophobic polymer is used. In addition, the material is mixed with a biologically degradable fibrous or capsular material capable of binding water by capillary action, said material being at least partially treated or saturated with water before being mixed with the polymer. The polymer/material mixture thus obtained is processed under controlled pressure and temperature so that the water bound by capillarity in the material is released and causes the polymer to foam.

Classifications:
International (IPC 8-9): C08B30/12 C08J9/00 C08J9/12 C08J9/28 C08L101/16 C08L3/02 (Advanced/Invention); C08B30/00 C08J9/00 C08L101/00 C08L3/00 (Core/Invention)
International (IPC 1-7): C08J9/00 C08J9/04 C08J9/12 C08J9/28 C08L3/00 C08L3/00 C08L3/02
CPC: C08B30/12 C08J9/0085 C08J9/125 C08J2303/00 C08L3/02
European: C08B30/12 C08J9/00N C08J9/12D C08L3/02 M08J303/00
US: 106/122 264/53 521/79 521/81 521/84.1

Family:

Publication number	Publication date	Application number	Application date
AT156162 E	19970815	AT19940920938T	19940615
AU199471853 A1	19950228	AU19940071853	19940615
AU683673 B2	19971120	AU19940071853	19940615
BRPI9407042 A	19960312	BR1994PI07042	19940615
CA2168216 AA	19960126	CA19942168216	19940615
CA2168216 C	20000530	CA19942168216	19940615
CN1128036 A	19960731	CN19941092919	19940615
DE59403574 D1	19970904	DE19945003574	19940615
DK0711322 T3	19980316	DK19940920938T	19940615
EP0711322 A1	19960515	EP19940920938	19940615
EP0711322 B1	19970730	EP19940920938	19940615
ES2107846 T3	19971201	ES19940920938T	19940615
JP2628936 B2	19970709	JP19950505511T	19940615
JP8512356 T2	19961224	JP19950505511T	19940615
SG48938 A1	19980518	SG19960003874	19940615
US5705536 A	19980106	US19960586859	19960627
WO9504104 A2	19950209	WO1994EP01946	19940615
WO9504104 A3	19950316	WO1994EP01946	19940615

Priority:

CH19930002280 19930728 WO1994EP01946 19940615 WO1994EP01946 19940615

Probable Assignee: BIO TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH

Assignee(s): (std): BIOTEC BIOLOG NATURVERPACK ; BIO TEC BIOLOG NATURVERPACKUNG ; TOMKA IVAN

Assignee(s): BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO KG ; BIO TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH 46446 EM ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH ; BIO TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO ; BIO TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO KG ; BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH 46446 EMMERICH DE

Inventor(s): (std): IVAN TOMKA ; TOMKA IVAN

Inventor(s): TOMKA IVAN CH 1722 BOURGUILLON CH

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; KIRBY EADES GALE BAKER

Designated states: AT AU BE BR CA CH CN CZ DE DK ES FI FR GB GR HU IE IT JP LI LU MC NL NO PL PT RU SE SK US

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT156162 E	19970815	LSGT	+	granted / extensions (spc, cpc, pte)	
AT156162 E	20000515	LSAS	EEIH	CHANGE IN THE PERSON OF PATENT OWNER	
AT156162 E	20020315	LSLE	-REN	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
AU199471853 A1	19950228	LSPB	+	published / reissued	
AU683673 B2	19971120	LSGT	+	granted / extensions (spc, cpc, pte)	
AU683673 B2	20020117	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
BRPI9407042 A	19960312	LSPB	+	published / reissued	
BRPI9407042 A	20010828	LSRV	-FA8	DISMISSAL: DISMISSAL - ARTICLE 36, PAR. 1 OF INDUSTRIAL PROPERTY LAW	

CA2168216 AA	19960126	LSPB	+	published / reissued	
CA2168216 AA	19960126	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2168216 AA	19960528	LSES	+EEER	EXAMINATION REQUEST	
CA2168216 AA	20020617	LSLE	-MKLA	LAPSED	
CA2168216 C	20000530	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1128036 A	19960731	LSPB	+	published / reissued	
CN1128036 A	19960731	LSPB	+C06	PUBLICATION	
CN1128036 A	20010725	LSDW	-C01	DEEMED WITHDRAWAL OF PATENT APPLICATION (PATENT LAW 1993)	
DE59403574 D1	19980827	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE59403574 D1	19991216	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	OWNER NAME : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO.KG
DK0711322 T3	19980316	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0711322 A1	19960515	LSPB	+	published / reissued	
EP0711322 A1	19960515	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19951204
EP0711322 A1	19970205	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19961220
EP0711322 A1	19970731	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP0711322 A1	19971201	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2107846 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 FORMAT OF REF DOCUMENT (F/P) : P
EP0711322 A1	19980722	LSGT	+26N	NO OPPOSITION FILED	
EP0711322 A1	19990730	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PUE OWNER NAME : BIOTEC BIOLOGISCHE NATURVERPACKUNGEN GMBH - DANN AN
EP0711322 A1	20000403	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20000403 YEAR OF FEE PAYMENT : 07
EP0711322 A1	20000417	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20000417 YEAR OF FEE PAYMENT : 07
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EP0711322 A1	20000627	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20000627 YEAR OF FEE PAYMENT : 07
EP0711322 A1	20000628	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20000628 YEAR OF FEE PAYMENT : 07
EP0711322 A1	20000629	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20000629 YEAR OF FEE PAYMENT : 07
EP0711322 A1	20000814	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20000814 YEAR OF FEE PAYMENT : 07

EP0711322 A1	20000825	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20000825 YEAR OF FEE PAYMENT : 07
EP0711322 A1	20010615	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20010615
EP0711322 A1	20010615	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20010615
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EP0711322 A1	20010616	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20010616
EP0711322 A1	20010616	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20010616
EP0711322 A1	20010630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20010630
EP0711322 A1	20010630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20010630
EP0711322 A1	20010630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20010630
EP0711322 A1	20011231	LSLE	-BERE	BE: LAPSED	OWNER NAME : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN G.M.B.H. AND EFFECTIVE DATE : 20010630
EP0711322 A1	20020101	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20020101
EP0711322 A1	20020128	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EBP
EP0711322 A1	20020205	LSLE	-EUG	SE: EUROPEAN PATENT HAS LAPSED	REF DOCUMENT NUMBER : 94920938.1 FORMAT OF REF DOCUMENT (F/P) : F
EP0711322 A1	20020206	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20010615
EP0711322 A1	20020215	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0711322 A1	20020228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20020228
EP0711322 A1	20020301	LSLE	-NLV4	NL: LAPSED OR ANULLED DUE TO NON-PAYMENT OF THE ANNUAL FEE	EFFECTIVE DATE : 20020101
EP0711322 A1	20030401	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE :

					FD2A EFFECTIVE DATE : 20030203
EP0711322 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20090625 YEAR OF FEE PAYMENT : 16
EP0711322 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20090123 YEAR OF FEE PAYMENT : 16
EP0711322 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100622 YEAR OF FEE PAYMENT : 17
EP0711322 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20100629 YEAR OF FEE PAYMENT : 17
EP0711322 A1	20110930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20110617 YEAR OF FEE PAYMENT : 18
EP0711322 A1	20111130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110615 YEAR OF FEE PAYMENT : 18
EP0711322 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120619 YEAR OF FEE PAYMENT : 19
EP0711322 A1	20120928	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20120626 YEAR OF FEE PAYMENT : 19
EP0711322 A1	20120928	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20120626 YEAR OF FEE PAYMENT : 19
EP0711322 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130620 YEAR OF FEE PAYMENT : 20
EP0711322 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20130624 YEAR OF FEE PAYMENT : 20
EP0711322 A1	20140617	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R071 REF DOCUMENT NUMBER : 59403574 COUNTRY OF REF DOCUMENT : DE
EP0711322 A1	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20140617
EP0711322 B1	19970730	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2107846 T3	19971201	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2107846 T3	19971201	LSGT	+FG2A	DEFINITIVE PROTECTION	REF DOCUMENT NUMBER : 711322 COUNTRY OF REF DOCUMENT : ES
JP2628936 B2	19970709	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2628936 B2	20090205	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20090418 YEAR OF FEE PAYMENT : 12
JP2628936 B2	20100318	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20100418 YEAR OF FEE PAYMENT : 13
JP2628936 B2	20100330	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110418 YEAR OF FEE PAYMENT : 14
JP2628936 B2	20110405	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF	DESCRIPTION : PAYMENT UNTIL: 20120418 YEAR OF FEE PAYMENT : 15

				DATABASE)	
JP2628936 B2	20120327	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130418 YEAR OF FEE PAYMENT : 16
JP2628936 B2	20130319	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140418 YEAR OF FEE PAYMENT : 17
JP2628936 B2	20140318	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP2628936 B2	20140615	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP8512356 T2	19961224	LSPB	+	published / reissued	
SG48938 A1	19980518	LSPB	+	published / reissued	
US5705536 A	19980106	LSGT	+	granted / extensions (spc, cpc, pte)	
US5705536 A	19960126	LSAS	AS	ASSIGNMENT	OWNER NAME : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH, GERMAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:TOMKA, IVAN; REEL/FRAME:008053/0353 EFFECTIVE DATE : 19960110
US5705536 A	19990816	LSAS	AS	ASSIGNMENT	OWNER NAME : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO. K DESCRIPTION : CHANGE OF FORM; ASSIGNOR:BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH; REEL/FRAME:010164/0632 EFFECTIVE DATE : 19980813
US5705536 A	19990816	LSAS	AS	ASSIGNMENT	OWNER NAME : BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH AND CO. K DESCRIPTION : CHANGE OF FORM; ASSIGNOR:BIO-TEC BIOLOGISCHE NATURVERPACKUNGEN GMBH; REEL/FRAME:010175/0084 EFFECTIVE DATE : 19980813
US5705536 A	20020104	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5705536 A	20050706	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5705536 A	20090603	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO9504104 A2	19950209	LSPB	+	published / reissued	
WO9504104 A2	19960126	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2168216 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO9504104 A3	19951204	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1994920938 COUNTRY OF REF DOCUMENT : EP
WO9504104 A3	19960126	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2168216 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO9504104 A3	19960126	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2168216 COUNTRY OF REF DOCUMENT : CA
WO9504104 A3	19960515	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1994920938 COUNTRY OF REF DOCUMENT : EP

WO9504104 A3	19960627	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 08586859 COUNTRY OF REF DOCUMENT : US
WO9504104 A3	19970730	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1994920938 COUNTRY OF REF DOCUMENT : EP

52) Family number: 43685201 (CO4180428A)

Title: METODOS Y SISTEMAS PARA LA FABRICACION DE MATERIALES DE EM- PAQUE, RECIPIENTES Y OTROS PRODUCTOS DE MEZCLAS QUE FRAGUAN HIDRAULICAMENTE COMPUESTOS CON ALTO RELLENO INORGANICO. METHODS AND SYSTEMS FOR MAKING MATERIALS PARKS EM, VESSELS AND OTHER PRODUCTS hydraulically setting MIXING WITH HIGH FILLING INORGANIC COMPOUNDS. (Machine translation)

Abstract: Source: CO4180428A UN ARTICULO DE FABRICACION QUE TIENE UNA MATRIZ ESTRUCTURAL CONRELLENO INORGANICO QUE COMPRENDE UN AGLUTINANTE ORGANICO DISPERSABLE EN AGUA; UN AGREGADO INORGANICO QUE TIENE UNA CONCENTRACION DENTRO DEL RANGO DE ENTRE 40 percent Y 98 percent EN VOLUMEN DEL TOTAL DE SOLIDOS EN LA MATRIZ ESTRUCTURAL CON RELLENO INORGANICO; Y UN MATERIAL FIBROSO, TENIENDO DICHA MATRIZ ESTRUCTURAL CON RELLENO INORGANICO UN GROSOR DENTRO DEL RANGO DE ENTRE 0.01 nm Y 20 nm.7UN METODO PARA FABRICAR UN ARTICULO COMPRENDIENDO EL METODO LOS PASOS DE: MEZCLAR UN AGLUTINANTE DE POLIMERO ORGANICO, UN AGREGADO INORGANICO, AGUA Y FIBRAS CON EL FIN DE FORMAR UNA MEZCLA MOLDEABLE, ESTANDO INCLUIDO EL AGREGADO INORGANICO EN UNA CANTIDAD DENTRO DEL RANGO ENTRE 40 percent Y 98 percent EN VOLUMEN DEL TOTAL DE SOLIDOS EN LA MEZCLA; MOLDEAR LA MEZCLA EN LA FORMA ESTABLE DEL ARTICULO Y ENDURECER LA MEZCLA EN UNA FORMA ESTABLE DEL ARTICULO, TENIENDO EL ARTICULO UNA MATRIZ ESTRUCTURAL.18UN SISTEMA PARA FABRICAR UN ARTICULO, QUE COMPRENDE: UNA MEZCLADORA ESTRUCTURADA PARA PREPARAR UNA MEZCLA MOLDEABLE QUE INCLUYA UN AGLUTINANTE DE POLIMERO ORGANICO, UN AGREGADO INORGANICO QUE TIENE UNA CONCENTRACION EN EL RANGO ENTRE 40 percent Y 98 percent EN VOLUMEN DEL TOTAL DE SOLIDOS EN LA MEZCLA, AGUA Y FIBRAS; MEDIOS PARA MOLDEAR LA MEZCLA MOLDEABLE EN LA FORMA DESEADA Y LOGRAR ESTABILIDAD DE FORMA EN MENOS DE UN MINUTO Y MEDIOS PARA ENDURECER LA MEZCLA EN LA FORMA DESEADA DEL ARTICULO. An article of manufacture having a structural CONRELLENO MATRIX INORGANIC ORGANIC comprising a binder dispersible in water; INORGANIC an aggregate having a concentration in the range between 40 percent and 98 percent by volume of the total solids in MATRIX FILLED STRUCTURAL INORGANIC; And a fibrous material, said structural matrix STUFFED WITH INORGANIC a thickness in the range between 0.01 nm and 20 nm.7UN method for making an article the method comprising the steps of: mixing an organic polymer binder, an aggregate inorganic WATER And **fibers** in order to form a moldable mixture, BEING INCLUDED IN THE AGGREGATE INORGANIC an amount within the range of between 40 percent and 98 percent by volume of the total solids in the mixture; Molding the mixture in stable shape of the article and curing the mixture into a stable form of the article, the article having MATRIX SYSTEM ESTRUCTURAL.18UN making an article, comprising: a STRUCTURED MIXER FOR PREPARING A moldable mixture including a binder ORGANIC POLYMER, INORGANIC an aggregate having a concentration in a range between 40 percent and 98 percent by volume of the total solids in the mixture, water and **fibers**; MEDIA MOLDEABLE molding the mixture into desired shape and form stability ACHIEVE IN LESS THAN ONE MINUTE AND MEANS FOR HARD MIX IN ARTICLE desired shape.

Classifications:
International (IPC 8-9): A47G19/12 (Advanced/Invention);
A47G19/00 (Core/Invention)
International (IPC 1-7): A47G19/12

Family:

Publication number	Publication date	Application number	Application date
CO4180428 A1	19950607	CO19940005882	19940216

Priority:
CO19940005882 19940216

Probable Assignee:	E KHASHOGGI IND
Assignee(s): (std):	E KHASHOGGI IND
Assignee(s):	E KHASHOGGI INDUSTRIES
Inventor(s): (std):	ANDERSEN PER JUST ; HODSON SIMON K
Inventor(s):	JUST ANDERSEN PER ; SIMON K HODSON
Agent(s):	XIMENA BONILLA PEREIRA

Legal status (INPADOC)

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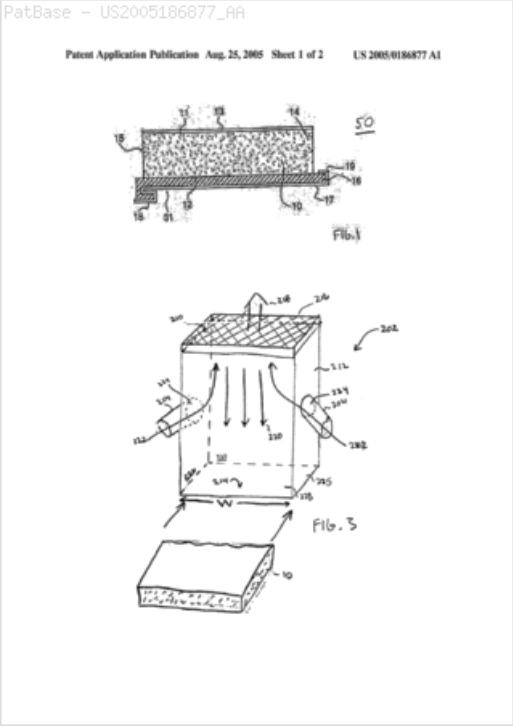
Patent	Date recorded	Event group	Code	Event	Details
CO4180428 A1	19950607	LSPB	+	published / reissued	

53) Family number: 32193163 (US2005186877A)

Title: INSULATION PRODUCT HAVING BICOMPONENT **FIBER** FACING LAYER AND METHOD OF MANUFACTURING THE SAME

Abstract: Source: US2005186877A An insulation product is provided comprising an insulation sheet containing randomly oriented **fibers** bonded together. The sheet has first and second major surfaces and a pair of side portions. A nonwoven facing layer is bonded to at least one of the major surfaces. The nonwoven facing layer comprises randomly oriented bicomponent **fibers**, each of the bicomponent **fibers** including first component and second component portions. The nonwoven facing layer is bonded to the at least one major surface at least in part by a meltbond between the first component portion of the bicomponent **fibers** and the randomly oriented **fibers** in the insulation sheet.

Classifications:
International (IPC 8-9): B05C13/02 B05C19/00 B05C5/00 B32B17/12 B32B27/04 B32B37/00 B32B37/06 B32B5/26 B32B7/10 D04H1/00 D04H1/54 D04H1/56 D04H13/00 D04H3/00 D04H5/00 D04H5/06 E04B1/16 E04B1/76 (Advanced/Invention);
B29C63/04 (Advanced/Non-invention);
B05C13/02 B05C19/00 B05C5/00 B32B27/04 B32B37/00 B32B37/06 B32B5/22 B32B7/10 D04H1/00 D04H1/56 D04H13/00 D04H3/00 D04H5/00 E04B1/16 E04B1/76 (Core/Invention);
B29C63/02 (Core/Non-invention)
International (IPC 1-7): D04H1/00 D04H13/00 D04H3/00 D04H5/00 E04B1/16
CPC: B32B5/26 B29C63/044 B29K2095/00 B32B7/10 B32B27/04 B32B2395/00 E04B1/767 E04B2001/7687 Y10T156/10 Y10T442/60 Y10T442/637 D04H1/56 D04H1/559
European: B32B27/04 B32B5/26 B32B7/10 D04H1/56B D04H13/00B2 D04H13/00B5 E04B1/76E2B1F L29C63/04D L29K95/00 L32B395/00 P04B1/76Q
US: 118/304 118/308 118/325 118/60 118/641 156/499 156/60 156/60S 156/62.2 442/327 442/327P 442/361 442/361P 442/361S



Family:

Publication number	Publication date	Application number	Application date
US2005186877 AA	20050825	US20040783494	20040220
US2008139068 AA	20080612	US20080033556	20080219
US7354478 BB	20080408	US20040783494	20040220
US8142584 BB	20120327	US20080033556	20080219
WO05080701 A2	20050901	WO2005EP50702	20050217
WO05080701 A3	20060810	WO2005EP50702	20050217

Priority:
US20040783494 20040220 US20080033556 20080219

Probable Assignee: CERTAIN TEED CORP

Assignee(s): (std): CUTHBERSTON THOMAS ; CUTHBERTSON THOMAS A ; SAINT GOBAIN ISOVER ; TRABBOLD MARK ; YANG ALAIN ; CERTAIN TEED CORP

Assignee(s): CERTAINTEED CORP

Inventor(s): (std): CUTHBERSTON THOMAS ; CUTHBERTSON THOMAS A ; TRABBOLD MARK ; YANG ALAIN

Inventor(s): CUTHBERTSON THOMAS

Agent(s): DUANE MORRIS LLP, IP DEPARTMENT; DUANE MORRIS LLP IP DEPARTMENT; DUANE MORRIS LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2005186877 AA	20050825	LSPB	+	published / reissued	
US2008139068 AA	20080612	LSPB	+	published / reissued	
US7354478 BB	20080408	LSGT	+	granted / extensions (spc, cpc, pte)	
US7354478 BB	20040220	LSAS	AS	ASSIGNMENT	OWNER NAME : CERTAIN TEED CORPORATION, PENNSYLVANIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST;

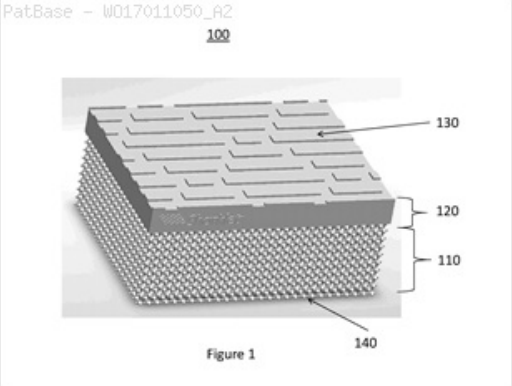
					ASSIGNORS:YANG, ALAIN; CUTHBERTSON, THOMAS A.; TRABBOLD, MARK; REEL/FRAME:015020/0779 EFFECTIVE DATE : 20040209
US7354478 BB	20111011	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7354478 BB	20160408	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7354478 BB	20160531	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160408
US8142584 BB	20120327	LSGT	+	granted / extensions (spc, cpc, pte)	
US8142584 BB	20120703	LSRE	CC	CERTIFICATE OF CORRECTION	
US8142584 BB	20160327	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8142584 BB	20160517	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160327
WO05080701 A2	20050901	LSPB	+	published / reissued	
WO05080701 A3	20060822	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO05080701 A3	20060822	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE

54) Family number: 64707979 (WO17011050A2)

Title: BILAYERED DEVICES FOR ENHANCED HEALING

Abstract: Disclosed herein is a multilayered wound dressing comprising a first layer; the first layer including channels that facilitate neovascularization of a wound; and a second layer in contact with the first layer, the second layer having the same or different chemical composition as the first layer; where the second layer comprises at least one surface that has a texture and the direction of the texture is operative to facilitate cell orientation and growth. A method includes forming a first layer of a **polymeric** material; forming a second layer of the same **polymeric** material as the first layer on the first layer; and forming a textured surface of the second layer of the same **polymeric** material as the first layer, the textured surface being operative to facilitate directional cell growth when used in a wound dressing, where the first layer and the second layer are formed using an additive manufacturing process.

Classifications:
International (IPC 8-9): A61K35/12 A61K9/70 (Advanced/Invention)
CPC: A61K35/12 A61L15/44



Family:

Publication number	Publication date	Application number	Application date
WO17011050 A2	20170119	WO2016US29122	20160425

Priority:

US20150151875P 20150423 US20150151936P 20150423 US20150261407P 20151201

Probable Assignee: SHARKLET TECH LLC

Assignee(s): (std): SHARKLET TECH LLC ; UNIV OF FLORIDA RES FOUND INC ; UNIV FLORIDA

Assignee(s): SHARKLET TECHNOLOGIES LLC ; OF FLORIDA RESEARCH FOUNDATION INC UNIV

Inventor(s): (std): BRENNAN ANTHONY B ; MAGIN CHELSEA MARIE ; NEALE DYLAN BURTON ; SCHULTZ GREGORY SCOTT ; WILLENBERG BRADLEY JAY

Agent(s): RODRIGUES DAVID E

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

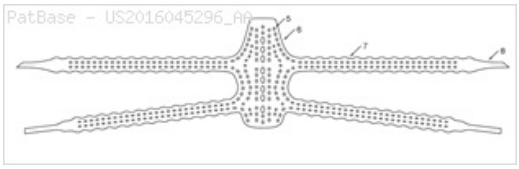
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Patent	Date recorded	Event group	Code	Event	Details
WO17011050 A2	20170119	LSPB	+	published / reissued	

55) Family number: 56444081 (US2016045296A)

Title: **FIBER** MEMBRANES FOR REPAIRING TISSUE AND PRODUCTS AND PREPARATION METHOD THEREOF

Abstract: Source: US2016045296A The present invention relates to a fibrous membrane used for tissue repair and products and preparation methods thereof, wherein the fibrous membrane used for tissue repair is formed by interweaving fibrous filaments with diameters of 10 nm-100 micro m, and has a porous structure, with the fluffiness of 200-2,000 cm3/g. In addition, the present invention also relates to a composite fibrous membrane, an implantable membrane and an anti-adhesion tissue repair membrane comprising the fibrous membrane used for tissue repair as well as preparation methods and applications thereof.



Classifications:
International (IPC 8-9): A61B17/00 A61F2/00 A61F2/02 A61F2/06 A61F2/08 A61F2/10 A61F2/28 A61F2/40 A61L15/00 A61L27/18 A61L27/20 A61L27/22 A61L27/24 A61L27/40 A61L27/44 A61L27/50 A61L27/54 A61L27/56 A61L27/60 A61L31/04 A61L31/12 A61L31/14 A61L31/16 B29C47/00 D01D5/00 D01D5/04 (Advanced/Invention); B29K23/00 B29K27/00 B29K75/00 B29L31/00 (Advanced/Non-invention)
CPC: A61F2/0045 A61F2/0063 A61F2/0077 B29C47/0021 A61F2002/0068 A61F2002/009 B29K2027/16 A61L31/04 A61L31/047 A61L31/125 A61L31/146 A61L31/16 B29K2023/12 B29K2075/00 B29L2031/755 D01D5/003 D01D5/0069
US: 264/466 623/23.74

Family:

Publication number	Publication date	Application number	Application date
CN103800096 A	20140521	CN201210457158	20121114
CN103800096 B	20161221	CN201210457158	20121114
CN103800097 A	20140521	CN201210457521	20121114
CN103800097 B	20161221	CN201210457521	20121114
CN104414773 A	20150318	CN201310372804	20130823
CN104414773 B	20170301	CN201310372804	20130823
EP2921136 A1	20150923	EP20130854718	20131114
EP2921136 A4	20160713	EP20130854718	20131114
IN01362DN2015 A	20150703	IN2015DN01362	20150218
JP2016502426 T2	20160128	JP20150540990T	20131114
KR20150086227 A	20150727	KR20157005750	20131114
US2016045296 AA	20160218	US20130377665	20131114
WO14075388 A1	20140522	WO2013CN01387	20131114

Priority:

CN201210457158 20121114 CN201210457521 20121114 CN201310372804 20130823 WO2013CN001387 20131114

Probable Assignee: MEDPRIN REGENERATIVE MEDICAL TECHNOLOGIES CO LTD

Assignee(s): (std): MEDPRIN REGENERATIVE MEDICAL TECHNOLOGIES CO LTD ; MEDPRIN REGENERATIVE MEDICAL TECHNOLOGY CO LTD

Assignee(s): MEDPRIN REGENERATIVE MEDICAL TECHNOLOGY CO ; MEDPRIN REGENERATIVE MEDICAL TECHNOLOGIES CO

Inventor(s): (std): ZHAN ZEFENG ; YUAN YUYU ; XU TAO ; WANG GUOSHUAI ; LAI KUILIN ; GUO ZEYUE

Agent(s): ZEITLER VOLPERT KANDLBINDER PATENT U RECHTSANWAELTE PARTNERSCHAFT MBB; KOGA TETSUJI; AOKI ATSUSHI; FUKUMOTO TSUMORU; ISHIDA TAKASHI; LINDA LIU AND PARTNERS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
CN103800096 A	20140521	LSPB	+	published / reissued	
CN103800096 A	20140521	LSPB	+C06	PUBLICATION	
CN103800096 A	20161221	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103800096 B	20161221	LSGT	+	granted / extensions (spc, cpc, pte)	
CN103800097 A	20140521	LSPB	+	published / reissued	
CN103800097 A	20140521	LSPB	+C06	PUBLICATION	
CN103800097 A	20161221	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103800097 B	20161221	LSGT	+	granted / extensions (spc, cpc, pte)	
CN104414773 A	20150318	LSPB	+	published / reissued	

CN104414773 A	20150318	LSPB	+C06	PUBLICATION	
CN104414773 B	20170301	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2921136 A1	20150923	LSPB	+	published / reissued	
EP2921136 A1	20150923	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150205
EP2921136 A1	20160713	LSES	+RA4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160615
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B29C 47/00 20060101ALI20160609BHEP
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 27/56 20060101ALI20160609BHEP
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B29L 31/00 20060101ALI20160609BHEP
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/04 20060101ALI20160609BHEP
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/14 20060101ALI20160609BHEP
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/12 20060101ALI20160609BHEP
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EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 27/44 20060101ALI20160609BHEP
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B29K 27/00 20060101ALI20160609BHEP
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B29K 23/00 20060101ALI20160609BHEP
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61L 31/16 20060101ALI20160609BHEP
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B29K 75/00 20060101ALI20160609BHEP
EP2921136 A1	20160713	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D01D 5/00 20060101ALI20160609BHEP
IN01362DN2015 A	20150703	LSPB	+	published / reissued	
JP2016502426 T2	20160128	LSPB	+	published / reissued	
JP2016502426 T2	20160607	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20160607
JP2016502426 T2	20160907	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160907
JP2016502426 T2	20170110	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20170110
KR20150086227 A	20150727	LSPB	+	published / reissued	
KR20150086227 A	20150818	LSES	A201	REQUEST FOR EXAMINATION	
US2016045296 AA	20160218	LSPB	+	published / reissued	
US2016045296 AA	20151021	LSAS	AS	ASSIGNMENT	OWNER NAME : MEDPRIN

					REGENERATIVE MEDICAL TECHNOLOGIES CO., LTD DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:GUO, ZEYUE; LAI, KULIN; WANG, GUOSHUAI; AND OTHERS; REEL/FRAME:036843/0395 EFFECTIVE DATE : 20151020
US2016045296 AA	20160930	LSAS	AS	ASSIGNMENT	OWNER NAME : MEDPRIN REGENERATIVE MEDICAL TECHNOLOGIES CO., LTD DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE SECOND INVENTOR'S NAME PREVIOUSLY RECORDED ON REEL 036843 FRAME 0395. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT; ASSIGNORS:GUO, ZEYUE; LAI, KUILIN; WANG, GUOSHUAI; AND OTHERS; REEL/FRAME:040221/0306 EFFECTIVE DATE : 20151020
WO14075388 A1	20140522	LSPB	+	published / reissued	
WO14075388 A1	20140826	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015540990 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO14075388 A1	20150304	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20157005750 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
WO14075388 A1	20150515	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

56) Family number: 48872301 (US2012276619A)

Title: METHOD FOR RECYCLING PAPER PRODUCTS GLUED AND/OR COATED WITH BIODEGRADABLE POLYMERS

Abstract: Source: US2012276619A A method for recycling paper products sized and/or coated with polymers, in which the paper products sized and/or coated with polymers are initially taken in an aqueous wastepaper suspension, this wastepaper suspension a) is pulped in the presence of at least one hydrolase, b) is pulped in an alkaline medium, and/or c) is treated in an alkaline medium in a deinking process, and the polymers are then separated from the wastepaper suspension, the polymers being biodegradable polymers.

Classifications:
International (IPC 8-9): C08G63/00 D21C3/00 D21C5/02 D21H17/53 D21H19/28 D21H21/16 (Advanced/Invention); C08G D21C D21H (Subclass/Invention)
CPC: Y02W30/648 D21C5/025 D21H19/28 D21H21/16
European: D21C5/02B D21H19/28 D21H21/16
US: 162/8 435/278

Family:

Publication number	Publication date	Application number	Application date
BR112012009873 A2	20160927	BR20121109873	20101025
CA2777904 AA	20110512	CA20102777904	20101025
CN102575423 A	20120711	CN201080045921	20101025
CN102575423 B	20141231	CN201080045921	20101025
EP2494106 A1	20120905	EP20100768263	20101025
US2012276619 AA	20121101	US20100503988	20101025
US8679826 BB	20140325	US20100503988	20101025
WO11054694 A1	20110512	WO2010EP66079	20101025
ZA201203764 A	20130925	ZA20120003764	20120523

Priority:

EP20090174077 20091026 EP20100768263 20101025 WO2010EP66079 20101025

Probable Assignee: BASF SE

Assignee(s): (std): BASAF SE ; BASF SE ; BLUM RAINER ; KUENKEL ANDREAS ; SKUPIN GABRIEL ; YAMAMOTO MOTONORI

Inventor(s): (std): ANDREAS KUENKEL ; BLUM RAINER ; GABRIEL SKUPIN ; KUENKEL ANDREAS ; KUNKEL ANDREAS ; MOTONORI YAMAMOTO ; RAINER BLUM ; SKUPIN GABRIEL ; YAMAMOTO MOTONORI

Agent(s): ROBIC; PEATFIELD JEREMY WILLIAM; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT LLP; BASF SE

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BR112012009873 A2	20160927	LSPB	+	published / reissued	
BR112012009873 A2	20170207	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	
CA2777904 AA	20110512	LSPB	+	published / reissued	
CA2777904 AA	20120417	LSES	+EEER	EXAMINATION REQUEST	
CA2777904 AA	20161218	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20161104
CN102575423 A	20120711	LSPB	+	published / reissued	
CN102575423 A	20120711	LSPB	+C06	PUBLICATION	
CN102575423 A	20141231	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN102575423 B	20141231	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2494106 A1	20120905	LSPB	+	published / reissued	
EP2494106 A1	20120905	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120529
US2012276619 AA	20121101	LSPB	+	published / reissued	

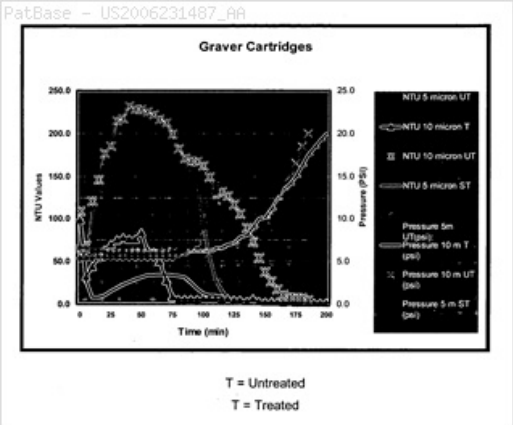
US2012276619 AA	20120723	LSAS	AS	ASSIGNMENT	OWNER NAME : BASF SE, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:YAMAMOTO, MOTONORI; KUENKEL, ANDREAS; SKUPIN, GABRIEL; AND OTHERS; SIGNING DATES FROM 20120404 TO 20120713; REEL/FRAME:028610/0530
US8679826 BB	20140325	LSGT	+	granted / extensions (spc, cpc, pte)	
WO11054694 A1	20110512	LSPB	+	published / reissued	
WO11054694 A1	20120417	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2777904 COUNTRY OF REF DOCUMENT : CA
WO11054694 A1	20120417	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2777904 COUNTRY OF REF DOCUMENT : CA
WO11054694 A1	20120426	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11054694 A1	20120713	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13503988 COUNTRY OF REF DOCUMENT : US
WO11054694 A1	20160927	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012009873 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20120426
ZA201203764 A	20130925	LSGT	+	granted / extensions (spc, cpc, pte)	

57) Family number: 33511239 (US2006231487A)

Title: COATED FILTER MEDIA

Abstract: Source: US2006231487A The invention relates to a coating composition on the surface of a filtration media. In particular, the invention relates to a coating composition for a filtration media comprising at least one polymer; at least one crosslinking agent; and optionally at least one compatabilizing agent.

Classifications:
International (IPC 8-9): B01D39/00 (Advanced/Invention); B01D39/00 (Core/Invention)
CPC: B01D39/18 B01D39/2065 B01D2239/0478 B01D2239/10 C09D135/00
European: B01D39/18 B01D39/20F4 C09D135/00
US: 210/500.21 210/500.210S 210/506 55/524 55/524S 96/11 96/11S



Family:

Publication number	Publication date	Application number	Application date
US2006231487 AA	20061019	US20050105260	20050413
WO06113266 A2	20061026	WO2006US13620	20060412
WO06113266 A3	20061214	WO2006US13620	20060412

Priority:
US20050105260 20050413

Probable Assignee: LUBRIZOL CORP
Assignee(s): (std): BARTLEY STUART L ; LUBRIZOL CORP ; YODICE RICHARD
Inventor(s): (std): BARTLEY STUART L ; YODICE RICHARD
Inventor(s): BARTLEY STUART
Agent(s): TERESAN W GILBERT LUBRIZOL CORP
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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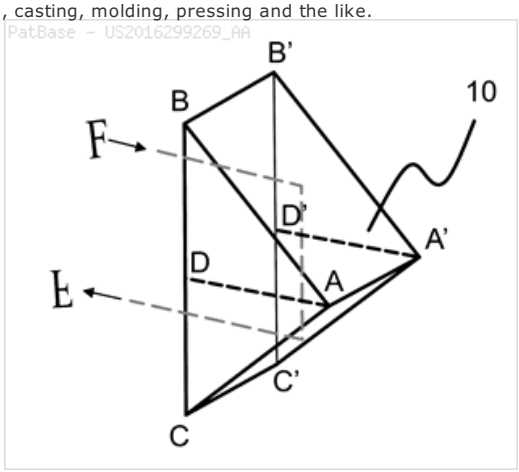
Patent	Date recorded	Event group	Code	Event	Details
US2006231487 AA	20061019	LSPB	+	published / reissued	
US2006231487 AA	20050617	LSAS	AS	ASSIGNMENT	OWNER NAME : LUBRIZOL CORPORATION, THE, OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BARTLEY, STUART L.; YODICE, RICHARD; REEL/FRAME:016703/0656 EFFECTIVE DATE : 20050414
WO06113266 A2	20061026	LSPB	+	published / reissued	
WO06113266 A3	20071016	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO06113266 A3	20071113	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : RU

58) Family number: 59290579 (US2016299269A)

Title: RETROREFLECTIVE BIODEGRADABLE ELEMENT, COMPOSITE AND RELATED PRODUCTS

Abstract: Source: US2016299269A A retroreflective element (10) in the form of a micro- or nano-sized prism produced from bio-based and biodegradable plastic polymers, such as **polylactic acid** (PLA) or polyglycolic **acid** (PGA) is provided. A plurality of retroreflective elements (10) are utilized for manufacturing of a reflective composite material (100), which, in turn, may be utilized for manufacturing of a multiplicity of various products. Retroreflective fibrous products, like yarns, threads and textiles may thus be produced. The composite (100) and/or elements (10) may be blended to any appropriate material and being further processed by spraying, spreading, printing, casting, molding, pressing and the like.

Classifications:
International (IPC 8-9): A41B11/00 A41B11/14 A41B9/00 A41D13/01 A41D19/00 A41D20/00 A41D23/00 A41D7/00 A41F9/00 A42B1/00 B29C43/00 B29C45/00 B29C47/00 C08K7/02 C08L101/16 C09D167/04 C09D5/33 D01D5/26 D01F1/10 D02G3/22 D03D1/00 D03D15/00 D04B1/14 D04B21/00 D04B21/12 D04C1/06 G02B1/04 G02B5/122 G02B5/124 (Advanced/Invention)
CPC: G02B5/122 G02B5/124 G02B1/04 C09D5/004 C09D167/04 C08K7/02 B29C43/003 B29C45/0001 B29C47/0004 B29C47/0014 D01D5/26 A41D13/01 A42B1/00 A41D7/00 A41B9/00 A41D19/00 A41B11/00 A41B11/14 A41F9/00 A41D23/00 A41D20/00 B29K2995/003 G02B1/041
US: 359/530



Family:

Publication number	Publication date	Application number	Application date
CA2930659 AA	20160513	CA20132930659	20131115
EP3069176 A1	20160921	EP20130802547	20131115
JP2017503215 T2	20170126	JP20160553708T	20131115
US2016299269 AA	20161013	US20130036448	20131115
WO15070916 A1	20150521	WO2013EP73922	20131115

Priority:
WO2013EP73922 20131115

Probable Assignee: WALOON REFLECTOR SOLUTIONS OY
Assignee(s): (std): PARMANEN ELISA ; RUOTSINSALO EEVA LIISA ; TEKSLA OY ; WALOON REFLECTOR SOLUTIONS OY
Inventor(s): (std): PARMANEN ELISA ; RUOTSINSALO EEVA LIISA
Agent(s): SHAPIRO COHEN LLP; IPR PARTNERS LTD; KUPIAINEN JUHANI
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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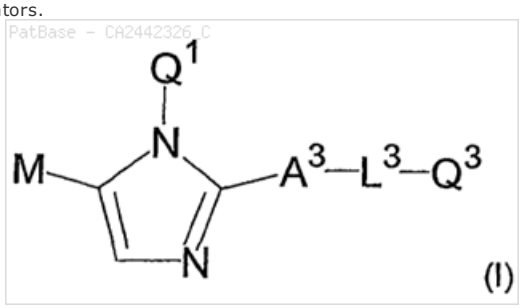
Patent	Date recorded	Event group	Code	Event	Details
CA2930659 AA	20160513	LSPB	+	published / reissued	
EP3069176 A1	20160921	LSPB	+	published / reissued	
EP3069176 A1	20160921	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160607
JP2017503215 T2	20170126	LSPB	+	published / reissued	
JP2017503215 T2	20161115	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20161115
US2016299269 AA	20161013	LSPB	+	published / reissued	
WO15070916 A1	20150521	LSPB	+	published / reissued	
WO15070916 A1	20160513	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016553708 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO15070916 A1	20160513	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2930659 COUNTRY OF REF DOCUMENT : CA

WO15070916 A1	20160513	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15036448 COUNTRY OF REF DOCUMENT : US
WO15070916 A1	20160517	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

59) Family number: 28262168 (US2002198237A)

Title: HETEROCYCLIC COMPOUNDS

Abstract: Source: US2002198237A Pharmaceutically useful heterocyclic compounds, compositions containing them, and methods of using them, for example, as histamine H3 receptor mediators.



Classifications:
International (IPC 8-9): A61K31/41 A61K31/4164 A61K31/4174 A61K31/4178 A61K31/45 A61K31/454 A61P11/06 A61P25/02 A61P25/06 A61P25/08 A61P25/18 A61P25/20 A61P25/28 A61P37/08 A61P43/00 C07D233/70 C07D233/84 C07D401/12 C07D401/14 C07D403/12 (Advanced/Invention);
A61K31/41 A61K31/45 (Core/Invention)
International (IPC 1-7): A61K31/4164 A61K31/4174 A61K31/4178 A61K31/454 A61P11/06 A61P25/02 A61P25/06 A61P25/08 A61P25/18 A61P25/20 A61P25/28 A61P37/08 A61P43/00 C0743/02 C07D233/84 C07D401/12 C07D403/12
CPC: C07D233/70 C07D233/84 C07D401/12 C07D403/12
European: C07D233/70 C07D233/84 C07D401/12 C07D403/12
US: 514/210.2 514/210.200S 514/254.05 514/254.050S 514/326 514/326S 514/396 514/397 514/397S 514/398 514/398S 514/400 544/37 544/370 544/370S 546/21 546/210 546/210S 548/311.1 548/311.100S 548/314.7 548/318.5 548/318.500S 548/322.5 548/323.5 548/324.5 548/325.1 548/331.5 548/332.1

Family:

Publication number	Publication date	Application number	Application date
AT383343 E	20080115	AT20020757803T	20020322
AU2002306841 AA	20021015	AU20020306841	20020322
CA2442326 AA	20030926	CA20022442326	20020322
CA2442326 C	20120522	CA20022442326	20020322
CY1107362 T1	20121219	CY20081100341T	20080326
DE60224509 D1	20080221	DE20026024509	20020322
DE60224509 T2	20090305	DE20026024509T	20020322
DK1373218 T3	20080519	DK20020757803T	20020322
EP1373218 A1	20040102	EP20020757803	20020322
EP1373218 B1	20080109	EP20020757803	20020322
EP1373218 B9	20081203	EP20020757803	20020322
ES2299596 T3	20080601	ES20020757803T	20020322
JP2004524363 T2	20040812	JP20020577795T	20020322
JP4653935 B2	20110316	JP20020577795T	20020322
PT1373218 T	20080221	PT20020757803T	20020322
US2002198237 AA	20021226	US20020104283	20020322
US2004147577 AA	20040729	US20040757625	20040114
US7265135 BB	20070904	US20040757625	20040114
WO02079168 A1	20021010	WO2002US09026	20020322

Priority:

EP20020757803 20020322 US20010279802P 20010329 US20020104283 20020322
US20040757625 20040114 WO2002US09026 20020322

Probable Assignee: ORTHO MCNEIL JANSSEN PHARMACEUTICALS INC

Assignee(s): (std): ORTHO MCNEIL PHARM INC ; ORTHO MCNEIL PHARMACEUTICAL INC ; ORTHO MCNEIL JANSSEN PHARM

Assignee(s): ORTHO MCNEIL JANSSEN PHARMACEUTICALS INC ; LY KIEV S ; BOGENSTAETTER MICHAEL ; CARRUTHERS NICHOLAS I ; JABLONOWSKI JILL A ; LOVENBERG TIMOTHY W

Inventor(s): (std): BOGENSTAETTER MICHAEL ; CARRUTHERS NICHOLAS ; CARRUTHERS NICHOLAS I ; JABLONOWSKI JILL ; JABLONOWSKI JILL A ; LOVENBERG TIMOTHY ; LOVENBERG TIMOTHY W ; LY KIEV ; LY KIEV S

Inventor(s): MICHAEL BOGENSTAETTER ; NICHOLAS I CARRUTHERS ; TIMOTHY W LOVENBERG ; JILL A JABLONOWSKI ; KIEV S LY

Agent(s): NORTON ROSE CANADA SENCRL SRL LLP; OGILVY RENAULT LLP SENCRL SRL; FISHER ADRIAN JOHN ET AL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

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Patent	Date recorded	Event group	Code	Event	Details
AT383343 E	20080115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT383343 E	20080815	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	REF DOCUMENT NUMBER : 1373218 COUNTRY OF REF DOCUMENT : EP
AU2002306841 AA	20021015	LSPB	+	published / reissued	
CA2442326 AA	20030926	LSPB	+	published / reissued	
CA2442326 AA	20030926	LSNP	+AFNE	NATIONAL PHASE ENTRY	

CA2442326 AA	20070322	LSES	+EEER	EXAMINATION REQUEST	
CA2442326 C	20120522	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60224509 D1	20081113	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	OWNER NAME : ORTHO-MCNEIL-JANSSEN PHARMACEUTICALS, INC., TI, US
DE60224509 D1	20090129	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60224509 T2	20090305	LSGT	+	granted / extensions (spc, cpc, pte)	
DK1373218 T3	20080519	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1373218 A1	20040102	LSPB	+	published / reissued	
EP1373218 A1	20040102	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20031006
EP1373218 A1	20040407	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BOGENSTAETTER, MICHAEL
EP1373218 A1	20040407	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : CARRUTHERS, NICHOLAS, I.
EP1373218 A1	20040407	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : JABLONOWSKI, JILL, A.
EP1373218 A1	20040407	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : LOVENBERG, TIMOTHY, W.
EP1373218 A1	20040407	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : LY, KIEV, S.
EP1373218 A1	20050706	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20050524
EP1373218 A1	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BOGENSTAETTER, MICHAEL
EP1373218 A1	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : CARRUTHERS, NICHOLAS, I.
EP1373218 A1	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : JABLONOWSKI, JILL, A.
EP1373218 A1	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : LOVENBERG, TIMOTHY, W.
EP1373218 A1	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : LY, KIEV, S.
EP1373218 A1	20080109	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1373218 A1	20080131	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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					DESIGNATED STATE(S) :
EP1373218 A1	20080820	LSAS	RAP2	TRANSFER OF RIGHTS OF AN EP GRANTED PATENT	PARTYTYPE : OWNER OWNER : ORTHO-MCNEIL-JANSEN PHARMACEUTICALS, INC.
EP1373218 A1	20080822	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : PT OWNER : ORTHO-MCNEIL-JANSSEN PHARMACEUTICALS, INC., US REF LEGAL EVENT CODE : PC4A EFFECTIVE DATE : 20080812
EP1373218 A1	20080831	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : CH OWNER : ORTHO-MCNEIL-JANSSEN PHARMACEUTICALS, INC. REF LEGAL EVENT CODE : PFA OLDPARTY : ORTHO MCNEIL PHARMACEUTICAL, INC.#U.S. ROUTE 202#RARITAN, NJ 08869-0602 (US) -TRANSFER TO- ORTHO-MCNEIL-JANSSEN PHARMACEUTICALS, INC.#1125 TRENTON-HARBOURTON ROAD#TITUSVILLE, NJ 08560 (US)
EP1373218 A1	20081001	LSAS	NLS	NL: ASSIGNMENTS OF EP-PATENTS	PARTYTYPE : OWNER REF COUNTRY CODE : EP OWNER : ORTHO-MCNEIL-JANSEN PHARMACEUTICALS, INC. EFFECTIVE DATE : 20080725
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EP1373218 A1	20160208	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 15
EP1373218 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20160311 YEAR OF FEE PAYMENT : 15
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ES2299596 T3	20080601	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2004524363 T2	20040812	LSPB	+	published / reissued	
JP4653935 B2	20110316	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4653935 B2	20050311	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20050310
JP4653935 B2	20081202	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20081202
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JP4653935 B2	20090714	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090714
JP4653935 B2	20091210	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20091209
JP4653935 B2	20100223	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20100223

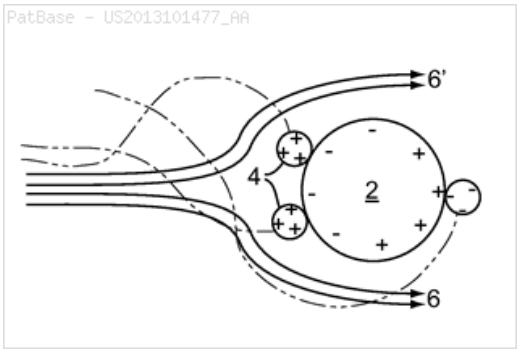
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JP4653935 B2	20100722	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	TEXT : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20100721
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JP4653935 B2	20101117	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20101116
JP4653935 B2	20101206	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4653935 B2	20101214	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20101214
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JP4653935 B2	20101224	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20101220
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JP4653935 B2	20141209	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4653935 B2	20151208	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4653935 B2	20161206	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
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US2002198237 AA	20021226	LSPB	+	published / reissued	
US2002198237 AA	20040909	LSAS	AS	ASSIGNMENT	OWNER NAME : ORTHO MCNEIL PHARMACEUTICAL, INC., NEW JERSEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOGENSTAETTER, MICHAEL; CARRUTHERS, NICHOLAS I.; JABLONOWSKI, JILL A.; AND OTHERS; REEL/FRAME:015115/0539; SIGNING DATES FROM 20020320 TO 20020325
US2004147577 AA	20040729	LSPB	+	published / reissued	
US7265135 BB	20070904	LSGT	+	granted / extensions (spc, cpc, pte)	
US7265135 BB	20110210	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7265135 BB	20150218	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
WO02079168 A1	20021010	LSPB	+	published / reissued	
WO02079168 A1	20030926	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2442326 COUNTRY OF REF DOCUMENT : CA
WO02079168 A1	20030929	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL	REF DOCUMENT NUMBER : 2002577795

				PHASE	COUNTRY OF REF DOCUMENT : JP
WO02079168 A1	20031006	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002757803 COUNTRY OF REF DOCUMENT : EP
WO02079168 A1	20040102	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2002757803 COUNTRY OF REF DOCUMENT : EP
WO02079168 A1	20040212	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO02079168 A1	20080109	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2002757803 COUNTRY OF REF DOCUMENT : EP

60) Family number: 50475189 (US2013101477A)

Title: NON-WOVEN ELECTRET FIBROUS WEBS AND METHODS OF MAKING SAME

Abstract: Source: US2013101477A Non-woven electret fibrous webs including electret **fibers**, multicomponent **fibers**, and sorbent particles, and pleated filters made therefrom.



Classifications:
International (IPC 8-9): A61F13/15 B01D39/06 B01D39/16 B01D39/18 B01D39/20 B01J20/08 B01J20/10 B01J20/14 B01J20/20 B01J20/28 B01J20/30 B01J35/02 B01J35/06 B03C3/28 B03C3/34 B32B3/26 B32B3/30 B32B5/02 B32B5/08 B32B5/26 C08K7/16 C08L101/00 D01F8/04 D01G13/00 D04H1/407 D04H1/413 D04H1/42 D04H1/4242 D04H1/435 D04H1/4374 D04H1/4382 D04H1/46 D04H1/485 D04H1/54 D04H1/541 D04H1/542 D04H1/58 D04H1/593 D04H1/60 D04H1/70 D04H1/72 D04H1/732 D04H1/736 D04H13/00 D06M10/04 (Advanced/Invention)
CPC: D04H1/736 B32B3/263 B32B3/266 B32B5/022 B32B5/08 B32B5/26 D04H1/54 D04H1/541 D04H1/732 D04H13/00 D04H1/593 B03C3/34 B03C3/155 B03C3/30 B03C2201/22 D04H1/4242 D04H1/435 B01J35/065 D04H1/4374 D04H1/485 D04H1/413 D06M10/04 D01G13/00 B01J35/023 Y10T428/24479 Y10T428/24612 Y10T428/24331 Y10T428/24372 Y10T428/24405 Y10T428/24413 Y10T428/24421 Y10T428/2443 Y10T428/24521 Y10T428/24645 B01D39/1623 B01D39/2065 B01D2239/0407 B01D2239/0435 B01D2239/064 Y10T442/20 Y10T442/603 Y10T442/609 Y10T442/611 Y10T442/612 Y10T442/696 D04H1/407 D04H1/4382 D04H1/4291 D04H1/4391 A61F13/15 D04H1/58
European: B32B5/02A D04H1/42 D04H1/54 D04H1/541 D04H1/593 D04H1/70 D04H1/732
US: 156/62.6 19/296 19/66R 19/98 264/101 264/109 264/122 28/102 28/108 28/165 422/187 428/138 428/143 428/147 428/148 428/149 428/150 428/156 428/161 428/172 428/176 428/219 442/330 442/335 442/337 442/338 442/414 442/59 96/74

Family:

Publication number	Publication date	Application number	Application date
BR112013000010 A2	20160510	BR20131100010	20110706
BR112013000281 A2	20160524	BR20131100281	20110706
CN103025941 A	20130403	CN201180036832	20110706
CN103025941 B	20160810	CN201180036832	20110706
CN103069065 A	20130424	CN201180037458	20110706
CN103069065 B	20160810	CN201180037458	20110706
CN103781956 A	20140507	CN201280032484	20120627
CN103781956 B	20160928	CN201280032484	20120627
EP2726659 A2	20140507	EP20120804066	20120627
EP2726659 A4	20150325	EP20120804066	20120627
JP2013535582 A2	20130912	JP20130518804	20110706
JP2013535582 T2	20130912	JP20130518804T	20110706
JP2013538297 A2	20131010	JP20130518796	20110706
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JP2014518339 T2	20140728	JP20140518936T	20120627
JP6054865 B2	20161227	JP20130518796T	20110706
JP6054866 B2	20161227	JP20130518804T	20110706
KR20130041928 A	20130425	KR20137003020	20110706
KR20130091734 A	20130819	KR20137003019	20110706
KR20140037942 A	20140327	KR20147002171	20120627
US2013101477 AA	20130425	US20120714739	20121214
US2013101805 AA	20130425	US20110808106	20110706
US2013108831 AA	20130502	US20110808109	20110706
US2014120322 AA	20140501	US20120125329	20120627
WO12006300 A1	20120112	WO2011US42995	20110706
WO12006338 A2	20120112	WO2011US43052	20110706
WO12006338 A3	20120503	WO2011US43052	20110706
WO13003391 A2	20130103	WO2012US44279	20120627
WO13003391 A3	20130418	WO2012US44279	20120627

Priority:

CN201110441145 20111226 US20100362191P 20100707 US20110503363P 20110630
US20110808106 20110706 US20110808109 20110706 US20120125329 20120627
WO2011US42995 20110706 WO2012US44279 20120627 US20120714739 20121214
WO2011US43052 20110706

Probable Assignee: 3M INNOVATIVE PROPERTIES CO

Assignee(s): (std): ALTSHULER GORDON L ; BOTH HENDRIK ; BRANDNER JOHN M ; LE JIMMY M ; HOFFDAHL GERRY A ; HENDERSON JOHN W ; LE NORMAND JEAN ; PEREZ MARIO A ; COANT JEAN MARIE ; ENDLE JAMES P ; PEYRAS CARRATTE JEREMIE ; LALOUCH LAHOUSSAINE ; CHEN RUI ; FU XIAOSHUAN ; FOX ANDREW R ; WU TIEN T ; VALL DAVID L ; PRINSZE MENNO ; SONG LIMING ; ROBERTSON RANDY L ; XU QIANG ; 3M CO MINNESOTA MINING AND MFG COMPANY ; 3M INNOVATIVE PROPERTIES CO

Assignee(s): 3M INNOVATIVE PROPERTIES COMPANY

Inventor(s): (std): NORMAND JEAN LE ; WU TIANZONG ; XU QIANG ; FU XIAOSHUAN ; FOX ANDREW R ; CHEN RUI ; WU TIEN T ; VALL DAVID L ; SONG LIMING ; ROBERTSON RANDY L ; PRINSZE MENNO ; PEYRAS CARRATTE JEREMIE ; PEREZ MARIO A ; LE NORMAND JEAN ; LE JIMMY M ; LALOUCH LAHOUSSAINE ; HOFFDAHL GERRY A ; HENDERSON JOHN W ; ENDLE JAMES P ; COANT JEAN MARIE ; BRANDNER JOHN M ; BOTH HENDRIK ; ALTSHULER GORDON L

Inventor(s): DAVID L VALL ; TIEN T WU ; GORDON L ALTSHULER ; JAMES P ENDLE ; JEAN MARIE COANT ; JEREMIE PEYRAS CARRATTE ; LAHOUSSAINE LALOUCH ; RANDY L ROBERTSON ; MENNO PRINSZE ; MARIO A PEREZ ; LIMING SONG ; JOHN W HENDERSON ; JOHN M BRANDNER ; JIMMY M LE ; JEAN LE NORMAND ; HENDRIK BOTH ; GERRY A HOFFDAHL

Agent(s): HERZOG FIESSER AND PARTNER; AOKI ATSUSHI; KOGA TETSUJI; ISHIDA TAKASHI; BAKER JAMES A ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BR112013000010 A2	20160510	LSPB	+	published / reissued	
BR112013000281 A2	20160524	LSPB	+	published / reissued	
CN103025941 A	20130403	LSPB	+	published / reissued	
CN103025941 A	20130403	LSPB	+C06	PUBLICATION	
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CN103025941 B	20160810	LSGT	+	granted / extensions (spc, cpc, pte)	
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CN103069065 A	20130424	LSPB	+C06	PUBLICATION	
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CN103781956 A	20140507	LSPB	+C06	PUBLICATION	
CN103781956 A	20160928	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103781956 B	20160928	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2726659 A2	20140507	LSPB	+	published / reissued	
EP2726659 A2	20140507	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140109
EP2726659 A2	20150325	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20150219
EP2726659 A2	20150325	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B01D 39/16 20060101ALI20150213BHEP
EP2726659 A2	20150325	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 1/732 20120101ALI20150213BHEP
EP2726659 A2	20150325	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : D04H 1/4382 20120101AFI20150213BHEP
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JP2013538297 A2	20131010	LSPB	+	published / reissued	
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KR20130091734 A	20130819	LSPB	+	published / reissued	
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				EXAMINATION	
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US2013101477 AA	20130425	LSPB	+	published / reissued	
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US2013101805 AA	20130425	LSPB	+	published / reissued	
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US2013108831 AA	20130502	LSPB	+	published / reissued	
US2013108831 AA	20130103	LSAS	AS	ASSIGNMENT	OWNER NAME : 3M INNOVATIVE PROPERTIES COMPANY, MINNESOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WU, TIEN T.; LE, JIMMY M.; VALL, DAVID L.; AND OTHERS; SIGNING DATES FROM 20121116 TO 20121212; REEL/FRAME:029559/0221
US2014120322 AA	20140501	LSPB	+	published / reissued	
US2014120322 AA	20131211	LSAS	AS	ASSIGNMENT	OWNER NAME : 3M INNOVATIVE PROPERTIES COMPANY, MINNESOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FU, XIAOSHUAN; CHEN, RUI; XU, QIANG; AND OTHERS; SIGNING DATES FROM 20131014 TO 20131029; REEL/FRAME:031756/0106
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WO12006300 A1	20130103	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13808106 COUNTRY OF REF DOCUMENT : US
WO12006300 A1	20130104	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013518796 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO12006300 A1	20130107	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
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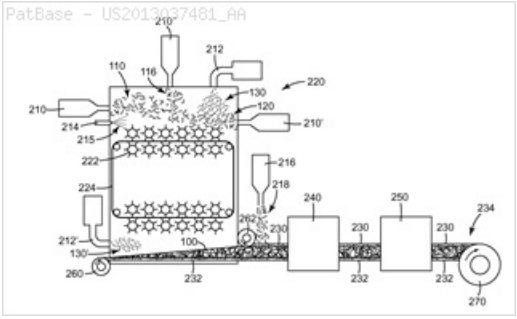
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WO13003391 A2	20130103	LSPB	+	published / reissued	
WO13003391 A3	20131211	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14125329 COUNTRY OF REF DOCUMENT : US
WO13003391 A3	20131226	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014518936 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO13003391 A3	20131230	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13003391 A3	20140127	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20147002171 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A

61) Family number: 49822906 (US2013037481A)

Title: NONWOVEN NANOFIBER WEBS CONTAINING CHEMICALLY ACTIVE PARTICULATES AND METHODS OF MAKING AND USING SAME

Abstract: Source: US2013037481A Nonwoven fibrous webs including a multiplicity of discrete **fibers**, a population of sub-micrometer **fibers** having a population median diameter less than one micrometer adjoining the discrete **fibers**, and a multiplicity of chemically active particulates secured to the nonwoven fibrous web. In some embodiments, more than 0 percent and less than 10 percent wt. of the nonwoven fibrous web is made of discrete **fibers** that are thermoplastic **polymeric fibers**, and which optionally at least partially melt and coalesce to secure the discrete **polymeric fibers** to each other. In certain embodiments, at least some of the particulates are bonded to the thermoplastic **polymeric fibers**. In other embodiments, at least some of the particulates are secured within interstices of the fibrous web, without substantial bonding to the discrete **fibers**. Methods of making and using such nonwoven fibrous webs are also described.

Classifications:
International (IPC 8-9): B01D39/00 B01D39/14 B01D39/16 B01D39/20 B01D46/10 B01J20/28 B01J20/30 B05D5/00 C02F1/00 C02F1/28 C02F1/50 D04H1/413 D04H1/42 D04H1/4382 D04H1/541 D04H1/72 D04H3/016 D04H3/147 D04H3/16 (Advanced/Invention)
CPC: B01D2239/025 B01D2239/0407 B01D2239/065 B01D2239/1233 C02F1/001 C02F1/281 C02F1/283 C02F1/42 C02F2305/08 D04H1/407 D04H1/413 D04H1/4382 B01D39/163 B01D39/00 D04H1/541 D04H3/147
European: C02F1/00D D04H1/42 M02F1/28B M02F1/28D M02F1/42 M02F305/08
US: 210/435 210/489 210/502.1 210/504 210/505 427/244



Family:

Publication number	Publication date	Application number	Application date
BR112012026770 A2	20160712	BR20121126770	20110414
CN102859060 A	20130102	CN201180020322	20110414
CN102859060 B	20160302	CN201180020322	20110414
DE602011013321 D1	20150305	DE201160013321T	20110414
EP2561127 A1	20130227	EP20110719389	20110414
EP2561127 B1	20150121	EP20110719389	20110414
JP2013528711 T2	20130711	JP20130506184T	20110414
JP5819939 B2	20151124	JP20130506184T	20110414
KR20130094196 A	20130823	KR20127030196	20110414
US2013037481 AA	20130214	US20110641739	20110414
WO11133394 A1	20111027	WO2011US32484	20110414

Priority:
EP20110719389 20110414 US20100326863P 20100422 US20110641739 20110414 WO2011US32484 20110414

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Assignee(s): 3M INNOVATIVE PROPERTIES CO SAINT PAUL ; 3M INNOVATIVE PROPERTIES COMPANY

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Inventor(s): LAURIE L POLUHA ; WU TIEN T SAINT PAUL ; TIEN T WU ; HOFFDAHL GERRY A SAINT PAUL ; JEAN LE NORMAND ; JIMMY M LE ; LAHOUSSAINE LALOUCH ; BERNARD VINCENT ; BRET W LUDWIG ; DAVID L VALL ; GERRY A HOFFDAHL

Agent(s): VOSSIUS AND PARTNER; AOKI ATSUSHI; KOGA TETSUJI; ISHIDA TAKASHI; BAKER JAMES A ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BR112012026770 A2	20160712	LSPB	+	published / reissued	
CN102859060 A	20130102	LSPB	+	published / reissued	
CN102859060 A	20130102	LSPB	+C06	PUBLICATION	
CN102859060 A	20160302	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN102859060 B	20160302	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2561127 A1	20130227	LSPB	+	published / reissued	

EP2561127 A1	20130227	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20121030
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EP2561127 A1	20150130	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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				POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561127 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561127 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561127 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561127 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150414
EP2561127 A1	20151130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2561127 A1	20151223	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20150421
EP2561127 A1	20151230	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20151022
EP2561127 A1	20151231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561127 A1	20160127	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2561127 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GB NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150421
EP2561127 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150430
EP2561127 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150430
EP2561127 A1	20160129	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20151231
EP2561127 A1	20160229	LSLE	-PG25	LAPSED IN A	COUNTRY OF REF DOCUMENT : FR

				CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150430
EP2561127 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561127 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150414
EP2561127 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561127 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PL PAYMENT DATE : 20160307 YEAR OF FEE PAYMENT : 6
EP2561127 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160405 YEAR OF FEE PAYMENT : 6
EP2561127 A1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561127 B1	20150121	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2013528711 T2	20130711	LSPB	+	published / reissued	
JP2013528711 T2	20140225	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20140224
JP2013528711 T2	20140225	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20140224
JP2013528711 T2	20150318	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150317
JP2013528711 T2	20150807	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150807
JP2013528711 T2	20150827	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2013528711 T2	20150902	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20150901
JP2013528711 T2	20151008	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20151001
JP5819939 B2	20151124	LSGT	+	granted /	

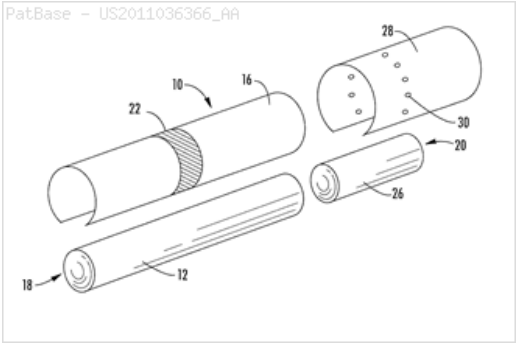
				extensions (spc, cpc, pte)	
KR20130094196 A	20130823	LSPB	+	published / reissued	
KR20130094196 A	20160222	LSES	A201	REQUEST FOR EXAMINATION	
US2013037481 AA	20130214	LSPB	+	published / reissued	
US2013037481 AA	20121017	LSAS	AS	ASSIGNMENT	OWNER NAME : 3M INNOVATIVE PROPERTIES COMPANY, MINNESOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LALOUCH, LAHOUSSAINE; HOFFDAHL, GERRY A.; WU, TIEN T.; AND OTHERS; SIGNING DATES FROM 20120823 TO 20120914; REEL/FRAME:029142/0666
WO11133394 A1	20111027	LSPB	+	published / reissued	
WO11133394 A1	20121017	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13641739 COUNTRY OF REF DOCUMENT : US
WO11133394 A1	20121019	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013506184 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11133394 A1	20121022	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11133394 A1	20121119	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20127030196 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
WO11133394 A1	20160712	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012026770 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20121018

62) Family number: 48312453 (US2011036366A)

Title: DEGRADABLE FILTER ELEMENT

Abstract: Source: US2011036366A A filter material adapted for use as a filter element of a smoking article is provided, the filter material including at least one segment of fibrous tow having a plurality of degradable particles dispersed therein, the degradable particles comprising a starch material. Exemplary starch materials include **naturally**-occurring starch, hydroxyalkylated starch, starch esters, ionically modified starch, oxidized starch, hydrolyzed starch, plasticized starch, gelatinized starch, grafted starch, crosslinked starch, transglycosylated starch, starch ethers, and mixtures thereof, as well as blends of starch with other polymers. Filter elements and smoking articles, such as cigarettes, that contain the filter material are also provided. A method of preparing polymer **fibers** for use in filter elements is also provided, the method including adding the starch material to a **fiber** precursor solution prior to **fiber** extrusion or dry-blending the starch material with the polymer material to be formed into **fibers**.

Classifications:
International (IPC 8-9): A24B15/28 A24D3/06 A24D3/08 A24D3/14 B29C47/12 (Advanced/Invention)
CPC: A24D3/068 A24D3/08 A24D3/14
European: A24D3/06F2 A24D3/08 A24D3/14
US: 131/331 131/332 131/342 131/342S 131/344 131/345 264/207 264/207S



Family:

Publication number	Publication date	Application number	Application date
US2011036366 AA	20110217	US20090539226	20090811
US2013180536 AA	20130718	US20130787123	20130306
US8434498 BB	20130507	US20090539226	20090811
WO11019646 A1	20110217	WO2010US44862	20100809

Priority:
US20090539226 20090811 US20130787123 20130306

Probable Assignee: R J REYNOLDS TOBACCO CO

Assignee(s): (std): REYNOLDS TOBACCO CO R ; SEBASTIAN ANDRIES D

Assignee(s): RJ REYNOLDS TOBACCO CO ; R J REYNOLDS TOBACCO CO ; R J REYNOLDS TOBACCO COMPANY

Inventor(s): (std): SEBASTIAN ANDRIES D

Agent(s): WOMBLE CARLYLE SANDRIDGE AND RICE PLLC; WOMBLE CARLYLE SANDRIDGE AND RICE LLP; HUMPHREY CHRISTOPHER M

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2011036366 AA	20110217	LSPB	+	published / reissued	
US2011036366 AA	20091023	LSAS	AS	ASSIGNMENT	OWNER NAME : R.J. REYNOLDS TOBACCO COMPANY, NORTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SEBASTIAN, ANDRIES D.; REEL/FRAME:023416/0446 EFFECTIVE DATE : 20090818
US2011036366 AA	20130308	LSAS	AS	ASSIGNMENT	OWNER NAME : R. J. REYNOLDS TOBACCO COMPANY, NORTH CAROLINA DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE SECOND PAGE OF ASSIGNMENT INADVERTENTLY REPLACED WITH SECOND PAGE OF DECLARATION PREVIOUSLY RECORDED ON REEL 023416 FRAME 0446. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNOR: ANDRIES D. SEBASTIAN; ASSIGNEE: R. J. REYNOLDS TOBACCO COMPANY; ASSIGNOR:SEBASTIAN, ANDRIES D.; REEL/FRAME:029942/0676 EFFECTIVE DATE : 20090818
US2013180536 AA	20130718	LSPB	+	published / reissued	
US8434498 BB	20130507	LSGT	+	granted / extensions (spc, cpc,	

				pte)	
US8434498 BB	20091023	LSAS	AS	ASSIGNMENT	OWNER NAME : R.J. REYNOLDS TOBACCO COMPANY, NORTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SEBASTIAN, ANDRIES D.; REEL/FRAME:023416/0446 EFFECTIVE DATE : 20090818
US8434498 BB	20130308	LSAS	AS	ASSIGNMENT	OWNER NAME : R. J. REYNOLDS TOBACCO COMPANY, NORTH CAROLINA DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE SECOND PAGE OF ASSIGNMENT INADVERTENTLY REPLACED WITH SECOND PAGE OF DECLARATION PREVIOUSLY RECORDED ON REEL 023416 FRAME 0446. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNOR: ANDRIES D. SEBASTIAN; ASSIGNEE: R. J. REYNOLDS TOBACCO COMPANY; ASSIGNOR:SEBASTIAN, ANDRIES D.; REEL/FRAME:029942/0676 EFFECTIVE DATE : 20090818
US8434498 BB	20161027	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
WO11019646 A1	20110217	LSPB	+	published / reissued	
WO11019646 A1	20120213	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11019646 A1	20120905	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 10749538 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

63) Family number: 59350782 (US2016257869A)

Title: A **FIBER** SUSPENDING AGENT FOR LOST-CIRCULATION MATERIALS

Abstract: Source: US2016257869A A treatment fluid comprises: a base fluid; a lost-circulation material, wherein the lost-circulation material inhibits or prevents some or all of the treatment fluid from penetrating into a subterranean formation from a wellbore, wherein the wellbore penetrates the subterranean formation; and a suspending agent, wherein the suspending agent consists of a plurality of **fibers**, and wherein the suspending agent provides a lost-circulation material distribution of at least 30 percent for a test treatment fluid consisting essentially of the base fluid, the lost-circulation material, and the suspending agent at the temperature of a lost-circulation zone of the subterranean formation and static aging for at least 1 hour.

Classifications:
International (IPC 8-9): C09K8/035 C09K8/487 C09K8/50 C09K8/514 C09K8/516 E21B21/00 E21B33/138 E21B43/22 (Advanced/Invention)
CPC: C09K8/514 C09K8/516 E21B33/138 E21B21/003 E21B43/16 E21B33/14 E21B43/25 E21B43/26 C09K8/035 C09K8/50 C09K2208/08
US: 507/104

Family:

Publication number	Publication date	Application number	Application date
AU2013405891 AA	20150528	AU20130405891	20131125
AU2013405891 BB	20161027	AU20130405891	20131125
CA2925115 AA	20160322	CA20132925115	20131125
GB201604776 A0	20160504	GB20160004776	20131125
GB2533733 A1	20160629	GB20160004776	20131125
NO20160346 A	20160302	NO20160000346	20160302
US2016257869 AA	20160908	US20130028366	20131125
WO15076852 A1	20150528	WO2013US71767	20131125

Priority:
US20130028366 20131125 WO2013US71767 20131125

Probable Assignee: HALLIBURTON ENERGY SERVICES INC

Assignee(s): (std): HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC

Assignee(s): TEKE KUSHABHAU D ; MILLER MATTHEW L ; JAMISON DALE E ; KULKARNI SANDEEP D

Inventor(s): (std): DALE E JAMISON ; JAMISON DALE E ; KULKARNI SANDEEP D ; KUSHABHAU DAGADU TEKE ; MATTHEW L MILLER ; MILLER MATTHEW L ; SANDEEP D KULKARNI ; TEKE KUSHABHAU D ; TEKE KUSHABHAU DAGADU

Agent(s): FB RICE; PARLEE MCLAWS LLP; HIGGINS SHERI L

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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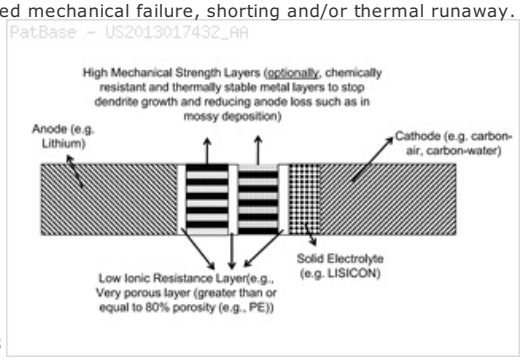
Patent	Date recorded	Event group	Code	Event	Details
AU2013405891 AA	20150528	LSPB	+	published / reissued	
AU2013405891 AA	20170223	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2013405891 BB	20161027	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2925115 AA	20160322	LSPB	+	published / reissued	
CA2925115 AA	20160411	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20160322
GB2533733 A1	20160629	LSPB	+	published / reissued	
NO20160346 A	20160302	LSPB	+	published / reissued	
US2016257869 AA	20160908	LSPB	+	published / reissued	
US2016257869 AA	20160408	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:TEKE, KUSHABHAU D.; REEL/FRAME:038232/0428 EFFECTIVE DATE : 20131030
US2016257869 AA	20160408	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST;

					ASSIGNORS:KULKARNI, SANDEEP D.; JAMISON, DALE E.; MILLER, MATTHEW L.; SIGNING DATES FROM 20131113 TO 20131114; REEL/FRAME:038232/0421
WO15076852 A1	20150528	LSPB	+	published / reissued	
WO15076852 A1	20160322	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2925115 COUNTRY OF REF DOCUMENT : CA
WO15076852 A1	20160322	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	TEXT : PCT FILING DATE = 20131125 REF DOCUMENT NUMBER : 201604776 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15076852 A1	20160324	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013405891 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20131125 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15076852 A1	20160408	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15028366 COUNTRY OF REF DOCUMENT : US
WO15076852 A1	20160525	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15076852 A1	20161221	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 13897907 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

64) Family number: 52813464 (US2013017432A)

Title: NOVEL SEPARATORS FOR ELECTROCHEMICAL SYSTEMS

Abstract: Source: US2013017432A In an aspect, the invention provides separator systems for electrochemical systems providing electronic, mechanical and chemical properties useful for a range of electrochemical storage and conversion applications. Separator systems of some embodiments, for example, provide structural, physical and electrostatic attributes useful for managing and controlling dendrite formation in lithium and zinc based batteries. In an embodiment, for example, separator systems of the invention have a multilayer, porous geometry supporting excellent ion transport properties while at the same time providing a barrier effective to prevent dendrite initiated mechanical failure, shorting and/or thermal runaway.



Classifications:
International (IPC 8-9): B32B27/06 H01B1/06 H01B1/08 H01B1/10 H01B1/12 H01G11/52 H01G9/00 H01M10/02 H01M10/04 H01M10/052 H01M10/0525 H01M10/054 H01M10/056 H01M10/0562 H01M10/0565 H01M10/0568 H01M10/0569 H01M10/0585 H01M10/12 H01M10/28 H01M12/06 H01M12/08 H01M2/14 H01M2/16 H01M2/18 H01M4/131 H01M4/133 H01M4/134 H01M4/136 H01M4/38 H01M4/42 H01M4/44 H01M4/46 H01M4/485 H01M4/505 H01M4/525 H01M4/58 H01M4/587 H01M4/60 H01M4/62 H01M6/12 H01M8/02 H01M8/0245 H01M8/10 H01M8/1016 (Advanced/Invention);
H01M10/052 (Advanced/Non-invention)
CPC: H01M2/1646 H01M2/1653 H01M2/145 H01G9/0029 H01G11/52 H01M2/1666 H01M2/1673 H01M2/18 H01M10/052 Y10T29/417 Y10T29/49108 H01M12/08 H01M10/0525 H01M8/0245 H01M10/0585 H01M10/0569 H01M10/0568 H01M4/136 H01M4/134 H01M4/5825 H01M4/382 H01M4/133 H01M4/587 H01M4/131 H01M4/525 H01M4/38 H01M8/02 H01M8/1016 H01M10/0562 H01M4/625 H01M2004/027 H01M2004/028 H01M2300/0037 H01M2300/004 H01M2300/0071 H01M2/1686 H01M2/166
US: 1/1 29/25.03 29/623.1 361/500 361/502 429/144 429/145 429/211 429/213 429/218.1 429/219 429/220 429/223 429/225 429/229 429/231.5 429/231.8 429/231.95 429/246 429/403 429/516

Family:

Publication number	Publication date	Application number	Application date
CN103650204 A	20140319	CN201280033561	20120710
CN103650204 B	20161116	CN201280033561	20120710
CN104350631 A	20150211	CN201380030525	20130110
EP2732487 A2	20140521	EP20120811935	20120710
EP2732487 A4	20150408	EP20120811935	20120710
EP2837049 A1	20150218	EP20130775922	20130110
EP2837049 A4	20160713	EP20130775922	20130110
JP2014528139 T2	20141023	JP20140520250T	20120710
JP2015519686 T2	20150709	JP20150505702T	20130110
KR20140048197 A	20140423	KR20147000423	20120710
KR20150004358 A	20150112	KR20147030130	20130110
US2013017432 AA	20130117	US20120545683	20120710
US2013224632 AA	20130829	US20130738835	20130110
US2016254514 AA	20160901	US20160148278	20160506
US9379368 BB	20160628	US20130738835	20130110
WO13009750 A2	20130117	WO2012US46067	20120710
WO13009750 A3	20130613	WO2012US46067	20120710
WO13154623 A1	20131017	WO2013US21043	20130110

Priority:

US20110506489P 20110711 US20120545683 20120710 US20120622371P 20120410
US20130738835 20130110 US20120677306P 20120730 US20120679584P 20120803
WO2012US46067 20120710 WO2013US21043 20130110 US20160148278 20160506

Probable Assignee: CALIFORNIA INST OF TECHN

Assignee(s): (std): CALIFORNIA INST OF TECHN ; ROUMI FARSHID

Assignee(s): CALIFORNIA INST OF TECHNOLOGY ; CALIFORNIA INSTITUTE OF TECHNOLOGY

Inventor(s): (std): ROUMI FARSHID

Agent(s): BOERNER ROBERT; SAMPSON EIMEAR; LATHROP AND GAGE LLP; BARONE STEPHEN B ET AL; GIANOLA ADAM J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN103650204 A	20140319	LSPB	+	published / reissued	
CN103650204 A	20161116	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103650204 B	20161116	LSGT	+	granted / extensions (spc, cpc, pte)	
CN104350631 A	20150211	LSPB	+	published / reissued	
CN104350631 A	20150211	LSPB	+C06	PUBLICATION	

EP2732487 A2	20140521	LSPB	+	published / reissued	
EP2732487 A2	20140521	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140116
EP2732487 A2	20150408	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20150309
EP2732487 A2	20150408	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : H01M 2/16 20060101ALI20150303BHEP
EP2732487 A2	20150408	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : H01M 10/052 20100101ALI20150303BHEP
EP2732487 A2	20150408	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : H01M 2/18 20060101AFI20150303BHEP
EP2732487 A2	20150408	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : H01M 10/02 20060101ALI20150303BHEP
EP2732487 A2	20151230	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20151201
EP2837049 A1	20150218	LSPB	+	published / reissued	
EP2837049 A1	20150218	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20141001
EP2837049 A1	20160302	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : H01M 10/052 20100101ALI20160126BHEP
EP2837049 A1	20160302	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : H01M 10/02 20060101ALI20160126BHEP
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EP2837049 A1	20160713	LSES	+RA4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160615
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JP2014528139 T2	20150708	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150708
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JP2014528139 T2	20170214	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20170214
JP2015519686 T2	20150709	LSPB	+	published / reissued	
JP2015519686 T2	20160112	LSRE	A524	WRITTEN SUBMISSION OF COPY OF	TEXT : JAPANESE INTERMEDIATE CODE: A524 EFFECTIVE DATE : 20160112

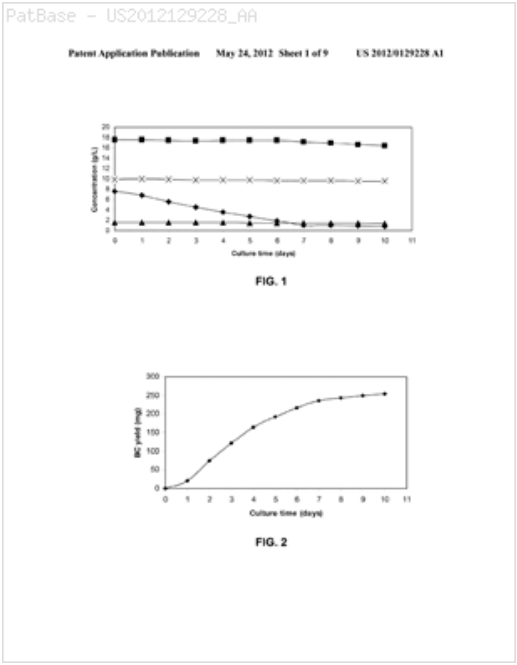
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JP2015519686 T2	20170110	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20170110
KR20140048197 A	20140423	LSPB	+	published / reissued	
KR20150004358 A	20150112	LSPB	+	published / reissued	
US2013017432 AA	20130117	LSPB	+	published / reissued	
US2013017432 AA	20120910	LSAS	AS	ASSIGNMENT	OWNER NAME : CALIFORNIA INSTITUTE OF TECHNOLOGY, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ROUMI, FARSHID; REEL/FRAME:028928/0969 EFFECTIVE DATE : 20120901
US2013224632 AA	20130829	LSPB	+	published / reissued	
US2013224632 AA	20130329	LSAS	AS	ASSIGNMENT	OWNER NAME : CALIFORNIA INSTITUTE OF TECHNOLOGY, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ROUMI, FARSHID; REEL/FRAME:030118/0739 EFFECTIVE DATE : 20130320
US2016254514 AA	20160901	LSPB	+	published / reissued	
US9379368 BB	20160628	LSGT	+	granted / extensions (spc, cpc, pte)	
WO13009750 A2	20130117	LSPB	+	published / reissued	
WO13009750 A3	20131108	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014520250 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO13009750 A3	20140107	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20147000423 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
WO13154623 A1	20131017	LSPB	+	published / reissued	
WO13154623 A1	20141001	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015505702 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO13154623 A1	20141010	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13154623 A1	20141027	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20147030130 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A

65) Family number: 47677365 (US2012129228A)

Title: BACTERIAL CELLULOSE BASED 'GREEN' COMPOSITES

Abstract: Source: US2012129228A 'Green' composites are fabricated using resins, such as soy-based resins, and reinforced with crystalline high strength bacterial cellulose (BC) **fibers**. Bacterial cellulose is produced by providing a bacterial cellulose-producing bacterium such as Acetobacter xylinum; providing an inexpensive bacteria nutritional medium; culturing the bacterium in the bacteria nutritional medium under conditions to produce bacterial cellulose; and isolating bacterial cellulose produced by cultured bacteria from the bacteria nutritional medium. The bacteria nutritional medium comprises an inexpensive carbon source that is a plant-based seed extract. The seed extract is derived from a plant-based seed comprising soluble sugars.

Classifications:
International (IPC 8-9): A01N61/00 C08L1/02 C08L1/12 C08L89/00 C12N1/20 C12P19/04 C12R1/02 (Advanced/Invention); C12R1/02 (Advanced/Non-invention)
CPC: C08L1/02 C12N1/20 C12P19/04
European: C12N1/20 C12P19/04
US: 106/124.2 106/124.200S 106/136.1 106/136.100S 106/163.01 106/163.010S 106/168.01 106/168.010S 106/204.01 106/204.010S 106/204.3 106/204.300S 424/195.18 435/101 435/101P 524/35 524/35S



Family:

Publication number	Publication date	Application number	Application date
US2012129228 AA	20120524	US20100321145	20100517
US2014083327 AA	20140327	US20130031314	20130919
US8541001 BB	20130924	US20100321145	20100517
US9499686 BB	20161122	US20130031314	20130919
WO10135234 A2	20101125	WO2010US35103	20100517
WO10135234 A3	20110324	WO2010US35103	20100517

Priority:

US20090179257P 20090518 US20100321145 20100517 WO2010US35103 20100517
US20130031314 20130919 US20120321145 20120202

Probable Assignee: CORNELL UNIV

Assignee(s): (std): CORNELL UNIV ; NETRAVALI ANIL N ; QIU KAIYAN ; UNIV CORNELL

Assignee(s): CORNELL UNIVERSITY

Inventor(s): (std): NETRAVALI ANIL N ; QIU KAIYAN

Agent(s): HARRIS BEACH PLLC; SCHNEIDERMAN ANNE M

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2012129228 AA	20120524	LSPB	+	published / reissued	
US2012129228 AA	20110411	LSAS	AS	ASSIGNMENT	OWNER NAME : CORNELL UNIVERSITY, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:NETRAVALI, ANIL N.; QIU, KAIYAN; REEL/FRAME:026104/0046 EFFECTIVE DATE : 20110406
US2012129228 AA	20111209	LSAS	AS	ASSIGNMENT	OWNER NAME : CORNELL UNIVERSITY, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:NETRAVALI, ANIL N.;

					QIU, KAIYAN; REEL/FRAME:027356/0626 EFFECTIVE DATE : 20110406
US2014083327 AA	20140327	LSPB	+	published / reissued	
US2014083327 AA	20130923	LSAS	AS	ASSIGNMENT	OWNER NAME : CORNELL UNIVERSITY, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:NETRAVALI, ANIL N; QIU, KAIYAN; REEL/FRAME:031255/0938 EFFECTIVE DATE : 20110406
US8541001 BB	20130924	LSGT	+	granted / extensions (spc, cpc, pte)	
US8541001 BB	20110411	LSAS	AS	ASSIGNMENT	OWNER NAME : CORNELL UNIVERSITY, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:NETRAVALI, ANIL N.; QIU, KAIYAN; REEL/FRAME:026104/0046 EFFECTIVE DATE : 20110406
US8541001 BB	20111209	LSAS	AS	ASSIGNMENT	OWNER NAME : CORNELL UNIVERSITY, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:NETRAVALI, ANIL N.; QIU, KAIYAN; REEL/FRAME:027356/0626 EFFECTIVE DATE : 20110406
US9499686 BB	20161122	LSGT	+	granted / extensions (spc, cpc, pte)	
WO10135234 A2	20101125	LSPB	+	published / reissued	
WO10135234 A3	20111118	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10135234 A3	20120202	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13321145 COUNTRY OF REF DOCUMENT : US
WO10135234 A3	20120613	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 10778201 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2

66) Family number: 60802803 (US2016017128A)

Title: CHEMICALLY MULTI-FUNCTIONAL NANOMATERIALS FOR COMPOSITE STRUCTURES AND METHOD OF PRODUCTION THEREOF

Abstract: Source: US2016017128A A chemically multi-functional nanomaterial for use as binding agent in composite structures having at least two components chemically different from each other, wherein said chemically multi-functional nanomaterial is provided with a first functional group and at least a second functional group different from said first functional group, is proposed. Also two alternative methods for production of said chemically multi-functional nanomaterial is proposed. Further, a composite structure comprising said chemically multi-functional nanomaterial is proposed.

Classifications:
International (IPC 8-9): B82Y30/00 B82Y40/00 C01B31/02 C07C263/16 C07C265/00 C07D301/00 C07D303/22 C07F7/08 C07F7/10 C08J5/00 C08J5/24 C08K5/29 C08K5/54 C08K5/5435 C08K5/5465 (Advanced/Invention)
CPC: C01B31/0273 B82Y30/00 C08K5/5465 C07C265/00 C07C263/16 C07F7/10 C07D303/22 C07D301/00 C07F7/0812 C07F7/08 C07F7/0801 C08K5/29 C08K5/5403 C08K5/5435 C08J5/24 C01B21/064 C01B31/0213 C01B31/04 C01B31/0484 C01P2004/13 D06M2101/40 D06M2200/50 B82Y40/00
US: 524/114 524/188 524/196 524/197 524/264 549/215 549/513 549/551 556/414 556/465 556/466 560/330 560/351

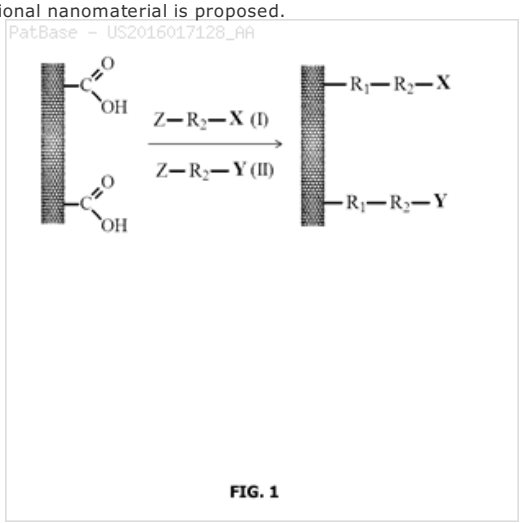


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
EP2944667 A1	20151118	EP20140167985	20140512
US2016017128 AA	20160121	US20150708674	20150511

Priority:
EP20140167985 20140512

Probable Assignee: SABANCI UENIVERSITESI
Assignee(s): (std): SABANCI UENIVERSITESI
Inventor(s): (std): UENAL SERKAN ; YILDIZ MEHMET
Agent(s): SEVINC ERKAN
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Legal status (INPADOC)

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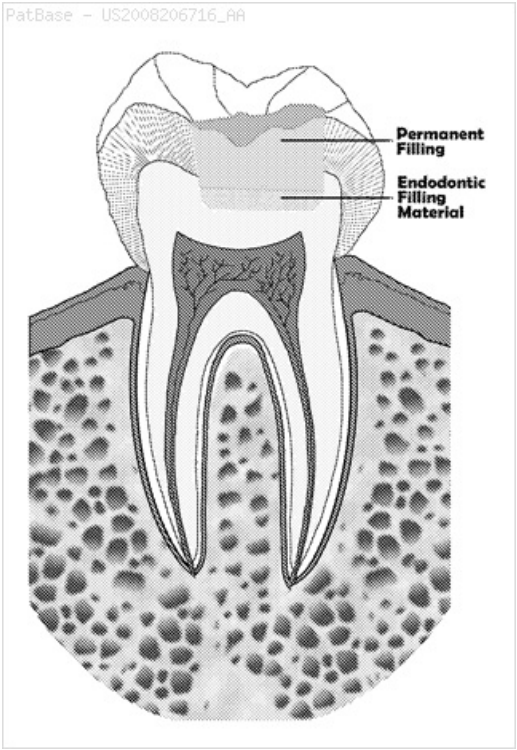
Patent	Date recorded	Event group	Code	Event	Details
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EP2944667 A1	20161130	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20160519
US2016017128 AA	20160121	LSPB	+	published / reissued	
US2016017128 AA	20150708	LSAS	AS	ASSIGNMENT	OWNER NAME : SABANCI UENIVERSITESI, TURKEY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:UENAL, SERKAN; YILDIZ, MEHMET; REEL/FRAME:036021/0540 EFFECTIVE DATE : 20150703

67) Family number: 42118554 (US2008206716A)

Title: ENDODONTIC FILLING MATERIAL

Abstract: Source: US2008206716A The present invention is a bioactive endodontic material and its use for filling the tooth and bone cavities. The present invention, by using calcium salt, calcium oxide, calcium silicate, and calcium phosphate compounds as essential constituents, and mixing them with a water base solution, prepares a bioactive calcium and phosphate enriched material. The enriched material (cement) comprises high concentration of water-soluble calcium and phosphate, and immediately forms hydroxyapatite during and after setting. The cement is biocompatible, antibacterial, capable to form an effective seal against reentrance of microorganisms into the filled cavity, compatible to handle and set in an aqueous environment, and able to stimulate hard tissue healing.

Classifications:
International (IPC 8-9): A61C5/00 A61C5/02 A61C5/04 A61K33/42 A61K35/00 A61K38/20 A61K38/21 A61K38/43 A61K39/00 A61K9/00 A61K9/14 A61P1/02 A61P19/08 A61P29/00 A61P31/04 A61P31/12 B29B9/12 (Advanced/Invention);
A61C5/00 A61C5/02 A61C5/04 (Core/Invention)
CPC: A61C5/50 A61K6/0625
European: A61C5/04 A61K6/06E K61C5/04
US: 106/35 106/690 106/691 106/717 264/6 264/6S 424/184.1 424/184.100S 424/400 424/400S 424/489 424/489P 424/602 424/602S 424/603 424/603S 424/85.2 424/85.200S 424/85.4 424/85.400S 424/93.1 424/93.100S 424/94.1 424/94.100S 433/224 433/224S 433/226 433/228.1 433/228.100P 433/228.100S



Family:

Publication number	Publication date	Application number	Application date
US2008206716 AA	20080828	US20070778118	20070716
US2011182995 AA	20110728	US20110078238	20110401
US7942961 BB	20110517	US20070778118	20070716
US8105086 BB	20120131	US20110078238	20110401
WO08102214 A2	20080828	WO2007IB50564	20070222
WO08102214 A3	20081127	WO2007IB50564	20070222
WO08102214 A4	20090212	WO2007IB50564	20070222

Priority:
US20070778118 20070716 US20110078238 20110401 WO2007IB50564 20070222

Probable Assignee: GHASSEMIAN POUR BAVANDI MADJID

Assignee(s): (std): ASGARY SAEED ; GHASSEMIAN POUR BAVANDI MADJID

Inventor(s): (std): ASGARY SAEED

Agent(s): BARRY CHOOBIN; BARRY; CHOOBIN AND CHOOBIN CONSULTANCY LLC; CHOOBIN AND CHOOBIN CONSULTANCY

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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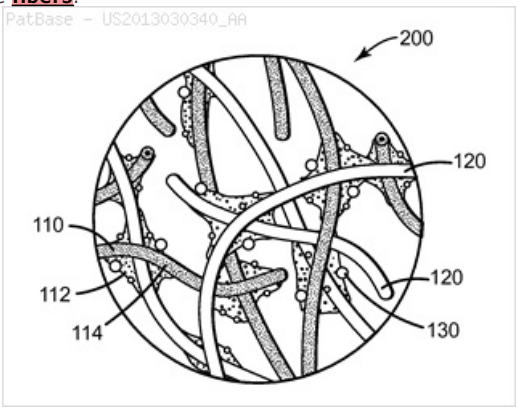
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US2011182995 AA	20110728	LSPB	+	published / reissued	
US7942961 BB	20110517	LSGT	+	granted / extensions (spc, cpc, pte)	
US7942961 BB	20150517	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7942961 BB	20150707	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20150517

US8105086 BB	20120131	LSGT	+	granted / extensions (spc, cpc, pte)	
US8105086 BB	20160131	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8105086 BB	20160322	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160131
WO08102214 A2	20080828	LSPB	+	published / reissued	
WO08102214 A3	20090825	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

68) Family number: 49820358 (US2013030340A)

Title: NONWOVEN FIBROUS WEBS CONTAINING CHEMICALLY ACTIVE PARTICULATES AND METHODS OF MAKING AND USING SAME

Abstract: Source: US2013030340A Nonwoven fibrous webs including a multiplicity of randomly oriented discrete **fibers** and a multiplicity of chemically active particulates secured to the web, and methods of making and using same. In some embodiments, more than 0 percent and less than 10 percent wt. of the nonwoven fibrous web is made of multi-component **fibers** having at least a first region exhibiting a first melting temperature and a second region exhibiting a second melting temperature greater than the first melting temperature. In other embodiments, the discrete **fibers** include a first population of monocomponent thermoplastic **fibers** having a first melting temperature, and a second population of monocomponent **fibers** having a second melting temperature greater than the first melting temperature. In certain embodiments, at least some of the particulates are bonded to the **fibers**. In other embodiments, at least some of the particulates are secured within interstices of the fibrous web, without substantial bonding to the **fibers**.



Classifications:
International (IPC 8-9): A47L25/00 A61F13/00 A61F13/15 B01D39/00 B01D39/02 B01D39/08 B01D39/14 B01D39/16 B01D46/10 B01J20/28 B01J20/30 B32B15/02 B32B27/02 B32B3/24 B32B5/02 B32B5/16 B32B5/26 C02F1/00 C02F1/28 C02F1/50 D04H1/407 D04H1/413 D04H1/42 D04H1/4374 D04H1/4382 D04H1/54 D04H1/541 D04H1/72 (Advanced/Invention); C02F1/28 C02F1/42 (Advanced/Non-invention)
CPC: B01J20/28028 B01D39/163 B01D2239/0216 B01D2239/0407 B01D2239/065 B01D2239/0654 C02F1/28 C02F1/42 D04H1/407 D04H1/413 D04H1/4374 D04H1/4382 D04H1/541 B01D39/00 D04H3/147 Y10T428/24331 Y10T442/10 Y10T442/20 Y10T442/2484 Y10T442/2508 Y10T442/2525 Y10T442/2861 Y10T442/2877 Y10T442/2885 Y10T442/2893 Y10T442/291 Y10T442/2918 Y10T442/3846 Y10T442/494 Y10T442/603 Y10T442/655
European: B01D39/16B4B D04H1/42 D04H1/541 L01D239/02D L01D239/04B L01D239/06F L01D239/06F10 M02F1/28 M02F1/42
US: 1/1 15/209.1 210/502.1 264/122 428/138 442/1 442/118 442/121 442/123 442/164 442/166 442/167 442/168 442/170 442/171 442/285 442/319 442/330 442/377 442/59 602/42 604/358 96/153

Family:

Publication number	Publication date	Application number	Application date
CN102859058 A	20130102	CN201180020369	20110414
CN102859058 B	20160323	CN201180020369	20110414
DE602011013322 D1	20150305	DE201160013322T	20110414
EP2561128 A1	20130227	EP20110719390	20110414
EP2561128 B1	20150121	EP20110719390	20110414
JP2013528712 T2	20130711	JP20130506185T	20110414
JP5866338 B2	20160217	JP20130506185T	20110414
KR20130094197 A	20130823	KR20127030197	20110414
US2013030340 AA	20130131	US20110640133	20110414
US9475034 BB	20161025	US20110640133	20110414
WO11133396 A1	20111027	WO2011US32492	20110414

Priority:
EP20110719390 20110414 US20100326730P 20100422 US20110640133 20110414 WO2011US32492 20110414

Probable Assignee: 3M INNOVATIVE PROPERTIES CO

Assignee(s): (std): LALOUCH LAHOUSSAINE ; MOORE ERIC M ; VINCENT BERNARD ; WU TIEN T ; 3M INNOVATIVE PROPERTIES CO

Assignee(s): 3M INNOVATIVE PROPERTIES CO SAINT PAUL ; 3M INNOVATIVE PROPERTIES COMPANY

Inventor(s): (std): LALOUCH LAHOUSSAINE ; MOORE ERIC M ; VINCENT BERNARD ; WU TIEN T

Inventor(s): WU TIEN T SAINT PAUL ; MOORE ERIC M SAINT PAUL

Agent(s): VOSSIUS AND PARTNER; AOKI ATSUSHI; KOGA TETSUJI; ISHIDA TAKASHI; JAMES A; BAKER JAMES A ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN102859058 A	20130102	LSPB	+	published / reissued	
CN102859058 A	20130102	LSPB	+C06	PUBLICATION	
CN102859058 A	20160323	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN102859058 B	20160323	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2561128 A1	20130227	LSPB	+	published /	

				reissued	
EP2561128 A1	20130227	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20121018
EP2561128 A1	20141029	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20140929
EP2561128 A1	20150121	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2561128 A1	20150130	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2561128 A1	20150211	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2561128 A1	20150305	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602011013322 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20150305
EP2561128 A1	20150315	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 709257 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150315
EP2561128 A1	20150610	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : VDEP EFFECTIVE DATE : 20150121
EP2561128 A1	20150615	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 709257 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150121
EP2561128 A1	20150625	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2561128 A1	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
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EP2561128 A1	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
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EP2561128 A1	20150831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150521
EP2561128 A1	20150831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
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EP2561128 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561128 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561128 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121

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EP2561128 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150414
EP2561128 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561128 A1	20151130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2561128 A1	20151223	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20150421
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EP2561128 A1	20151231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
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EP2561128 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150430
EP2561128 A1	20160129	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20151231
EP2561128 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150430
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EP2561128 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES

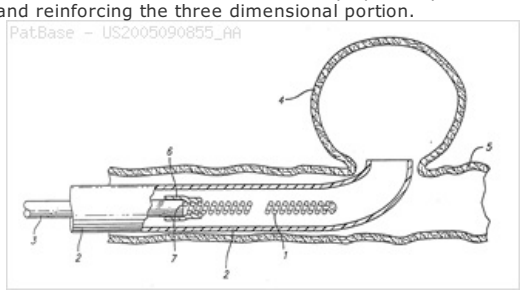
				POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	LAPSED DATE : 20150414
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EP2561128 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PL PAYMENT DATE : 20160307 YEAR OF FEE PAYMENT : 6
EP2561128 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160405 YEAR OF FEE PAYMENT : 6
EP2561128 A1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150121
EP2561128 B1	20150121	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2013528712 T2	20130711	LSPB	+	published / reissued	
JP2013528712 T2	20140219	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20140218
JP2013528712 T2	20140219	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20140218
JP2013528712 T2	20150318	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150317
JP2013528712 T2	20150617	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150617
JP2013528712 T2	20151126	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2013528712 T2	20151202	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20151201
JP2013528712 T2	20160107	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20160104
JP5866338 B2	20160217	LSGT	+	granted / extensions (spc, cpc, pte)	
KR20130094197 A	20130823	LSPB	+	published / reissued	
US2013030340 AA	20130131	LSPB	+	published / reissued	
US2013030340 AA	20121009	LSAS	AS	ASSIGNMENT	OWNER NAME : 3M INNOVATIVE PROPERTIES COMPANY, MINNESOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:VINCENT, BERNARD; LALOUCH, LAHOUSSAINE; WU, TIEN T.; AND OTHERS; SIGNING DATES FROM 20120823 TO 20120914; REEL/FRAME:029096/0862
US9475034 BB	20161025	LSGT	+	granted / extensions (spc, cpc, pte)	
WO11133396 A1	20111027	LSPB	+	published / reissued	

WO11133396 A1	20121009	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13640133 COUNTRY OF REF DOCUMENT : US
WO11133396 A1	20121022	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013506185 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11133396 A1	20121022	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11133396 A1	20121119	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20127030197 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A

69) Family number: 29238370 (US2005090855A)

Title: THREE DIMENSIONAL, LOW FRICTION VASOOCCLUSIVE COIL, AND METHOD OF MANUFACTURE

Abstract: Source: US2005090855A The three dimensional, low friction vasoocclusive coil has a portion that is three dimensionally box or cubed shaped. The three dimensional box or cubed shaped portion will form a basket for filling the anatomical cavity at the site in the vasculature to be treated. The vasoocclusive device is formed from at least one strand of a flexible material formed to have a first inoperable, substantially linear configuration for insertion into and through a catheter or cannula to a desired portion of the vasculature to be treated, and a second operable, three dimensional configuration for occluding the desired portion of the vasculature to be treated. The vasoocclusive coil may optionally include a portion that is substantially J-shaped or helically shaped, for filling and reinforcing the three dimensional portion.



Classifications:
International (IPC 8-9): A61B17/00 A61B17/03 A61B17/12 A61F2/01 A61F2/82 A61L31/02 A61L31/04 A61L31/06 A61M29/00 B29C53/60 B29C53/76 B29C53/82 B29C61/00 B29C61/06 (Advanced/Invention);
A61B17/00 A61B17/12 A61F2/00 A61F2/01 A61F2/82 (Advanced/Non-invention);
A61B17/00 A61B17/12 A61F2/82 A61M29/00 B29C53/00 B29C61/06 (Core/Invention);
A61B A61F (Subclass/Invention);
A61B (Subclass/Non-invention)
International (IPC 1-7): A61B17/00 A61B17/03 A61B17/08 A61B17/12 A61F2/01 A61M25/00 A61M29/00 B29C53/60 B29C61/00
CPC: A61B2017/00867 B29C61/0608 A61B17/12113 A61B2017/1205 A61B2017/12072 A61B2017/12077 A61L2430/36 B29C61/00 A61B17/12022 A61B17/12145 A61B17/1215 A61B17/12172 A61B17/12177 A61B2017/00526 A61F2/01 A61F2002/30092 A61F2210/0014 A61L31/022 A61L31/048 A61L31/06 B29C53/76 B29C53/821 B29K2029/00 B29L2031/753 B29L2031/7734
European: A61B17/12P A61B17/12P5B1 A61B17/12P7C1 A61B17/12P7C3 A61B17/12P7W1 A61B17/12P7W3 A61L31/02B A61L31/04H A61L31/06 B29C53/76 B29C53/82B B29C61/00 B29C61/06B K61B17/00M K61B17/00S12 K61B17/12P2 K61F2/01 K61F2/30A1W20 K61F210/00D L29K29/00 L29L31/753 L29L31/7734
US: 140/92.1 606/151 606/158 606/191 606/194 606/198 606/200 606/200P

Family:

Publication number	Publication date	Application number	Application date
AT380504 E	20071215	AT19990945520T	19990827
AU199958106 A1	20000321	AU19990058106	19990827
AU199958106 A5	20000321	AU19990058106	19990827
AU2001267053 AA	20011217	AU20010267053	20010607
AU200167053 A5	20011217	AU20010067053	20010607
AU748677 B2	20020613	AU19990058106	19990827
BRPI9913287 A	20010515	BR1999PI13287	19990827
CA2186768 AA	19970330	CA19962186768	19960927
CA2186768 C	20001212	CA19962186768	19960927
CA2341704 AA	20010226	CA19992341704	19990827
CA2341704 C	20080708	CA19992341704	19990827
CA2412486 AA	20021206	CA20012412486	20010607
DE69630728 D1	20031224	DE19966030728	19960419
DE69630728 T2	20041007	DE19966030728T	19960419
DE69630728 T3	20080124	DE19966030728T	19960419
DE69637680 D1	20081023	DE19966037680	19960419
DE69638026 D1	20091022	DE19966038026	19960419
DE69937740 D1	20080124	DE19996037740	19990827
DE69937740 T2	20081204	DE19996037740T	19990827
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EP0743047 B1	20031119	EP19960302744	19960419
EP0743047 B2	20070627	EP19960302744	19960419
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EP0765636 A3	19970716	EP19960307158	19960930
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EP1105054 B1	20071212	EP19990945520	19990827
EP1292234 A2	20030319	EP20010944666	20010607
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EP1941845 B1	20090909	EP20080007793	19960419
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HK1063596 A1	20081128	HK20040106312	20040824
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JP3024071 B2	20000321	JP19960260005	19960930
JP3665133 B2	20050629	JP19960100567	19960422
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JP9168541 A2	19970630	JP19960260005	19960930
KR20010073020 A	20010731	KR20017002493	19990827
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NO20010955 A0	20010226	NO20010000955	20010226
US2005090855 AA	20050428	US20030664001	20030916
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US5766219 A	19980616	US19970799439	19970213
US5911731 A	19990615	US19970949066	19971010
US6090125 A	20000718	US19980089328	19980602
US6171326 BA	20010109	US19980140495	19980827
US6638291 BA	20031028	US20000590794	20000608
US7316701 BB	20080108	US20030664001	20030916
US8790363 BB	20140729	US20060436200	20060517
WO0012016 A1	20000309	WO1999US20391	19990827
WO0012016 C2	20001005	WO1999US20391	19990827
WO0193937 A2	20011213	WO2001US40892	20010607
WO0193937 A3	20020815	WO2001US40892	20010607

Priority:

CA19962186768	19960927	EP19960302744	19960419	EP20030078597	19960419
US19970949066	19971010	US19950536624	19950929	US19950536624	19950929
US19950425106	19950420	US19980089328	19980602	US19970799439	19970213
WO1999US20391	19990827	US20000590794	20000608	WO2001US40892	20010607
US19980140495	19980827	US20030664001	20030916	US20060436200	20060517

Probable Assignee: DEPUY SYNTHES PRODUCTS LLC

Assignee(s): (std): DEPUY SYNTHES PRODUCTS LLC ; DOAN HONG ; HORTON JOSEPH A ; FERRERA DAVID A ; KURZ DANIEL ; LEI LOK A ; MICRUS CORP ; PHAM PETE PHONG ; UNIV SOUTH CAROLINA ; TARGET THERAPEUTICS INC ; MUSC FOUND FOR RES DEV ; WILSON PETER ; SEIN LWYN CRYSTAL K ; MICRUS ENDOVASCULAR CORP

Assignee(s): STRYKER CORP ; STRYKER OPERATIONS LTD NV ; MEDICAL UNIV OF SOUTH CAROLINA ; MICRUS CORP MOUNTAIN VIEW ; SEIN LWIN CRYSTAL ; MICRUS ENDOVASCULAR LLC ; STRYKER EUROPEAN HOLDINGS I LLC ; STRYKER MEDTECH LTD ; MUSC FOUNDATION FOR RESEARCH DEVELOPMENT ; TAAGET SERAPIYUUTEIKUSU INC ; HAND INNOVATIONS LLC ; KURZ DANIEL R ; BOSTON SCIENTIFIC LTD ; BOSTON SCIENTIFIC SCIMED INC ; CODMAN AND SHURTLEFF INC ; DEPUY SPINE LLC ; MEDICAL UNIV ; MEDICAL UNIV OF SAUSU CAROLINA

Inventor(s): (std): CRYSTAL K SEIN LWYN ; DANIEL R KURZ ; DAVID A FERRERA ; DOAN HONG ; FERRERA DAVID ; HON DOAN ; HORTON JOSEPH A ; LEI LOK ; LOK A LEI ; PETER WILSON ; PHAM PETE PHONG ; PIITO FUON PAAMU ; SEIN LWYN CRYSTAL ; WILSON PETER ; SEIN LWYN CRYSTAL K ; SEIN LWIN CRYSTAL ; LEI LOK A ; KURZ DANIEL ; FERRERA DAVID A ; KURZ DANIEL R ; FERREIRA DAVID A

Inventor(s): DAVID A FERREIRA ; HORTON JOSEPH ; DANIEL KURZ ; CRYSTAL SEIN LWIN ; JOSEPH A HORTON ; LEI LOKA ; JIYOOZEFU EI HOOTON

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; OGILVY RENAULT LLP SENCRL SRL; SMART AND BIGGAR; MCLEISH NICHOLAS ALISTAIR MAXWELL ET AL; MCLEISH NICHOLAS ALISTAIR MAXWELL; JEONG SANG GOO; SHIN HYUN MOON; LEE BYONG HO; LEE BUM RAE; FULWIDER PATTON LEE AND UTECHT LLP, HOWARD HUGHES CENTER; FULWIDER PATTON LEE AND UTECHT LLP HOWARD HUGHES CENTER; FULWIDER PATTON; FULWIDER PATTON LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT380504 E	20071215	LSGT	+	granted / extensions (spc, cpc, pte)	
AT380504 E	20080615	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU199958106 A1	20000321	LSPB	+	published / reissued	
AU199958106 A5	20000321	LSPB	+	published / reissued	
AU2001267053 AA	20011217	LSPB	+	published / reissued	
AU200167053 A5	20011217	LSPB	+	published / reissued	
AU748677 B2	20020613	LSGT	+	granted / extensions (spc, cpc, pte)	
AU748677 B2	20021010	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
BRPI9913287 A	20010515	LSPB	+	published / reissued	
BRPI9913287 A	20031209	LSRV	-FA10	DISMISSAL: DISMISSAL - ARTICLE 33 OF INDUSTRIAL PROPERTY LAW	
BRPI9913287 A	20040727	LSRV	-B11Y	DEFINITIVE DISMISSAL ACC. ARTICLE 33 OF IPL - EXTENSION OF TIME LIMIT FOR REQUEST OF EXAMINATION EXPIRED	
CA2186768 AA	19970330	LSPB	+	published / reissued	
CA2186768 AA	19960927	LSES	+EEER	EXAMINATION REQUEST	

CA2186768 AA	20090928	LSLE	-MKLA	LAPSED	
CA2186768 C	20001212	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2341704 AA	20010226	LSPB	+	published / reissued	
CA2341704 AA	20010226	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2341704 AA	20040526	LSES	+EEER	EXAMINATION REQUEST	
CA2341704 C	20080708	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2412486 AA	20021206	LSPB	+	published / reissued	
CA2412486 AA	20021206	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2412486 AA	20070607	LSLE	-FZDE	DEAD	
DE69630728 D1	20041118	LSOP	-8363	OPPOSITION AGAINST THE PATENT	
DE69630728 D1	20070906	LSOP	+8366	RESTRICTED MAINTAINED AFTER OPPOSITION PROCEEDINGS	
DE69630728 D1	20080529	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	OWNER NAME : MICRUS ENDOVASCULAR CORP., SAN JOSE, CALIF., US
DE69630728 T2	20041007	LSGT	+	granted / extensions (spc, cpc, pte)	
DE69630728 T3	20080124	LSGT	+	granted / extensions (spc, cpc, pte)	
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DE69638026 D1	20100930	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE69937740 D1	20090108	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE69937740 T2	20081204	LSGT	+	granted / extensions (spc, cpc, pte)	
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EP0743047 A2	19971126	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19970925
EP0743047 A2	19990331	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MICRUS CORPORATION
EP0743047 A2	20010725	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20010608
EP0743047 A2	20031119	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP0743047 A2	20041013	LSOP	-26	OPPOSITION FILED	OPPONENT NAME : BOSTON SCIENTIFIC LTD. EFFECTIVE DATE : 20040818
EP0743047 A2	20041201	LSOP	-NLR1	NL: OPPOSITION HAS BEEN FILED WITH THE EPO	OPPONENT NAME : BOSTON SCIENTIFIC LTD.
EP0743047 A2	20070627	LSRE	27A	MAINTAINED AS AMENDED	EFFECTIVE DATE : 20070627
EP0743047 A2	20070903	LSOP	NLR2	NL: DECISION OF OPPOSITION	EFFECTIVE DATE : 20070627
EP0743047 A2	20080411	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : CD
EP0743047 A2	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20090429 YEAR OF FEE PAYMENT : 14
EP0743047 A2	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090417 YEAR OF FEE PAYMENT : 14
EP0743047 A2	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20090423 YEAR OF FEE PAYMENT : 14
EP0743047 A2	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL	REF COUNTRY CODE : GB

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EP0743047 A2	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100426 YEAR OF FEE PAYMENT : 15
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EP0743047 A2	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120413 YEAR OF FEE PAYMENT : 17
EP0743047 A2	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120425 YEAR OF FEE PAYMENT : 17
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EP0743047 A2	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120504 YEAR OF FEE PAYMENT : 17
EP0743047 A2	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120418 YEAR OF FEE PAYMENT : 17
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EP0743047 A2	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130508 YEAR OF FEE PAYMENT : 18
EP0743047 A2	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130417 YEAR OF FEE PAYMENT : 18
EP0743047 A2	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130625 YEAR OF FEE PAYMENT : 18
EP0743047 A2	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20130410 YEAR OF FEE PAYMENT : 18
EP0743047 A2	20140731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20140416 YEAR OF FEE PAYMENT : 19
EP0743047 A2	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20140410 YEAR OF FEE PAYMENT : 19
EP0743047 A2	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20140430 YEAR OF FEE PAYMENT : 19

EP0743047 A2	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20140409 YEAR OF FEE PAYMENT : 19
EP0743047 A2	20150408	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 20
EP0743047 A2	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20150414 YEAR OF FEE PAYMENT : 20
EP0743047 A2	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20150415 YEAR OF FEE PAYMENT : 20
EP0743047 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20150408 YEAR OF FEE PAYMENT : 20
EP0743047 A2	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20150409 YEAR OF FEE PAYMENT : 20
EP0743047 A2	20160419	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R071 REF DOCUMENT NUMBER : 69630728 COUNTRY OF REF DOCUMENT : DE
EP0743047 A2	20160511	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : PE20 EXPIRY DATE : 20160418
EP0743047 A2	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20160418
EP0743047 B1	20031119	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0743047 B2	20070627	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0765636 A2	19970402	LSPB	+	published / reissued	
EP0765636 A2	19980311	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19980106
EP0765636 A2	19990707	LSAS	RAP3	CORRECTION OF THE ADDRESS OR NAME OF APPLICANT (A DOCUMENT)	OWNER NAME : TARGET THERAPEUTICS, INC.
EP0765636 A2	20020220	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20020109
EP0765636 A2	20020515	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : BOSTON SCIENTIFIC LIMITED
EP0765636 A2	20021120	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20020522
EP0765636 A2	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : DOAN, HONG
EP0765636 A2	20070808	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : PHAM, PETE PHONG
EP1105054 A1	20010613	LSPB	+	published / reissued	
EP1105054 A1	20010613	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20010301
EP1105054 A1	20010711	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : FERRERA, DAVID, A.
EP1105054 A1	20010711	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : KURZ, DANIEL, R.
EP1105054 A1	20010711	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : WILSON, PETER
EP1105054 A1	20010711	LSRE	RIN1	INVENTOR	PARTYTYPE : INVENTOR

				(CORRECTION)	INVENTOR : SEIN-LWYN, CRYSTAL, K.
EP1105054 A1	20010711	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : LEI, LOK, A.
EP1105054 A1	20010808	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : FERRERA, DAVID, A.
EP1105054 A1	20010808	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : KURZ, DANIEL, R.
EP1105054 A1	20010808	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : WILSON, PETER
EP1105054 A1	20010808	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : SEIN-LWYN, CRYSTAL, K.
EP1105054 A1	20010808	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : LEI, LOK, A.
EP1105054 A1	20050720	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20050603
EP1105054 A1	20071017	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : MICRUS ENDOVASCULAR CORPORATION
EP1105054 A1	20071107	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : MICRUS ENDOVASCULAR CORPORATION
EP1105054 A1	20071212	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1105054 A1	20071231	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1105054 A1	20080109	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1105054 A1	20080430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080312
EP1105054 A1	20080501	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2297935 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) :
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				POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20071212
EP1105054 A1	20080930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080512
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EP1105054 A1	20081119	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20080915
EP1105054 A1	20090130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20080313
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EP1105054 A1	20090731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CY NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20071212
EP1105054 A1	20100630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20080827
EP1105054 A1	20151030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20150713 YEAR OF FEE PAYMENT : 17
EP1105054 A1	20160712	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 18
EP1105054 A1	20160930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20160810 YEAR OF FEE PAYMENT : 18
EP1105054 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160823 YEAR OF FEE PAYMENT : 18
EP1105054 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160822 YEAR OF FEE PAYMENT : 18
EP1105054 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160824 YEAR OF FEE PAYMENT : 18

EP1105054 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20160812 YEAR OF FEE PAYMENT : 18
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EP1105054 A1	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160712 YEAR OF FEE PAYMENT : 18
EP1105054 A1	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160712 YEAR OF FEE PAYMENT : 18
EP1105054 B1	20071212	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1292234 A2	20030319	LSPB	+	published / reissued	
EP1292234 A2	20030319	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20021217
EP1292234 A2	20030709	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : FERRERA, DAVID, A.
EP1292234 A2	20030709	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : LEI, LOK, A.
EP1292234 A2	20030709	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : KURZ, DANIEL
EP1292234 A2	20030709	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : HORTON, JOSEPH, A.
EP1292234 A2	20030709	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : WILSON, PETER
EP1292234 A2	20030709	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : SEIN-LWIN, CRYSTAL
EP1292234 A2	20070620	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20070103
EP1402847 A1	20040331	LSPB	+	published / reissued	
EP1402847 A1	20040825	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20040623
EP1402847 A1	20041222	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : DE FR GB NL
EP1402847 A1	20061220	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20060207
EP1402847 A1	20080521	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MICRUS ENDOVASCULAR CORPORATION
EP1402847 A1	20080910	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1402847 A1	20081128	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : GR REF DOCUMENT NUMBER : 1063596 COUNTRY OF REF DOCUMENT : HK
EP1402847 A1	20090819	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20090611
EP1402847 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20090429 YEAR OF FEE PAYMENT : 14
EP1402847 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090417 YEAR OF FEE PAYMENT : 14
EP1402847 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20090423 YEAR OF FEE PAYMENT : 14
EP1402847 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL	REF COUNTRY CODE : GB

				FEES PAID TO NATIONAL OFFICE	PAYMENT DATE : 20090429 YEAR OF FEE PAYMENT : 14
EP1402847 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100506 YEAR OF FEE PAYMENT : 15
EP1402847 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100428 YEAR OF FEE PAYMENT : 15
EP1402847 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20100424 YEAR OF FEE PAYMENT : 15
EP1402847 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100426 YEAR OF FEE PAYMENT : 15
EP1402847 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110413 YEAR OF FEE PAYMENT : 16
EP1402847 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110426 YEAR OF FEE PAYMENT : 16
EP1402847 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110413 YEAR OF FEE PAYMENT : 16
EP1402847 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20110420 YEAR OF FEE PAYMENT : 16
EP1402847 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120425 YEAR OF FEE PAYMENT : 17
EP1402847 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120413 YEAR OF FEE PAYMENT : 17
EP1402847 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120413 YEAR OF FEE PAYMENT : 17
EP1402847 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120418 YEAR OF FEE PAYMENT : 17
EP1402847 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120504 YEAR OF FEE PAYMENT : 17
EP1402847 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120504 YEAR OF FEE PAYMENT : 17
EP1402847 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130508 YEAR OF FEE PAYMENT : 18
EP1402847 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130417 YEAR OF FEE PAYMENT : 18
EP1402847 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20130410 YEAR OF FEE PAYMENT : 18
EP1402847 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130625 YEAR OF FEE PAYMENT : 18
EP1402847 A1	20140731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20140416 YEAR OF FEE PAYMENT : 19
EP1402847 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20140410 YEAR OF FEE PAYMENT : 19
EP1402847 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20140430 YEAR OF FEE PAYMENT : 19

EP1402847 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20140409 YEAR OF FEE PAYMENT : 19
EP1402847 A1	20150408	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 20
EP1402847 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20150414 YEAR OF FEE PAYMENT : 20
EP1402847 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20150415 YEAR OF FEE PAYMENT : 20
EP1402847 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20150409 YEAR OF FEE PAYMENT : 20
EP1402847 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20150408 YEAR OF FEE PAYMENT : 20
EP1402847 A1	20160419	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R071 REF DOCUMENT NUMBER : 69637680 COUNTRY OF REF DOCUMENT : DE
EP1402847 A1	20160511	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : PE20 EXPIRY DATE : 20160418
EP1402847 A1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20160418
EP1402847 B1	20080910	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1941845 A1	20080709	LSPB	+	published / reissued	
EP1941845 A1	20081022	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080904
EP1941845 A1	20081112	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20081014
EP1941845 A1	20090318	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : DE FR GB NL
EP1941845 A1	20090401	LSRE	RTI1	TITLE (CORRECTION)	DESCRIPTION : METHOD OF MAKING ANATOMICALLY SHAPED VASOOCCLUSIVE DEVICE
EP1941845 A1	20090909	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1941845 A1	20100507	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : GR REF DOCUMENT NUMBER : 1123965 COUNTRY OF REF DOCUMENT : HK
EP1941845 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100506 YEAR OF FEE PAYMENT : 15
EP1941845 A1	20100818	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20100610
EP1941845 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100428 YEAR OF FEE PAYMENT : 15
EP1941845 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20100424 YEAR OF FEE PAYMENT : 15
EP1941845 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100426 YEAR OF FEE PAYMENT : 15

EP1941845 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110426 YEAR OF FEE PAYMENT : 16
EP1941845 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110413 YEAR OF FEE PAYMENT : 16
EP1941845 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110413 YEAR OF FEE PAYMENT : 16
EP1941845 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20110420 YEAR OF FEE PAYMENT : 16
EP1941845 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120425 YEAR OF FEE PAYMENT : 17
EP1941845 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120413 YEAR OF FEE PAYMENT : 17
EP1941845 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20120413 YEAR OF FEE PAYMENT : 17
EP1941845 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120418 YEAR OF FEE PAYMENT : 17
EP1941845 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120504 YEAR OF FEE PAYMENT : 17
EP1941845 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120504 YEAR OF FEE PAYMENT : 17
EP1941845 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130508 YEAR OF FEE PAYMENT : 18
EP1941845 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130417 YEAR OF FEE PAYMENT : 18
EP1941845 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20130410 YEAR OF FEE PAYMENT : 18
EP1941845 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130625 YEAR OF FEE PAYMENT : 18
EP1941845 A1	20140731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20140416 YEAR OF FEE PAYMENT : 19
EP1941845 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20140410 YEAR OF FEE PAYMENT : 19
EP1941845 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20140430 YEAR OF FEE PAYMENT : 19
EP1941845 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20140409 YEAR OF FEE PAYMENT : 19
EP1941845 A1	20150408	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 20
EP1941845 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20150414 YEAR OF FEE PAYMENT : 20
EP1941845 A1	20150731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20150415 YEAR OF FEE PAYMENT : 20
EP1941845 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO	REF COUNTRY CODE : FR PAYMENT DATE : 20150408

				NATIONAL OFFICE	YEAR OF FEE PAYMENT : 20
EP1941845 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20150409 YEAR OF FEE PAYMENT : 20
EP1941845 A1	20160419	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R071 REF DOCUMENT NUMBER : 69638026 COUNTRY OF REF DOCUMENT : DE
EP1941845 A1	20160511	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : PE20 EXPIRY DATE : 20160418
EP1941845 A1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20160418
EP1941845 B1	20090909	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2297935 T3	20080501	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1063596 A1	20081128	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1063596 A1	20160506	LSLE	-PE	PATENT EXPIRED	EFFECTIVE DATE : 20160418
HK1063596 A3	20050107	LSPB	+	published / reissued	
HK1123965 A1	20100507	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1123965 A1	20160506	LSLE	-PE	PATENT EXPIRED	EFFECTIVE DATE : 20160418
JP2002523172 T2	20020730	LSPB	+	published / reissued	
JP2004500929 T2	20040115	LSPB	+	published / reissued	
JP3024071 B2	20000321	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3024071 B2	20041228	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP3024071 B2	20060121	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP3665133 B2	20050629	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3665133 B2	20040628	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20040625
JP3665133 B2	20040927	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20040924
JP3665133 B2	20050307	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP3665133 B2	20050310	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20050309
JP3665133 B2	20050407	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20050331
JP3665133 B2	20050408	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP3665133 B2	20080422	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20090408 YEAR OF FEE PAYMENT : 4
JP3665133 B2	20090407	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20100408 YEAR OF FEE PAYMENT : 5

JP3665133 B2	20100406	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110408 YEAR OF FEE PAYMENT : 6
JP3665133 B2	20120329	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120408 YEAR OF FEE PAYMENT : 7
JP3665133 B2	20130328	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130408 YEAR OF FEE PAYMENT : 8
JP3665133 B2	20130409	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140408 YEAR OF FEE PAYMENT : 9
JP3665133 B2	20160412	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP3665133 B2	20160422	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP4065665 B2	20080326	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4065665 B2	20060804	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060803
JP4065665 B2	20070814	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20070813
JP4065665 B2	20071114	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20071113
JP4065665 B2	20071206	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4065665 B2	20071211	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20071210
JP4065665 B2	20080110	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080107
JP4065665 B2	20080111	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4065665 B2	20080117	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4065665 B2	20110106	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4065665 B2	20110113	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4065665 B2	20110128	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4065665 B2	20110407	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4065665 B2	20120110	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 5
JP4065665 B2	20121227	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 5
JP4065665 B2	20140114	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4065665 B2	20150113	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250

JP4065665 B2	20160112	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4065665 B2	20170110	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP9094300 A2	19970408	LSPB	+	published / reissued	
JP9168541 A2	19970630	LSPB	+	published / reissued	
KR20010073020 A	20010731	LSPB	+	published / reissued	
NO20010955 A	20010424	LSPB	+	published / reissued	
US2005090855 AA	20050428	LSPB	+	published / reissued	
US2006241686 AA	20061026	LSPB	+	published / reissued	
US2006241686 AA	20130506	LSAS	AS	ASSIGNMENT	OWNER NAME : CODMAN AND SHURTLEFF, INC., MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MICRUS ENOVASCULAR LLC; REEL/FRAME:030352/0972 EFFECTIVE DATE : 20121230
US2006241686 AA	20130506	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SPINE, LLC, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CODMAN AND SHURTLEFF, INC.; REEL/FRAME:030352/0987 EFFECTIVE DATE : 20121230
US2006241686 AA	20130506	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SYNTHES PRODUCTS, LLC, MASSACHUSETTS DESCRIPTION : CHANGE OF NAME; ASSIGNOR:HAND INNOVATIONS LLC; REEL/FRAME:030353/0083 EFFECTIVE DATE : 20121231
US2006241686 AA	20130506	LSAS	AS	ASSIGNMENT	OWNER NAME : HAND INNOVATIONS LLC, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DEPUY SPINE, LLC; REEL/FRAME:030353/0075 EFFECTIVE DATE : 20121230
US5645558 A	19970708	LSGT	+	granted / extensions (spc, cpc, pte)	
US5645558 A	19950622	LSAS	AS	ASSIGNMENT	OWNER NAME : MEDICAL UNIVERSITY OF SOUTH CAROLINA, SOUTH CAROLI DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HORTON, JOSEPH A.; REEL/FRAME:007537/0287 EFFECTIVE DATE : 19950511
US5645558 A	19970922	LSAS	AS	ASSIGNMENT	OWNER NAME : MUSC FOUNDATION FOR RESEARCH DEVELOPMENT, SOUTH CA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SOUTH CAROLINA, MEDICAL UNIVERSITY OF; REEL/FRAME:008715/0450 EFFECTIVE DATE : 19970919
US5645558 A	19990217	LSAS	AS	ASSIGNMENT	OWNER NAME : MICRUS CORPORATION, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MUSC FOUNDATION FOR RESEARCH DEVELOPMENT; REEL/FRAME:009768/0523 EFFECTIVE DATE : 19960912
US5645558 A	20010117	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5645558 A	20021223	LSAS	AS	ASSIGNMENT	OWNER NAME : MICRUS CORPORATION, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MUSC

					FOUDATION FOR RESEARCH DEVELOPMENT; REEL/FRAME:013599/0733 EFFECTIVE DATE : 20021204
US5645558 A	20041203	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5645558 A	20090108	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5766219 A	19980616	LSGT	+	granted / extensions (spc, cpc, pte)	
US5766219 A	19980922	LSRE	CC	CERTIFICATE OF CORRECTION	
US5766219 A	20020211	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5766219 A	20021223	LSAS	AS	ASSIGNMENT	OWNER NAME : MICRUS CORPORATION, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MUSC FOUNDATION FOR RESEARCH DEVELOPMENT; REEL/FRAME:013599/0781 EFFECTIVE DATE : 20021204
US5766219 A	20051216	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5766219 A	20091216	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5911731 A	19990615	LSGT	+	granted / extensions (spc, cpc, pte)	
US5911731 A	20020924	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5911731 A	20061116	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5911731 A	20101122	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5911731 A	20101222	LSAS	AS	ASSIGNMENT	OWNER NAME : BOSTON SCIENTIFIC SCIMED, INC., MINNESOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PHAM, PETE PHONG; DOAN, HONG; REEL/FRAME:025560/0745 EFFECTIVE DATE : 20101222
US5911731 A	20110317	LSAS	AS	ASSIGNMENT	OWNER NAME : STRYKER CORPORATION, MICHIGAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BOSTON SCIENTIFIC SCIMED, INC.; REEL/FRAME:025969/0841 EFFECTIVE DATE : 20110103
US5911731 A	20110317	LSAS	AS	ASSIGNMENT	OWNER NAME : STRYKER NV OPERATIONS LIMITED, IRELAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BOSTON SCIENTIFIC SCIMED, INC.; REEL/FRAME:025969/0841 EFFECTIVE DATE : 20110103
US5911731 A	20151123	LSAS	AS	ASSIGNMENT	OWNER NAME : STRYKER MEDTECH LIMITED, MALTA DESCRIPTION : NUNC PRO TUNC ASSIGNMENT; ASSIGNOR:STRYKER NV OPERATIONS LIMITED; REEL/FRAME:037153/0034 EFFECTIVE DATE : 20151013
US5911731 A	20151123	LSAS	AS	ASSIGNMENT	OWNER NAME : STRYKER EUROPEAN HOLDINGS I, LLC, MICHIGAN DESCRIPTION : NUNC PRO TUNC ASSIGNMENT; ASSIGNOR:STRYKER MEDTECH LIMITED; REEL/FRAME:037153/0241 EFFECTIVE DATE : 20151013
US5911731 A	20160308	LSAS	AS	ASSIGNMENT	OWNER NAME : STRYKER MEDTECH LIMITED, MALTA DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE INCORRECT SERIAL # 09/905,670 AND 07/092,079

					PREVIOUSLY RECORDED AT REEL: 037153 FRAME: 0034. ASSIGNOR(S) HEREBY CONFIRMS THE NUNC PRO TUNC ASSIGNMENT; ASSIGNOR:STRYKER NV OPERATIONS LIMITED; REEL/FRAME:038039/0001 EFFECTIVE DATE : 20151013
US5911731 A	20160308	LSAS	AS	ASSIGNMENT	OWNER NAME : STRYKER EUROPEAN HOLDINGS I, LLC, MICHIGAN DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE INCORRECT LISTED SERIAL NOS. 09/905,670 AND 07/092,079 PREVIOUSLY RECORDED AT REEL: 037153 FRAME: 0241. ASSIGNOR(S) HEREBY CONFIRMS THE NUNC PRO TUNC ASSIGNMENT EFFECTIVE DATE 9/29/2014; ASSIGNOR:STRYKER MEDTECH LIMITED; REEL/FRAME:038043/0011 EFFECTIVE DATE : 20151013
US6090125 A	20000718	LSGT	+	granted / extensions (spc, cpc, pte)	
US6090125 A	20010424	LSRE	CC	CERTIFICATE OF CORRECTION	
US6090125 A	20021223	LSAS	AS	ASSIGNMENT	OWNER NAME : MICRUS CORPORATION, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MUSC FOUNDATION FOR RESEARCH DEVELOPMENT; REEL/FRAME:013599/0729 EFFECTIVE DATE : 20021204
US6090125 A	20040119	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6090125 A	20080118	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6090125 A	20110921	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6171326 BA	20010109	LSGT	+	granted / extensions (spc, cpc, pte)	
US6171326 BA	19981023	LSAS	AS	ASSIGNMENT	OWNER NAME : MICRUS CORPORATION, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FERRERA, DAVID A.; KURZ, DANIEL R.; WILSON, PETER; AND OTHERS; REEL/FRAME:009544/0474 EFFECTIVE DATE : 19981013
US6171326 BA	20011113	LSRE	CC	CERTIFICATE OF CORRECTION	
US6171326 BA	20040709	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6171326 BA	20080709	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6171326 BA	20120613	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6171326 BA	20140623	LSAS	AS	ASSIGNMENT	OWNER NAME : MICRUS ENDOVASCULAR CORPORATION, CALIFORNIA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:MICRUS CORPORATION; REEL/FRAME:033212/0072 EFFECTIVE DATE : 20050517
US6171326 BA	20140623	LSAS	AS	ASSIGNMENT	OWNER NAME : MICRUS ENDOVASCULAR LLC, CALIFORNIA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:MICRUS ENDOVASCULAR CORPORATION; REEL/FRAME:033212/0239 EFFECTIVE DATE : 20110222
US6171326 BA	20140716	LSAS	AS	ASSIGNMENT	OWNER NAME : CODMAN AND SHURTLEFF, INC., MASSACHUSETTS

					DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MICRUS ENDOVASCULAR LLC; REEL/FRAME:033319/0925 EFFECTIVE DATE : 20121230
US6171326 BA	20140716	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SPINE, LLC, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CODMAN AND SHURTLEFF, INC.; REEL/FRAME:033319/0969 EFFECTIVE DATE : 20121230
US6171326 BA	20140716	LSAS	AS	ASSIGNMENT	OWNER NAME : DEPUY SYNTHES PRODUCTS, LLC, MASSACHUSETTS DESCRIPTION : CHANGE OF NAME; ASSIGNOR:HAND INNOVATIONS LLC; REEL/FRAME:033332/0146 EFFECTIVE DATE : 20121231
US6171326 BA	20140716	LSAS	AS	ASSIGNMENT	OWNER NAME : HAND INNOVATIONS LLC, FLORIDA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DEPUY SPINE, LLC; REEL/FRAME:033320/0038 EFFECTIVE DATE : 20121230
US6638291 BA	20031028	LSGT	+	granted / extensions (spc, cpc, pte)	
US6638291 BA	20010130	LSAS	AS	ASSIGNMENT	OWNER NAME : MICRUS CORPORATION, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FERRERA, DAVID A.; WILSON, PETER; SEIN-LWYN, CRYSTAL K.; AND OTHERS; REEL/FRAME:011766/0303; SIGNING DATES FROM 20000814 TO 20001221
US6638291 BA	20040120	LSRE	CC	CERTIFICATE OF CORRECTION	
US6638291 BA	20070430	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6638291 BA	20110330	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6638291 BA	20151028	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6638291 BA	20151215	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151028
US7316701 BB	20080108	LSGT	+	granted / extensions (spc, cpc, pte)	
US7316701 BB	20110608	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7316701 BB	20160108	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7316701 BB	20160301	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160108
US8790363 BB	20140729	LSGT	+	granted / extensions (spc, cpc, pte)	
US8790363 BB	20141205	LSAS	AS	ASSIGNMENT	OWNER NAME : CODMAN AND SHURTLEFF, INC., MASSACHUSETTS DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE REMOVE SERIAL NUMBER 12/554,588 PREVIOUSLY RECORDED ON REEL 030352 FRAME 0973. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT; ASSIGNOR:MICRUS ENDOVASCULAR LLC; REEL/FRAME:034535/0733 EFFECTIVE DATE : 20121230
WO0012016 A1	20000309	LSPB	+	published / reissued	
WO0012016 C2	20010220	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 58106/99 COUNTRY OF REF

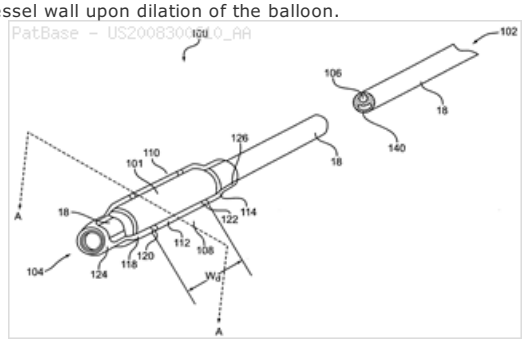
					DOCUMENT : AU
WO0012016 C2	20010226	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2341704 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO0012016 C2	20010226	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2341704 COUNTRY OF REF DOCUMENT : CA
WO0012016 C2	20010227	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1020017002493 COUNTRY OF REF DOCUMENT : KR
WO0012016 C2	20010301	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1999945520 COUNTRY OF REF DOCUMENT : EP
WO0012016 C2	20010613	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1999945520 COUNTRY OF REF DOCUMENT : EP
WO0012016 C2	20010628	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0012016 C2	20010731	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1020017002493 COUNTRY OF REF DOCUMENT : KR
WO0012016 C2	20020926	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 58106/99 COUNTRY OF REF DOCUMENT : AU
WO0012016 C2	20060608	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1020017002493 COUNTRY OF REF DOCUMENT : KR
WO0012016 C2	20071212	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1999945520 COUNTRY OF REF DOCUMENT : EP
WO0193937 A2	20011213	LSPB	+	published / reissued	
WO0193937 A3	20021114	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0193937 A3	20021206	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2412486 COUNTRY OF REF DOCUMENT : CA
WO0193937 A3	20021209	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP REF DOCUMENT NUMBER : 2002 501508 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO0193937 A3	20021217	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2001944666 COUNTRY OF REF DOCUMENT : EP
WO0193937 A3	20030319	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001944666 COUNTRY OF REF DOCUMENT : EP
WO0193937 A3	20070103	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001944666 COUNTRY OF REF DOCUMENT : EP

70) Family number: 42617142 (US2008300610A)

Title: DEVICE FOR TREATING HARDENED LESIONS AND METHOD OF USE THEREOF

Abstract: Source: US2008300610A A balloon catheter is provided that may be used to dilate hardened regions of a stenosis on a vessel wall. The balloon catheter is provided with cutting elements that extend along a surface of a balloon. At least one bioactive is present, either on the cutting element, within the interior of the balloon, within the material of the balloon or on an outside surface of the balloon. The bioactive is delivered to the vessel wall upon dilation of the balloon.

Classifications:
International (IPC 8-9): A61B17/22 A61B17/3207 A61F2/958 A61M25/10 A61M29/00 A61M31/00 A61M37/00 (Advanced/Invention); A61B17/00 A61B17/22 A61M25/00 (Advanced/Non-invention)
CPC: A61B2017/00539 A61B2017/00778 A61B2017/22061 A61M2025/0057 A61M2025/1013 A61M2025/105 A61M2025/1061 A61M2025/1086 A61M2025/109 A61M25/104 A61B17/320725
European: A61B17/3207E A61M25/10P K61B17/00N2 K61B17/00R4 K61B17/22H5 K61M25/00S5 K61M25/10D1 K61M25/10Z19 K61M25/10Z21 K61M25/10Z3 K61M25/10Z8
US: 1/1 604/22 604/22P 604/509 604/509S 606/159 606/159P 606/159S



Family:

Publication number	Publication date	Application number	Application date
DE602008041334 D1	20160107	DE200860041334T	20081201
US2008300610 AA	20081204	US20070809158	20070531
US2010286594 AA	20101111	US20100837834	20100716
US2013338571 AA	20131219	US20130971348	20130820
US2015005695 AA	20150101	US20140487378	20140916
US8906049 BB	20141209	US20130971348	20130820
US9119944 BB	20150901	US20140487378	20140916

Priority:

EP20080876483 20081201 US20070809158 20070531 US20100837834 20100716
US20130971348 20130820 US20140487378 20140916 US20110130420 20110720
WO2008US85150 20081201

Probable Assignee: GLOBAL THERAPEUTICS INC

Assignee(s): (std): COOK INC ; COOK MEDICAL TECHNOLOGIES LLC ; GLOBAL THERAPEUTICS INC

Assignee(s): COOK MEDICAL TECHNOLOGIES LLC BLOOMINGTON

Inventor(s): (std): AGGERHOLM STEEN ; CHAMBERS SEAN D ; HORN JOE

Agent(s): BRINKS HOFER GILSON AND LIONE/CHICAGO/COOK; BRINKS HOFER GILSON AND LIONE CHICAGO COOK; BRINKS GILSON AND LIONE

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2008300610 AA	20081204	LSPB	+	published / reissued	
US2008300610 AA	20070802	LSAS	AS	ASSIGNMENT	OWNER NAME : COOK INCORPORATED, INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CHAMBERS, SEAN D.; REEL/FRAME:019639/0178 EFFECTIVE DATE : 20070627
US2010286594 AA	20101111	LSPB	+	published / reissued	
US2013338571 AA	20131219	LSPB	+	published / reissued	
US2013338571 AA	20130821	LSAS	AS	ASSIGNMENT	OWNER NAME : COOK MEDICAL TECHNOLOGIES LLC, INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COOK INCORPORATED; REEL/FRAME:031050/0588 EFFECTIVE DATE : 20130812
US2015005695 AA	20150101	LSPB	+	published / reissued	
US2015005695 AA	20150724	LSAS	AS	ASSIGNMENT	OWNER NAME : COOK MEDICAL TECHNOLOGIES LLC, INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COOK GROUP INCORPORATED; REEL/FRAME:036169/0770 EFFECTIVE DATE : 20150721

US8906049 BB	20141209	LSGT	+	granted / extensions (spc, cpc, pte)
US9119944 BB	20150901	LSGT	+	granted / extensions (spc, cpc, pte)

71) Family number: 47789786 (DE102009022819A1)

Title: **NATURAL** **FIBER**-REINFORCED THERMOPLASTIC PLASTIC FOR MANUFACTURING PLASTIC-DIE CASTING COMPONENTS FOR VACUUM CLEANER NOZZLES, HAS **POLYMERIC** BASIC SUBSTANCE SUCH AS POLYPROPYLENE OR BIO-POLYMER

Abstract: The **natural** **fiber**-reinforced thermoplastic plastic has a **polymeric** basic substance such as polypropylene or bio-polymer, which is formed from **polylactic** **acid** and polyhydroxybutyric **acid**. A housing, a gliding sole and a carrier of the functional elements extendible at the lower side of the vacuum cleaner nozzle are formed from **natural** **fiber**-reinforced plastic by injection molding.

Classifications:
International (IPC 8-9): A47L9/02 (Advanced/Invention)
CPC: A47L9/02 B29C45/0005 B29K2101/12 B29K2105/06 B29K2311/10
European: A47L9/02 B29C45/00D L29K101/12 L29K105/06 L29K311/10

Family:

Publication number	Publication date	Application number	Application date
DE102009022819 A1	20101209	DE200910022819	20090527

Priority:

DE200910022819 20090527

Probable Assignee: WESSEL WERK GMBH

Assignee(s): (std): WESSEL WERK GMBH

Inventor(s): (std): DILGER HORST ; JUNGJOHANN UDO ; KAFFENBERGER DIETER

Legal status (INPADOC)

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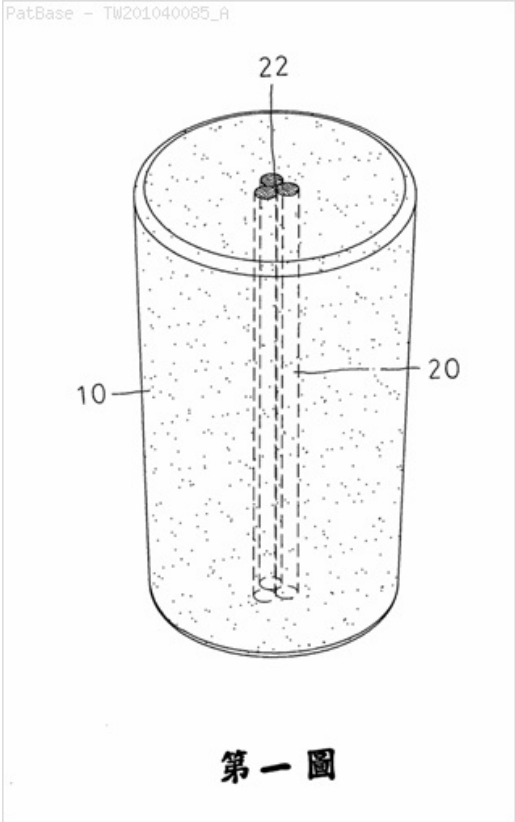
Patent	Date recorded	Event group	Code	Event	Details
DE102009022819 A1	20101209	LSPB	+	published / reissued	
DE102009022819 A1	20101209	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE102009022819 A1	20130814	LSES	R016	RESPONSE TO EXAMINATION COMMUNICATION	
DE102009022819 A1	20130816	LSES	R016	RESPONSE TO EXAMINATION COMMUNICATION	
DE102009022819 A1	20131204	LSRV	-R002	REFUSAL DECISION IN EXAMINATION/REGISTRATION PROCEEDINGS	
DE102009022819 A1	20140605	LSRV	-R003	REFUSAL DECISION NOW FINAL	EFFECTIVE DATE : 20140325

72) Family number: 48397643 (TW201040085A)

Title: GAS-PERMEABLE CORK

Abstract: Source: TW201040085A A gas-permeable cork is disclosed. Particularly, during formation of the cork, **fiber** is impregnated with **polymeric** plastic to form continuous gas-permeable holes in the cork, wherein the gas permeability is determined by the size, shape, distribution and strand of the **fiber**. The **polymeric** plastic can be selected from polypropylene (PP), polyethylene (PE), degradable **polylactic acid** (PLA), theremoplastic elastomer (TPR or TPE), hydrogenated styrene thermoplastic elastomer (styrene ethylene butadiene styrene (SEBS)), polystyrene (PS), ethylene vinyl acetate (EVA) copolymer, or foaming or non-foaming article of resin (thermoplastic polyurethane (TPU)). The **fiber** can be selected from **natural fiber**, **polymeric fiber**, metal **fiber**, carbon **fiber**, graphite **fiber**, glass **fiber**, or basalt **fiber**. The gas-permeable cork provided by this invention can avoid cork corrosion and peculiar smell, caused by long-term storage, from changing the taste. In addition, corresponding to the characteristics of the stored wine, corks with different gas-permeability can be made to make wine stored longer and with better taste.

Classifications:
International (IPC 8-9): B65D39/04 (Advanced/Invention); B65D39/04 (Core/Non-invention)
CPC: Y02W90/12



Family:

Publication number	Publication date	Application number	Application date
TW201040085 A	20101116	TW20090114725	20090504
TWI356032 B	20120111	TW20090114725	20090504

Priority:
TW20090114725 20090504

Probable Assignee: ZHANG RUI YANG
Assignee(s): (std): ZHANG RUI YANG
Assignee(s): ZHANG RUI YANGTW
Inventor(s): (std): ZHANG RUI YANG

Legal status (INPADOC)

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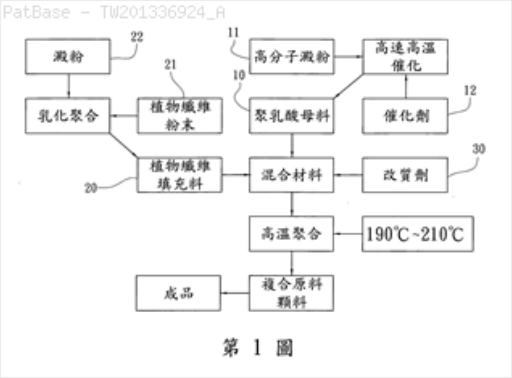
Patent	Date recorded	Event group	Code	Event	Details
TW201040085 A	20101116	LSPB	+	published / reissued	
TWI356032 B	20120111	LSGT	+	granted / extensions (spc, cpc, pte)	

73) Family number: 54754126 (TW201336924A)

Title: DEGRADABLE **POLYLACTIC** **ACID** PLANT **FIBER** COMPOSITE MATERIAL

Abstract: Source: TW201336924A Disclosed is a degradable **polylactic** **acid** plant **fiber** composite material, characterized by using a catalyst to catalyze **polymeric** starch **polylactic** **acid** at high speed and high temperature so as to change its molecular weight for forming **polylactic** **acid** parent stock having plasticity allowing stretch from all four directions, then using agricultural waste or residual waste after agricultural process to carry out high speed grinding by using the physical principle of temperature-lowering for obtaining powder having required particle size and number, carrying out high-temperature sterilization and then carrying out emulsification and polymerization with starch to obtain plant **fiber** filler, and finally mixing said **polylactic** **acid** parent stock, the plant **fiber** filler and an improver according to a required ratio and then carrying out high-temperature (190 and #x2103;~ 210 and #x2103;) polymerization to obtain biodegradable composite material used for various **natural**, non-toxic and green eco-friendly products.

Classifications:
International (IPC 8-9): C08K7/02 C08L101/16
C08L67/00 (Advanced/Invention)



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Family:

Publication number	Publication date	Application number	Application date
TW201336924 A	20130916	TW20120106782	20120301
TWI454524 B	20141001	TW20120106782	20120301

Priority:
TW20120106782 20120301

Probable Assignee: JI YONG MING
Assignee(s): (std): JI YONG MING
Inventor(s): (std): JI YONG MING

Legal status (INPADOC)

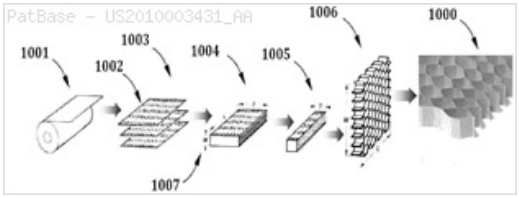
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Patent	Date recorded	Event group	Code	Event	Details
TW201336924 A	20130916	LSPB	+	published / reissued	
TWI454524 B	20141001	LSGT	+	granted / extensions (spc, cpc, pte)	

74) Family number: 44210765 (US2010003431A)

Title: COMPOSITE MATERIALS

Abstract: Source: US2010003431A Composite materials having at least one of the following desirable properties is described. Such properties include: rigidity, printability, water-proofness, pliability, recyclable, thermochromic, antimicrobial, electrically conductive, compostable or biodegradability. The composite includes a filler-containing layer and a **fiber**-containing layer substantially coupled together continuously across the at least one surface of the layers. These composites maybe useful in various markets including, but not limited to, construction, packaging, shipping, consumer products and medical packaging. The inventive composites provide, advantages such as reduction of environmental footprint, improved mechanical properties, usefulness/cost ratio, reduction in material costs compared to prior art, and cosmetic performance are embodied in the present invention.



Classifications:
International (IPC 8-9): B32B1/02 B32B27/32 B32B3/12 B32B5/16 (Advanced/Invention);
B32B1/00 B32B27/32 B32B3/12 B32B5/16 (Core/Invention)
CPC: B32B1/02 Y10T428/1303 Y10T428/24149 Y10T428/25 Y10T428/251 Y10T428/258 Y10T428/259 Y10T428/31938 B32B3/12 B32B27/06 B32B27/20 B32B29/002 B32B2250/40 B32B2262/103 B32B2262/106 B32B2264/105 B32B2264/108 B32B2307/202 B32B2307/21 B32B2307/31 B32B2307/412 B32B2307/7145 B32B2307/716 B32B2307/7163 B32B2307/72 B32B2307/7242 B32B2307/7265 B32B2307/728 B32B2307/734 B32B2307/75 B32B2419/00 B32B2439/00 B32B2439/80
European: B32B1/02
US: 428/116 428/116S 428/323 428/323S 428/324 428/324S 428/330 428/330S 428/331 428/331S 428/34.2 428/34.200P 428/523 428/523S

Family:

Publication number	Publication date	Application number	Application date
US2010003431 AA	20100107	US20090488556	20090620

Priority:

US20080129524P 20080702 US20080194330P 20080926 US20090488556 20090620

Probable Assignee: RAYBUCK JOHN
Assignee(s): (std): RAYBUCK JOHN
Inventor(s): (std): RAYBUCK JOHN
Agent(s): JOHN RAYBUCK

Legal status (INPADOC)

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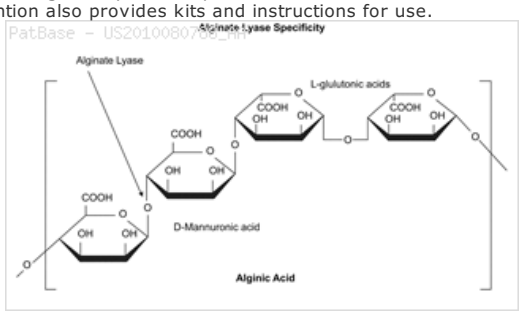
Patent	Date recorded	Event group	Code	Event	Details
US2010003431 AA	20100107	LSPB	+	published / reissued	

75) Family number: 42396891 (US2010080788A)

Title: ALGINATE AND ALGINATE LYASE COMPOSITIONS AND METHODS OF USE

Abstract: Source: US2010080788A The invention features alginate and alginate lyase compositions and methods that are useful for the treatment of various conditions and diseases. The invention also provides kits and instructions for use.

Classifications:
International (IPC 8-9): A61K31/15 A61K31/704 A61K31/715 A61K38/18 A61K38/19 A61K38/48 A61K38/51 A61K39/395 A61K45/06 A61K47/36 A61L27/20 A61L27/38 A61L27/54 A61P35/00 A61P7/00 A61P7/04 A61P9/10 C07H1/00 C08B37/04 C12N9/88 (Advanced/Invention);
A61K31/15 A61K31/715 A61K38/43 A61K39/395 A61P7/00 C07H1/00 C08B37/00 (Core/Invention)
CPC: A61K31/704 A61K38/1875 A61K38/4893 A61K45/06 A61L27/20 A61L27/3882 A61L27/54 A61L2300/254 A61K38/00 A61K2300/00 C08L5/04 A61K31/715 C12Y402/02003 A61K38/51 C12N9/88
European: A61K38/18 A61K38/19A A61K38/51
US: 1/1 424/94.5 424/94.500P 514/54 514/54S



Family:

Publication number	Publication date	Application number	Application date
EP2081964 A2	20090729	EP20070873447	20071011
EP2081964 A4	20120711	EP20070873447	20071011
US2010080788 AA	20100401	US20090422637	20090413
US2016199464 AA	20160714	US20150966213	20151211
US9220761 BB	20151229	US20090422637	20090413
WO08127290 A2	20081023	WO2007US21872	20071011
WO08127290 A3	20090528	WO2007US21872	20071011
WO08127290 C2	20081224	WO2007US21872	20071011

Priority:

US20060851837P 20061012 US20070936230P 20070619 WO2007US21872 20071011
US20090422637 20090413 US20150966213 20151211

Probable Assignee: UNIV JOHNS HOPKINS

Assignee(s): (std): BARNETT BRADLEY P ; BARNETT BRADLEY POWERS ; GAILLOUD PHILIPPE ; UNIV JOHNS HOPKINS

Assignee(s): JOHN HOPKINS UNIV ; JOHNS HOPKINS UNIV ; THE JOHNS HOPKINS UNIVERSITY

Inventor(s): (std): BARNETT BRADLEY P ; BARNETT BRADLEY POWERS ; GAILLOUD PHILIPPE

Agent(s): ADAM HOLGER; EDWARDS ANGELL PALMER AND DODGE LLP; PETER F; MINTZ LEVIN COHN FERRIS GLOVSKY AND POPEO PC; CHRISTOPHER R; CORLESS PETER F ET AL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP2081964 A2	20090729	LSPB	+	published / reissued	
EP2081964 A2	20090729	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090512
EP2081964 A2	20120711	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20120611
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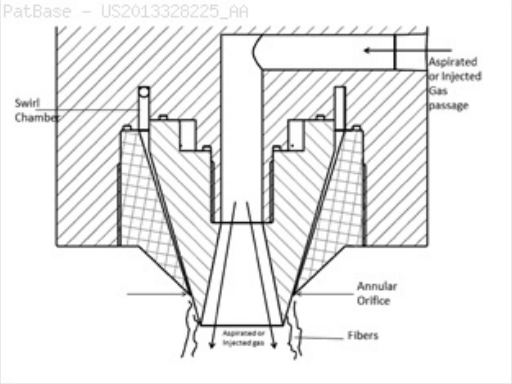
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EP2081964 A2	20120711	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A61P 9/10 20060101ALI20120601BHEP
EP2081964 A2	20120711	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C07H 1/00 20060101ALI20120601BHEP
EP2081964 A2	20160518	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20160414
US2010080788 AA	20100401	LSPB	+	published / reissued	
US2010080788 AA	20091201	LSAS	AS	ASSIGNMENT	OWNER NAME : JOHNS HOPKINS UNIVERSITY, THE, MARYLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BARNETT, BRADLEY P.; GAILLOUD, PHILIPPE; SIGNING DATES FROM 20091026 TO 20091130; REEL/FRAME:023589/0595
US2010080788 AA	20091201	LSAS	AS	ASSIGNMENT	OWNER NAME : JOHNS HOPKINS UNIVERSITY, THE,MARYLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BARNETT, BRADLEY P.; GAILLOUD, PHILIPPE; SIGNED BETWEEN 20091026 AND 20091130; US-ASSIGNMENT DATABASE UPDATED:20100401; REEL/FRAME:23589/595
US2010080788 AA	20091201	LSAS	AS	ASSIGNMENT	OWNER NAME : JOHNS HOPKINS UNIVERSITY, THE,MARYLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BARNETT, BRADLEY P.; GAILLOUD, PHILIPPE; SIGNING DATES FROM 20091026 TO 20091130; REEL/FRAME:023589/0595
US2016199464 AA	20160714	LSPB	+	published / reissued	
US9220761 BB	20151229	LSGT	+	granted / extensions (spc, cpc, pte)	
WO08127290 A2	20081023	LSPB	+	published / reissued	
WO08127290 A3	20090413	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009532445 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO08127290 A3	20090415	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO08127290 A3	20090828	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP

76) Family number: 55322216 (US2013328225A)

Title: PROCESS AND APPARATUS FOR PRODUCING NANOFIBERS USING A TWO PHASE FLOW NOZZLE

Abstract: Source: US2013328225A The disclosure relates to an apparatus and method for producing nanofibers and non-woven nanofibrous materials from polymer melts, liquids and particles using a two-phase flow nozzle. The process comprises supplying a first phase comprising a polymer melt and a second phase comprising a pressurized gas stream to a two-phase flow nozzle; injecting the polymer melt and the pressurized gas stream into a mixing chamber within the two-phase flow nozzle wherein the mixing chamber combines the polymer flow and pressurized gas into a two-phase flow; distributing the two-phase flow uniformly to a converging channel terminating into an channel exit wherein the converging channel accelerates the two-phase flow creating a **polymeric** film along the surface of the converging channel and fibrillating the **polymeric** film at the channel exit of the converging channel in the form of a plurality of nanofibers.

Classifications:
International (IPC 8-9)**:** A61L15/24 A61L15/42 A61L15/44 A61L15/46 A61L15/60 D01D5/00 D01D5/08 (Advanced/Invention)
CPC: D01D5/08 D01D5/0985 D01F11/00 D01D4/025 A61L15/60 A61L15/425 A61L15/44 A61L15/46 A61L15/24 A61L2300/252 A61L2300/606 Y10T428/254 Y10T442/674 Y10T428/249962
US: 252/194 264/103 264/12 264/172.11 264/172.19 264/210.8 264/211.12 264/211.14 424/443 428/311.11 428/327 442/394



Family:

Publication number	Publication date	Application number	Application date
US2013328225 AA	20131212	US20130912187	20130606
US2015190543 AA	20150709	US20140462557	20140818
US8668854 BB	20140311	US20130912187	20130606
US8808594 BA	20140819	US20140148712	20140106

Priority:

US20120657016P 20120607 US20130802643P 20130316 US20130912187 20130606
US20140148712 20140106 US20140462557 20140818

Probable Assignee: VERDEX TECHNOLOGIES INC

Assignee(s): (std)**:** BRYNER MICHAEL ; HUVARD GARY ; MARSHALL LARRY ; VERDEX TECHNOLOGIES INC

Inventor(s): (std)**:** BRYNER MICHAEL ; HUVARD GARY ; MARSHALL LARRY

Agent(s): JOHAN O; INNOVA LAW LLC; JOHAM O

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2013328225 AA	20131212	LSPB	+	published / reissued	
US2015190543 AA	20150709	LSPB	+	published / reissued	
US8668854 BB	20140311	LSGT	+	granted / extensions (spc, cpc, pte)	
US8808594 BA	20140819	LSGT	+	granted / extensions (spc, cpc, pte)	

77) Family number: 62182682 (US2016115081A)

Title: LOW TEMPERATURE, NANOSTRUCTURED CERAMIC COATINGS

Abstract: Source: US2016115081A A substrate subject to degradation at temperatures above 100 degrees centigrade is coated with a nanostructured ceramic coating having a thickness in excess of 100 nm, formed on a surface of the substrate, wherein a process temperature for deposition of the nanostructured coating does not exceed 90 degrees centigrade The coating may be photocatalytic, photovoltaic, or piezoelectric. The coating, when moistened and exposed to ultraviolet light or sunlight, advantageously generates free radicals, which may be biocidal, deodorizing, or assist in degradation of surface deposits on the substrate after use. The substrate may be biological or organic, and may have a metallic or conductive intermediate layer.

Classifications:

International (IPC 8-9): A61L29/10 A61L31/08 B01J21/06 B01J23/06 B01J35/00 C02F1/32 C02F1/72 C04B35/453 C04B35/46 C08J7/06 (Advanced/Invention)

CPC: C02F1/325 C02F1/725 B01J35/004 B01J23/06 B01J21/063 C08J7/06 A61L29/106 C02F2305/10 C02F2307/12 C02F2305/08 C08J2389/00 C08J2323/22 C08J2331/04 C08J2383/04 Y10T428/265 Y10T442/2525 A61L29/16 A61L31/16 A61L2300/404 C02F2201/326 C02F2303/02 C08J7/14 C25D9/04 A61L31/088 B29C59/14 B29C2035/0827

US: 422/119 422/186.3 428/336 442/123

Family:

Publication number	Publication date	Application number	Application date
US2016115081 AA	20160428	US20150734520	20150609

Priority:

US20140010003P 20140610 US20140010006P 20140610 US20150734520 20150609

Probable Assignee: RESEARCH FOUNDATION FOR STATE UNIV OF NEW YORK

Assignee(s): (std)**:** UNIV NEW YORK STATE RES FOUND

Assignee(s): RESEARCH FOUNDATION FOR STATE UNIV OF NEW YORK

Inventor(s): (std)**:** CHO JUNGHYUN

Legal status (INPADOC)

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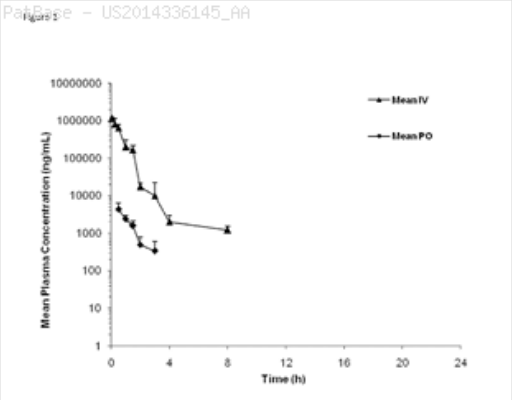
Patent	Date recorded	Event group	Code	Event	Details
US2016115081 AA	20160428	LSPB	+	published / reissued	
US2016115081 AA	20150609	LSAS	AS	ASSIGNMENT	OWNER NAME : THE RESEARCH FOUNDATION FOR THE STATE UNIVERSITY O DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CHO, JUNGHYUN; REEL/FRAME:035810/0026 EFFECTIVE DATE : 20150605

78) Family number: 57793420 (US2014336145A)

Title: COMPOSITIONS AND METHODS FOR TREATING OCULOPHARYNGEAL MUSCULAR DYSTROPHY

Abstract: Source: US2014336145A The present invention provides intravenous compositions of trehalose for the treatment of signs and symptoms of oculopharyngeal muscular dystrophy (OPMD).

Classifications:
International (IPC 8-9): A61K A61K31/7016 A61K9/00 A61K9/08 A61P11/04 A61P21/00 A61P21/04 A61P25/00 A61P25/14 A61P25/16 A61P25/28 (Advanced/Invention);
A61K A61P (Subclass/Invention)
CPC: A61K9/08 A61K9/0019 A61K31/7016
US: 1/1 514/53



Family:

Publication number	Publication date	Application number	Application date
AU2014264228 AA	20141113	AU20140264228	20140507
CA2911399 AA	20151103	CA20142911399	20140507
CO7570453 A2	20160408	CO20150289601	20151204
CR20150637 A	20160405	CR20150000637	20151204
EA201501054 A1	20160429	EA20150001054	20140507
EP2994145 A2	20160316	EP20140733380	20140507
HK1217300 A1	20170106	HK20160105328	20160510
IL241757 A0	20151231	IL20140241757	20140507
IN11056DN2015 A	20160603	IN2015DN11056	20151203
JP2016518403 T2	20160623	JP20160512480T	20140507
KR20160009617 A	20160126	KR20157034700	20140507
MD20150120 A2	20160331	MD20150000120	20140507
MX2015015355 A1	20160718	MX20150015355	20140507
US2014336145 AA	20141113	US20140320184	20140630
US2015196575 AA	20150716	US20150665648	20150323
US2016022716 AA	20160128	US20150818863	20150805
US2016101122 AA	20160414	US20150973465	20151217
US2016120798 AA	20160505	US20140889727	20140507
US2017020905 AA	20170126	US20160288152	20161007
US9084720 BB	20150721	US20140320184	20140630
US9125924 BB	20150908	US20150665648	20150323
US9572825 BB	20170221	US20150818863	20150805
WO14181333 A2	20141113	WO2014IL50411	20140507
WO14181333 A3	20150108	WO2014IL50411	20140507

Priority:

US20130820278P 20130507 US20140320184 20140630 US20140990027P 20140507
US20150665648 20150323 US20140889727 20140507 US20140820278P 20140507
WO2014IL50411 20140507 US20150818863 20150805 US20150973465 20151217
US20160288152 20161007

Probable Assignee: BIOBLAST PHARMA LTD

Assignee(s): (std): BIO BLAST PHARMA LTD ; BIOBLAST PHARMA LTD

Assignee(s): MEGIDDO DALIA

Inventor(s): (std): MEGIDDO DALIA

Inventor(s): DALIA MEGIDDO

Agent(s): FREEHILLS PATENT ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; BERESKIN AND PARR LLP SENCRL SRL; ANDREA TOBOS MATEUS; BENTHAM ANDREW; YAMAZAKI HIROSHI; TOMITA KENJI; TANAKA MITSUO; COOLEY LLP; CYNTHIA; IVOR; IVOR R; CYNTHIA A; HACKMEY MICHAL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2014264228 AA	20141113	LSPB	+	published / reissued	
CA2911399 AA	20151103	LSPB	+	published / reissued	

CO7570453 A2	20160408	LSPB	+	published / reissued	
CR20150637 A	20160405	LSPB	+	published / reissued	
EA201501054 A1	20160429	LSPB	+	published / reissued	
EP2994145 A2	20160316	LSPB	+	published / reissued	
EP2994145 A2	20160316	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20151203
HK1217300 A1	20170106	LSGT	+	granted / extensions (spc, cpc, pte)	
IN11056DN2015 A	20160603	LSPB	+	published / reissued	
JP2016518403 T2	20160623	LSPB	+	published / reissued	
KR20160009617 A	20160126	LSPB	+	published / reissued	
MD20150120 A2	20160331	LSPB	+	published / reissued	
MX2015015355 A1	20160718	LSPB	+	published / reissued	
US2014336145 AA	20141113	LSPB	+	published / reissued	
US2014336145 AA	20140709	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOBLAST PHARMA LTD., ISRAEL DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MEGIDDO, DALIA; REEL/FRAME:033275/0118 EFFECTIVE DATE : 20140709
US2015196575 AA	20150716	LSPB	+	published / reissued	
US2015196575 AA	20150430	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOBLAST PHARMA LTD., ISRAEL DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MEGIDDO, DALIA; REEL/FRAME:035541/0486 EFFECTIVE DATE : 20140709
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US2016022716 AA	20150806	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOBLAST PHARMA LTD., ISRAEL DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MEGIDDO, DALIA; REEL/FRAME:036265/0432 EFFECTIVE DATE : 20140709
US2016101122 AA	20160414	LSPB	+	published / reissued	
US2016101122 AA	20160831	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOBLAST PHARMA LTD., ISRAEL DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MEGIDDO, DALIA; REEL/FRAME:039598/0929 EFFECTIVE DATE : 20140709
US2016120798 AA	20160505	LSPB	+	published / reissued	
US2016120798 AA	20151110	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOBLAST PHARMA LTD., ISRAEL DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MEGIDDO, DALIA; REEL/FRAME:036999/0648 EFFECTIVE DATE : 20130519
US2017020905 AA	20170126	LSPB	+	published / reissued	
US2017020905 AA	20161010	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIOBLAST PHARMA LTD., ISRAEL OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MEGIDDO, DALIA; REEL/FRAME:039972/0151 EFFECTIVE DATE : 20140709
US9084720 BB	20150721	LSGT	+	granted /	

				extensions (spc, cpc, pte)	
US9125924 BB	20150908	LSGT	+	granted / extensions (spc, cpc, pte)	
US9572825 BB	20170221	LSGT	+	granted / extensions (spc, cpc, pte)	
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WO14181333 A2	20151202	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20150120 COUNTRY OF REF DOCUMENT : MD KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO14181333 A2	20151202	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : A 2015 0120 COUNTRY OF REF DOCUMENT : MD
WO14181333 A2	20151204	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20157034700 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :

79) Family number: 53122189 (US2013220173A)

Title: MACROPHYTE-BASED BIOPLASTIC

Abstract: Source: US2013220173A A bioplastic composition may contain certain biodegradable and renewable components. In some examples, the bioplastic composition includes at least one kind of aquatic macrophyte biomass, which may contain a native composition of protein and carbohydrates, in a blend with one or more types of biodegradable or durable thermoplastic polymers. The aquatic macrophyte composition may provide a balance of both **polymeric** and reinforcing properties to the blended bioplastic not typically exhibited by terrestrial feedstock such as soy meal or corn starch. Such a bioplastic composition may be formed into molded articles using extrusion, injection molding, compression molding, or the like.

Classifications:
International (IPC 8-9)**:** C08L1/00 C08L1/10 C08L1/12 C08L101/00 C08L101/16 C08L89/00 (Advanced/Invention)
CPC: C08L1/00 C08L89/00 C08L1/12 C08L1/10 C08L101/16
US: 106/136.1 106/143.1 106/162.9 106/168.01 106/170.27 106/170.29 106/170.31 106/170.51 106/171.1 264/328.14 523/447 523/448 524/9

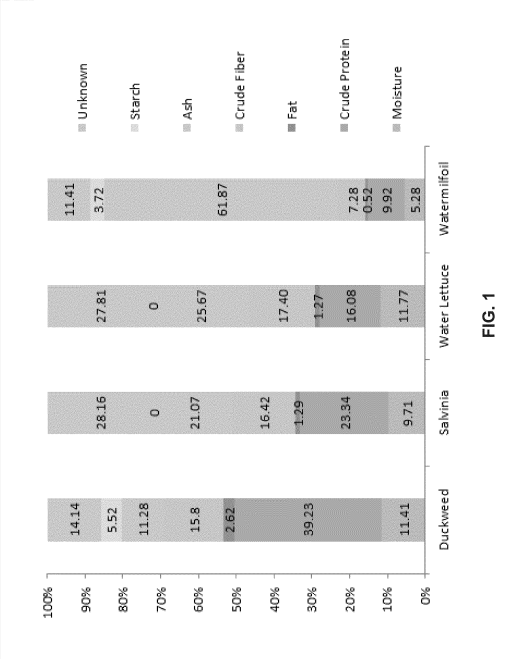


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
CN104144984 A	20141112	CN201280051167	20120824
US2013220173 AA	20130829	US20120594680	20120824
WO13029018 A1	20130228	WO2012US52380	20120824

Priority:
US20110526814P 20110824 US20120594680 20120824 WO2012US52380 20120824

Probable Assignee: ALGIX LLC
Assignee(s): (std)**:** ALGIX LLC ; HUNT RYAN W ; SHARMA SURAJ ; ZELLER MARK ASHTON
Inventor(s): (std)**:** HUNT RYAN W ; SHARMA SURAJ ; ZELLER MARK ASHTON
Agent(s): LAVANWAY JR PAUL J ET AL
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN104144984 A	20141112	LSPB	+	published / reissued	
CN104144984 A	20141112	LSPB	+C06	PUBLICATION	
US2013220173 AA	20130829	LSPB	+	published / reissued	
US2013220173 AA	20121030	LSAS	AS	ASSIGNMENT	OWNER NAME : ALGIX, LLC, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHARMA, SURAJ; HUNT, RYAN W.; ZELLER, MARK ASHTON; REEL/FRAME:029211/0532 EFFECTIVE DATE : 20120920
WO13029018 A1	20130228	LSPB	+	published / reissued	
WO13029018 A1	20140224	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

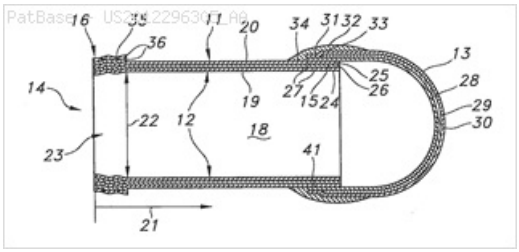
WO13029018 A1	20140924	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 12762718 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

80) Family number: 52204135 (US2012296305A)

Title: MALE LIGHT INCONTINENCE HYGIENIC ARTICLE

Abstract: Source: US2012296305A A hygienic article for personal wear by a male, the hygienic article includes an elongate, liquid permeable, and at least uni-directionally stretchable fabric sleeve having a first end, and a longitudinally opposite second end. A central passage extends longitudinally between the first and second ends of the sleeve, the first end of the sleeve being open to the central passage to permit a wearer's penis to extend through the open first end into the central passage of the sleeve. The second end of the sleeve is permanently affixed to an absorbent cap, either bonded to an end of the sleeve or contained within a closed end of the sleeve, which absorbent cap controls leakage of liquid at the tip of the user's penis.

Classifications:
International (IPC 8-9): A61F13/45 A61F6/02 A61F6/04 (Advanced/Invention)
CPC: A61F6/04 A61F2006/044
European: A61F6/04 K61F6/04C
US: 604/385.16



Family:

Publication number	Publication date	Application number	Application date
AR086465 AA	20131218	AR2012P101373	20120420
BR112013026033 A2	20161220	BR20131126033	20120413
CO6801673 A2	20131129	CO20130249126	20131021
MX2013011902 A1	20131202	MX20130011902	20120413
US2012296305 AA	20121122	US20120434462	20120329
WO12143837 A2	20121026	WO2012IB51841	20120413
WO12143837 A3	20130117	WO2012IB51841	20120413

Priority:

US20110477926P 20110421 US20120434462 20120329 WO2012IB51841 20120413

Probable Assignee: KIMBERLY CLARK WORLDWIDE INC

Assignee(s): (std): BARRAZA KHALED MARIA F ; BELMONT LAZLO ; COWAN ROS VERONICA ; GARCES JUAN D ; RIQUELME PATRICIA E ; KIMBERLY CLARK CO ; SILVA PERCY ; POPPE EDUARDO A ; MELENDEZ VEGA ESTEBAN ; VEGA ESTEBAN MELENDEZ

Assignee(s): KIMBERLY CLARK WORLDWIDE INC

Inventor(s): (std): BARRAZA KHALED MARIA F ; BARRAZA MARIA F KHALED ; BELMONT LAZLO ; COWAN ROS VERONICA ; KHALED MARIA F BARRAZA ; GARCES JUAN D ; MELENDEZ VEGA ESTEBAN ; POPPE EDUARDO A ; RIQUELME PATRICIA E ; SILVA PERCY ; VEGA ESTEBAN MELENDEZ

Inventor(s): VERONICA COWAN ROS ; PATRICIA E RIQUELME ; PERCY SILVA ; JUAN D GARCES ; LAZLO BELMONT ; MARIA F BARRAZA KHALED ; MARIA F KHALED BARRAZA ; EDUARDO A POPPE ; ESTEBAN MELENDEZ VEGA

Agent(s): J IAN RAISBECK; FLACK STEVEN D ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AR086465 AA	20131218	LSPB	+	published / reissued	
BR112013026033 A2	20161220	LSPB	+	published / reissued	
BR112013026033 A2	20170307	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	
CO6801673 A2	20131129	LSPB	+	published / reissued	
CO6801673 A2	20150115	LSGT	+FG	APPLICATION GRANTED	
MX2013011902 A1	20131202	LSPB	+	published / reissued	
US2012296305 AA	20121122	LSPB	+	published / reissued	
US2012296305 AA	20120619	LSAS	AS	ASSIGNMENT	OWNER NAME : KIMBERLY-CLARK WORLDWIDE, INC., WISCONSIN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST;

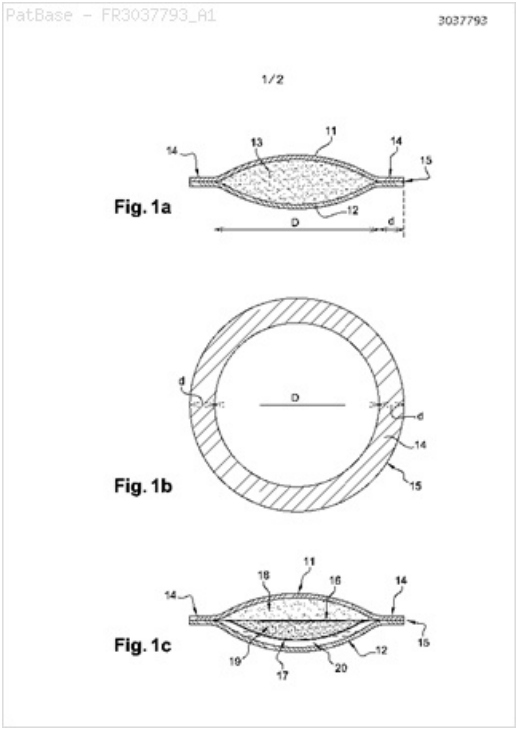
					ASSIGNOR:MELENDEZ VEGA, ESTEBAN; REEL/FRAME:028404/0613 EFFECTIVE DATE : 20110509
US2012296305 AA	20120619	LSAS	AS	ASSIGNMENT	OWNER NAME : KIMBERLY-CLARK WORLDWIDE, INC., WISCONSIN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BARRAZA KHALED, MARIA F.; BELMONT, LAZLO; COWAN-ROS, VERONICA; AND OTHERS; SIGNING DATES FROM 20120330 TO 20120614; REEL/FRAME:028404/0333
US2012296305 AA	20150203	LSAS	AS	ASSIGNMENT	OWNER NAME : KIMBERLY-CLARK WORLDWIDE, INC., WISCONSIN DESCRIPTION : NAME CHANGE; ASSIGNOR:KIMBERLY-CLARK WORLDWIDE, INC.; REEL/FRAME:034880/0634 EFFECTIVE DATE : 20150101
WO12143837 A2	20121026	LSPB	+	published / reissued	
WO12143837 A2	20131021	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12143837 A2	20140528	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 12773782 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) :
WO12143837 A2	20161220	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112013026033 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20131009

81) Family number: 64526842 (FR3037793A)

Title: ARTICLE DE CONDITIONNEMENT COMPORTANT UNE ENVELOPPE ET UNE COMPOSITION ANHYDRE COLORANTE, DECOLORANTE ET/OU OXYDANTE COMPRENANT AU MOINS DEUX COMPOSES CHOISIS PARMI UN AMIDON, UNE ARGILE, ET UNE CELLULOSE, ET UN COMPOSE CHOISI PARMI UN AGENT COLORANT ET/OU UN AGENT OXYDANT; UTILISATION ET PROCEDE POUR COLORER ET/OU DECOLORER LES FIBRES KERATINIQUES ARTICLE PACKAGING WITH AN ENVELOPE AND A COLOURING ANHYDROUS COMPOSITION, DECOLORANTE AND/OR OXIDATIVE COMPRISING AT LEAST TWO COMPOUNDS CHOSEN FROM A STARCH AND A CLAY, A CELLULOSE, AND ONE HAS CHOSEN FROM A COLORING AGENT OR AN OXIDIZING AGENT; USE AND METHOD FOR COLOR AND/OR DECOLORER **FIBER** KERATINIQUES (Machine translation)

Abstract: Source: FR3037793A La presente invention concerne un article de conditionnement cosmetique comportant: i) une enveloppe definissant au moins une cavite, l'enveloppe comprenant des fibres hydrosolubles ou liposolubles, et ii) au moins une composition anhydre contenant: - au moins deux composes choisis parmi: a) les amidons ou les amidons modifies, de preference les amidons modifies, b) les argiles, de preference les argiles fibreuses, et c) la cellulose ou les derives de cellulose, de preference la cellulose microcristalline et/ou les carboxymethyl celluloses sodiques reticulees, de preference la croscarmellose sodium; et/ou les polyvinylpyrolidones reticulees, de preference la crospovidone; et - au moins un compose choisi parmi: d) les agents colorants et/ou e) les agents oxydant chimique; etant entendu que la composition ii), se trouve dans une des cavites de l'enveloppe i). Un autre objet de l'invention est l'utilisation de l'article de conditionnement pour colorer et/ou decolorer les fibres keratiniques, et un procede de coloration et/ou de decoloration des fibres keratiniques mettant en œuvre ledit article. L'utilisation de l'article de conditionnement permet d'obtenir des compositions colorante presentant de bonnes proprietes tinctoriales et/ou eclaircissantes, faciles a appliquer et qui permettent d'obtenir une coloration et/ou une decoloration des cheveux puissantes. The present invention concerns an article in cosmetic packaging with: i) a defining at least one cavity envelope, the envelope including water-soluble or fat-soluble **fiber**, and ii) at least an anhydrous composition containing:-at least two compounds chosen from: has) starches or starch modified, preferably modified starches, b) clays, preferably fibrous clay, and c) cellulose or cellulose derivatives preferably the microcrystalline cellulose and/or the carboxymethyl celluloses sodium reticulees, preferably the croscarmellose sodium. and/or the reticulees polyvinylpyrolidones, preferably the findings; and - at least one composed of: d) agents dyes and/or e) chemical oxidizing agents; (heard as composition ii), is located in one of the cavities of the envelope i). Another object of the invention is the use of packaging article for color and/or decolorer the keratiniques **fibers**, and a method for staining and/or discoloration of keratiniques **fibers** implementing that article. Article of packaging used to obtain compositions coloring presenting good dyeing properties and/or lighteners, easy apply and to obtain powerful colouring and/or hair discoloration.

Classifications:
International (IPC 8-9): A61K8/19 A61K8/41 A61K8/73 A61Q5/08 A61Q5/10 B65D30/02 (Advanced/Invention)
CPC: A61Q5/065 A45D2040/0093 A61K8/0208 A61K8/022 A61K8/22 A61K8/25 A61K8/731 A61K8/732 A61K8/8129 A61K2800/31 A61K2800/594 A61K2800/87 A61Q5/08 A61Q5/10 A45D40/00



Family:

Publication number	Publication date	Application number	Application date
FR3037793 A1	20161230	FR20150055864	20150625

Priority:
FR20150055864 20150625

Probable Assignee:	OREAL
Assignee(s): (std):	OREAL
Assignee(s):	L OREAL
Inventor(s): (std):	POURILLE CHRYSTEL
Inventor(s):	CHRYSTEL POURILLE
Agent(s):	LOREAL

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
FR3037793 A1	20161230	LSPB	+	published / reissued	

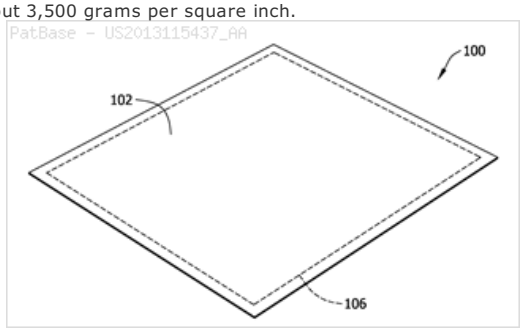
FR3037793 A1	20160516	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 2
FR3037793 A1	20161230	LSES	PLSC	SEARCH REPORT READY	EFFECTIVE DATE : 20161230

82) Family number: 53678489 (US2013115437A)

Title: DISPOSABLE ABSORBENT PAD

Abstract: Source: US2013115437A A disposable absorbent pad has an absorbent structure configured to absorb fluid. The disposable absorbent pad is adapted to provide a shear strength between the pad and the substrate when the pad is adhered to the substrate between about 1,500 grams per square inch and about 3,500 grams per square inch.

Classifications:
International (IPC 8-9): A61F13/15 A61F13/47 A61F13/505 A61F13/51 A61F13/539 A61F13/60 A61F5/48 B32B3/00 B32B33/00 B32B7/12 B32B9/00 (Advanced/Invention);
C09J7/02 (Advanced/Non-invention)
CPC: B32B3/00 A61F5/485 A61F13/539 A61F2013/15056 A61F2013/53908 B32B7/12 C09J7/0296 A61F13/515 A61F13/55105 Y10T428/14 Y10T428/23 Y10T428/28 Y10T428/249982
US: 428/220 428/317.1 428/343 428/40.1 428/68 5/482 5/487 604/358



Family:

Publication number	Publication date	Application number	Application date
AU2012335294 AA	20130516	AU20120335294	20121017
AU2012335294 BB	20161110	AU20120335294	20121017
AU2016256708 AA	20161124	AU20160256708	20161109
AU2016256710 AA	20161124	AU20160256710	20161109
CN103906492 A	20140702	CN201280053316	20121017
CN103906492 B	20160824	CN201280053316	20121017
CO6950456 A2	20140520	CO20140097339	20140507
EP2775979 A1	20140917	EP20120847712	20121017
EP2775979 A4	20150610	EP20120847712	20121017
KR20140084104 A	20140704	KR20147011762	20121017
MX2014005470 A1	20140818	MX20140005470	20121017
RU2014121515 A	20151220	RU20140121515	20121017
US2013115437 AA	20130509	US20110291871	20111108
US9005728 BB	20150414	US20110291871	20111108
WO13068864 A1	20130516	WO2012IB55676	20121017

Priority:

AU20120335294 20121017 AU20160256708 20161109 US20110291871 20111108
WO2012IB55676 20121017 AU20160256710 20161109

Probable Assignee: KIMBERLY CLARK CO

Assignee(s): (std): COENEN JOSEPH DANIEL ; HEITING CHRISTOPHER ; JOHNSTON ANGELA ANN ; KIMBERLY CLARK CO ; RUMAN MARCILLE FAYE ; ROOYAKKERS JON PHILIP ; KIMBERLY CLARK WORLDWIDE INC

Inventor(s): (std): COENEN JOSEPH DANIEL ; HEITING CHRISTOPHER ; JOHNSTON ANGELA ANN ; ROOYAKKERS JON PHILIP ; RUMAN MARCILLE FAYE

Inventor(s): ANGELA ANN JOHNSTON ; CHRISTOPHER HEITING ; JON PHILIP ROOYAKKERS ; JOSEPH DANIEL COENEN ; MARCILLE FAYE RUMAN

Agent(s): SPRUSON AND FERGUSON; J IAN RAISBECK; DAVIES CHRISTOPHER ROBERT; ARMSTRONG TEASDALE LLP; BRIDGE RICHARD L ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2012335294 AA	20130516	LSPB	+	published / reissued	
AU2012335294 AA	20170309	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2012335294 BB	20161110	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2016256708 AA	20161124	LSPB	+	published / reissued	
AU2016256710 AA	20161124	LSPB	+	published / reissued	
CN103906492 A	20140702	LSPB	+	published / reissued	
CN103906492 A	20140702	LSPB	+C06	PUBLICATION	

CN103906492 A	20160824	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103906492 B	20160824	LSGT	+	granted / extensions (spc, cpc, pte)	
CO6950456 A2	20140520	LSPB	+	published / reissued	
CO6950456 A2	20141216	LSWD	-FA	APPLICATION WITHDRAWN	
EP2775979 A1	20140917	LSPB	+	published / reissued	
EP2775979 A1	20140917	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140527
EP2775979 A1	20150610	LSES	+RA4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20150512
EP2775979 A1	20150610	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61F 13/505 20060101AFI20150506BHEP
EP2775979 A1	20150610	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61F 13/15 20060101ALI20150506BHEP
EP2775979 A1	20150610	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61F 13/51 20060101ALI20150506BHEP
EP2775979 A1	20150610	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A61F 5/48 20060101ALI20150506BHEP
EP2775979 A1	20170104	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20161206
KR20140084104 A	20140704	LSPB	+	published / reissued	
MX2014005470 A1	20140818	LSPB	+	published / reissued	
RU2014121515 A	20151220	LSPB	+	published / reissued	
US2013115437 AA	20130509	LSPB	+	published / reissued	
US2013115437 AA	20111108	LSAS	AS	ASSIGNMENT	OWNER NAME : KIMBERLY-CLARK WORLDWIDE, INC., WISCONSIN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:JOHNSTON, ANGELA ANN; ROOYAKKERS, JON PHILIP; COENEN, JOSEPH DANIEL; AND OTHERS; REEL/FRAME:027194/0745 EFFECTIVE DATE : 20111108
US2013115437 AA	20150203	LSAS	AS	ASSIGNMENT	OWNER NAME : KIMBERLY-CLARK WORLDWIDE, INC., WISCONSIN DESCRIPTION : NAME CHANGE; ASSIGNOR:KIMBERLY-CLARK WORLDWIDE, INC.; REEL/FRAME:034880/0634 EFFECTIVE DATE : 20150101
US9005728 BB	20150414	LSGT	+	granted / extensions (spc, cpc, pte)	
WO13068864 A1	20130516	LSPB	+	published / reissued	
WO13068864 A1	20140424	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012335294 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20121017 KIND CODE OF REF DOCUMENT : A
WO13068864 A1	20140430	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20147011762 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
WO13068864 A1	20140508	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

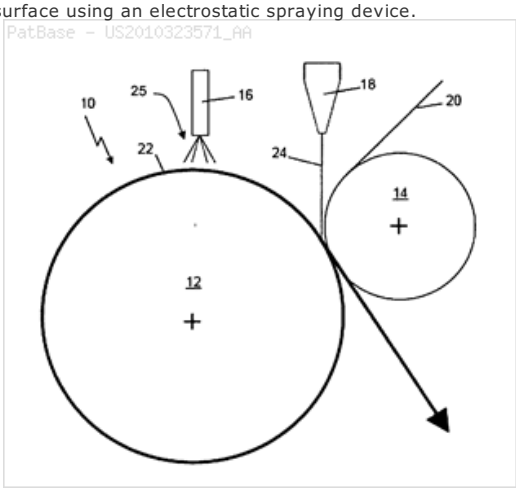
WO13068864 A1	20140609	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014121515 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A

83) Family number: 43811773 (US2010323571A)

Title: APPLICATION OF MATERIALS TO FORM A MULTI-LAYER PRODUCT

Abstract: Source: US2010323571A A method of producing a multi-layer product that includes an extruded **polymeric** layer comprising an enhancer composition is disclosed. The disclosed product is produced by applying an enhancer composition (25) onto a transfer surface (22), such as that of a chill roll (12) on an extruder station (10), and then contacting the applied transfer surface against molten polymer (24) either before or during extrusion process of the molten polymer onto a substrate (20). The enhancer composition may impart functional and/or decorative properties to the treated substrate. When desired, the enhancer composition may be applied onto the transfer surface using an electrostatic spraying device.

Classifications:
International (IPC 8-9): B05D1/04 B05D3/10 B32B15/04 B32B27/00 B32B27/36 B32B29/00 B32B33/00 B32B37/15 B32B5/16 (Advanced/Invention); B32B33/00 B32B37/14 (Core/Invention)
CPC: B32B37/153 B32B37/025 Y10T428/31678 Y10T428/31786 Y10T428/31855 Y10T428/31993 Y10T442/20
European: B32B37/15B L32B37/02B
US: 427/301 427/301S 427/475 427/475S 428/457 428/457S 428/480 428/480S 428/500 428/500S 428/537.5 428/537.500S 442/59 442/59P



Family:

Publication number	Publication date	Application number	Application date
US2010323571 AA	20101223	US20090918646	20090325
WO09123892 A1	20091008	WO2009US38182	20090325

Priority:
US20080041258P 20080401 WO2009US38182 20090325 US20090918646 20090325

Probable Assignee: MEADWESTVACO CORP
Assignee(s): (std): HAWES DAVID H ; MEADWESTVACO CORP
Inventor(s): (std): HAWES DAVID ; HAWES DAVID H
Agent(s): MEADWESTVACO ATTN IP LEGAL DEPARTMENT CORP; SISSON WARUNEE S ET AL
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2010323571 AA	20101223	LSPB	+	published / reissued	
US2010323571 AA	20100820	LSAS	AS	ASSIGNMENT	OWNER NAME : MEADWESTVACO CORPORATION, VIRGINIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HAWES, DAVID H.; REEL/FRAME:024865/0649 EFFECTIVE DATE : 20080401
WO09123892 A1	20091008	LSPB	+	published / reissued	
WO09123892 A1	20100820	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12918646 COUNTRY OF REF DOCUMENT : US
WO09123892 A1	20101002	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09123892 A1	20110622	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 09728216 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

84) Family number: 63917964 (WO16176041A1)

Title: DETOXIFICATION USING NANOPARTICLES

Abstract: The present invention relates treatments of a toxin in a subject. The toxin at least partially effects its toxicity in the subject via binding to a target cell of the subject. The present invention provides for methods, combinations and pharmaceutical compositions for decreasing or neutralizing the effect of a toxin in a subject, using, inter alia, an effective amount of a nanoparticle comprising an inner core comprising a non-cellular material, and an outer surface comprising a cellular membrane derived from a source cell. Exemplary toxins include acetylcholinesterase (AChE) inhibitors such as organophosphate poisoning.

Classifications:
International (IPC 8-9): A61K45/06 A61K9/14 (Advanced/Invention)
CPC: A61K9/5176 A61K9/5068 A61K45/06 A61K47/48

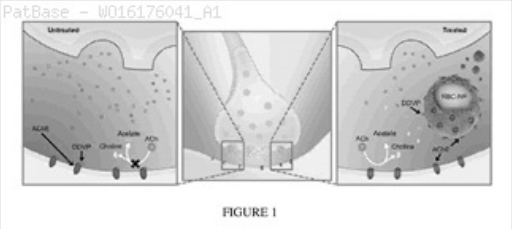


FIGURE 1

Family:

Publication number	Publication date	Application number	Application date
WO16176041 A1	20161103	WO2016US27250	20160413

Priority:

US20150154307P 20150429

Probable Assignee: THE UNIV OF CALIFORNIA

Assignee(s): (std): THE UNIV OF CALIFORNIA ; UNIV CALIFORNIA

Inventor(s): (std): FANG RONNIE H ; HU CHE MING JACK ; PANG ZHIQING ; ZHANG LIANGFANG

Agent(s): WARREN WILLIAM L

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
WO16176041 A1	20161103	LSPB	+	published / reissued	

85) Family number: 64460200 (WO16205087A1)

Title: THERMOPLASTIC CELLULOSIC **FIBER** GRANULES USEFUL AS INFILL MATERIALS FOR ARTIFICIAL TURF

Abstract: An artificial turf system has **polymeric** turf **fibers** resembling grass, and infill particles interspersed among said turf **fibers**. At least some of the infill comprises synthetic composite particles containing a thermoplastic polymer and cellulosic **fibers**, in which thermoplastic polymer is a matrix that binds together the other components of each synthetic particle into a composite particle.

Classifications:
International (IPC 8-9): B29C67/02 B29C73/00 C08J11/06 E01C13/08 (Advanced/Invention)
CPC: E01C13/08 C08J11/06

Family:

Publication number	Publication date	Application number	Application date
WO16205087 A1	20161222	WO2016US37005	20160610

Priority:

US20150175474P 20150615

Probable Assignee: BOARD OF SUPERVISORS OF LOUISIANA STATE UNIV AND AGRICULTURAL AND MECH COLLEGE

Assignee(s): (std): BOARD OF SUPERVISORS OF LOUISIANA STATE UNIV AND AGRICULTURAL AND MECH COLLEGE ; WU QINGLIN

Assignee(s): BOARD OF SUPERVISORS OF LOUISIANA STATE UNIV AND AGRICULTURAL AND MECHANICAL COLLEGE

Inventor(s): (std): WU QINGLIN

Agent(s): RUNNELS JOHN H

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

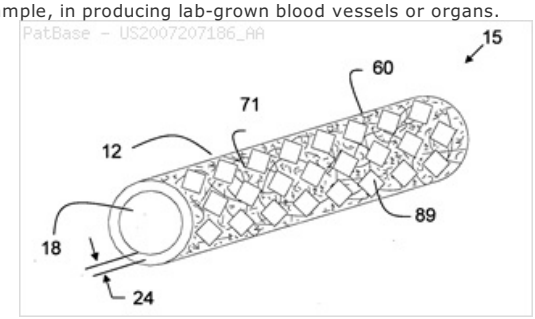
Patent	Date recorded	Event group	Code	Event	Details
WO16205087 A1	20161222	LSPB	+	published / reissued	

86) Family number: 36001246 (US2007207186A)

Title: TEAR AND ABRASION RESISTANT EXPANDED MATERIAL AND REINFORCEMENT

Abstract: Source: US2007207186A The present invention is a more durable expanded material that enables thinner wall thicknesses and a more flexible reinforcement suitable for stenting. The present invention is especially useful in the construction of grafts, stents, and stent-grafts which are used, for example, in repairing or replacing blood vessels that are narrowed or occluded by disease, aneurismal blood vessels, or other medical treatments. The inventive material and configurations allow expansion or contraction in size or adjustment in size in an incremental manner so that the optimum size, shape, and fit with other objects can be obtained. The present invention is also optionally capable of more accurately delivering one or more active ingredients such as drugs over longer periods of time. The present invention optionally includes surface modifications and additives that increase the surface adhesion of active ingredients, coatings, or combinations thereof. Finally, the present invention optionally includes growing cells on the inventive material so that the expanded material, reinforcement, or combinations thereof are useful, for example, in producing lab-grown blood vessels or organs.

Classifications:
International (IPC 8-9): A61F2/06 (Advanced/Invention);
A61F2/94 (Advanced/Non-invention);
A61F2/06 (Core/Invention);
A61F2/82 (Core/Non-invention)
CPC: A61F2/91 A61F2/07 A61F2/915 A61F2002/072 A61F2002/075 A61F2002/91533 A61F2002/9155 A61F2002/91558 A61F2250/0068 A61K47/48992 A61L31/048 A61L31/10 A61L31/146 A61L31/16 A61L2300/00 B29C55/26 A61F2/90 A61F2210/0076 A61F2220/0008 A61F2220/0025 A61F2220/0041 A61F2220/005 A61F2220/0058 A61F2220/0075 B23K26/402 B23K2203/42
European: A61F2/07 A61F2/91 A61F2/915 A61K47/48W26 A61L31/04H A61L31/10 A61L31/14H A61L31/16 B23K26/40B7H
US: 424/424 424/424P 623/1.42 623/1.420S 623/1.49 623/1.490S



Family:

Publication number	Publication date	Application number	Application date
US2007207186 AA	20070906	US20070713361	20070303
US8585753 BB	20131119	US20070713361	20070303

Priority:

US20060779128P 20060304 US20070713361 20070303

Probable Assignee: SCANLON CATHERINE ANN

Assignee(s): (std): SCANLON CATHERINE A ; SCANLON CATHERINE ANN ; SCANLON JOHN J ; SCANLON JOHN JAMES

Inventor(s): (std): SCANLON CATHERINE A ; SCANLON CATHERINE ANN ; SCANLON JOHN J ; SCANLON JOHN JAMES

Inventor(s): SCANLON JOHN ; SCANLON CATHERINE

Agent(s): JOHN J SCANLON

Legal status (INPADOC)

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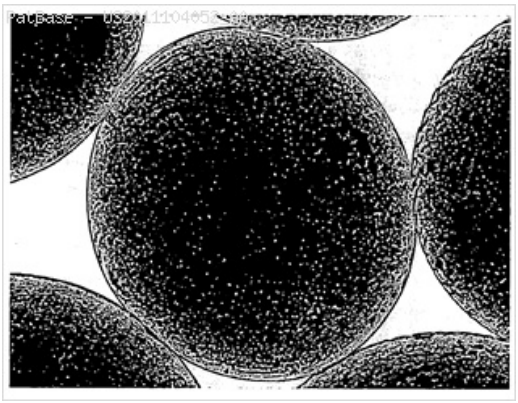
Patent	Date recorded	Event group	Code	Event	Details
US2007207186 AA	20070906	LSPB	+	published / reissued	
US8585753 BB	20131119	LSGT	+	granted / extensions (spc, cpc, pte)	

87) Family number: 43360128 (US2011104052A)

Title: METHODS OF SYNTHESIS AND USE OF CHEMOSPHERES

Abstract: Source: US2011104052A The present invention provides, in general, compositions comprising a hydrogel and an agent, for example a therapeutic agent or an imaging agent, for locoregional delivery. In certain preferred embodiments of the invention, the hydrogel compositions are detectable by Magnetic Responance and CT Scan and are used for locoregional delivery of therapeutic agents, for example chemotherapeutic agents. The invention also features polymer matrix compositions comprising nanoparticles that can be loaded after polymerization with bioactive agents, for example a diagnostic agent or therapeutic agent.

Classifications:
International (IPC 8-9): A61K31/704 A61K35/12 A61K39/395 A61K49/18 A61K51/12 A61K9/127 A61K9/14 A61P35/00 A61P7/04 B65B35/56 (Advanced/Invention);
B82Y5/00 (Advanced/Non-invention)
CPC: A61K9/0019 A61K9/0051 A61K9/06 A61K9/127 A61K9/1271 A61K9/1617 A61K9/1635 A61K9/1652 A61K9/19 A61K31/00 A61K31/4745 A61K31/704 A61K47/32 A61K49/1824
European: A61K31/00 A61K31/4745 A61K31/704 A61K47/32 A61K49/18P6 A61K49/18R2N A61K9/00M16B A61K9/00M5 A61K9/06 A61K9/127 A61K9/127B A61K9/16H4 A61K9/16H6B A61K9/16H6F A61K9/19
US: 424/1.21 424/1.210P 424/1.25 424/1.250S 424/1.37 424/1.370S 424/130.1 424/130.100S 424/450 424/450S 424/484 424/484S 424/9.1 424/9.100S 424/93.7 424/93.700S 514/34 514/34S 977/773 977/773S 977/906 977/906S 977/927 977/927S



Family:

Publication number	Publication date	Application number	Application date
EP2229147 A2	20100922	EP20080858193	20081203
US2011104052 AA	20110505	US20080746030	20081203
WO09073193 A2	20090611	WO2008US13336	20081203
WO09073193 A3	20091223	WO2008US13336	20081203

Priority:

US20070005228 20071203 US20070005228P 20071203 US20080093619P 20080902
US20080093619 20080902 WO2008US13336 20081203 US20080746030 20081203

Probable Assignee: JOHNS HOPKINS UNIV

Assignee(s): (std): BARNETT BRADLEY POWERS ; GESCHWIND JEFFREY ; UNIV JOHNS HOPKINS

Assignee(s): JOHNS HOPKINS UNIV ; THE JOHNS HOPKINS UNIVERSITY

Inventor(s): (std): BARNETT BRADLEY POWERS ; GESCHWIND JEFFREY

Agent(s): ADAM HOLGER; CORLESS PETER F ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP2229147 A2	20100922	LSPB	+	published / reissued	
EP2229147 A2	20100922	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20100702
EP2229147 A2	20141231	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20140701
US2011104052 AA	20110505	LSPB	+	published / reissued	
US2011104052 AA	20110121	LSAS	AS	ASSIGNMENT	OWNER NAME : THE JOHNS HOPKINS UNIVERSITY, MARYLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BARNETT, BRADLEY P.; GESHWIND, JEFFREY; SIGNING DATES FROM20100825 TO 20110118; REEL/FRAME:025680/0193
US2011104052 AA	20110317	LSAS	AS	ASSIGNMENT	OWNER NAME : THE JOHNS HOPKINS UNIVERSITY, MARYLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BARNETT, BRADLEY P.; GESCHWIND, JEFFREY; SIGNING DATES FROM 20100825 TO 20110118; REEL/FRAME:025972/0318
WO09073193 A2	20090611	LSPB	+	published / reissued	

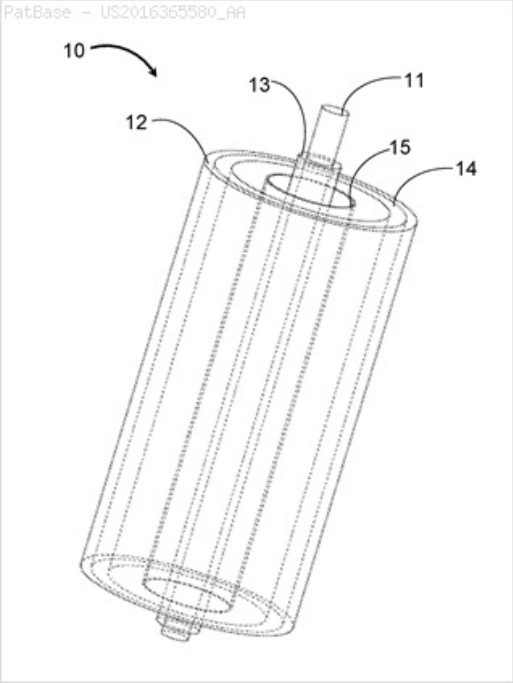
WO09073193 A3	20100605	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09073193 A3	20110120	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12746030 COUNTRY OF REF DOCUMENT : US

88) Family number: 64370081 (US2016365580A)

Title: MACROCYCLIC BATTERY

Abstract: Source: US2016365580A A macrocyclic battery being eco-friendly, for improving the efficiency for generating electric current is disclosed. The macrocyclic battery comprises conductive electrodes, cells, and a membrane. The first cell includes a biological, an organic, or a synthetic macrocycle molecule with central ion, and the second cell includes a reducible biological, an organic, or a synthetic reducible macrocycle molecule with central ion. The membrane is used to separate the first conductive electrode to the second conductive electrode in the battery. The first cell encircling the first conductive electrode and second conductive cell encircling the second conductive electrode generates an electrical potential through an ionic transport medium. The macrocyclic battery is manufactured by easily available environmental friendly or biodegradable raw materials. The electrospinning process of the macrocycle molecules in the cells increases the surface attachment of macrocycles molecules to the electrodes for improving the efficiency for generating electric current.

Classifications:
International (IPC 8-9)**:** H01M10/36 H01M2/16 H01M4/38 H01M4/60 (Advanced/Invention)
CPC: H01M4/60 H01M10/36 H01M4/38 H01M2/162 H01M2/1626 H01M4/602 H01M2300/0002



Family:

Publication number	Publication date	Application number	Application date
US2016365580 AA	20161215	US20160247119	20160825

Priority:
US20160247119 20160825

Probable Assignee: GHANAVI ROZHINA
Assignee(s): (std)**:** GHANAVI ROZHINA
Inventor(s): (std)**:** GHANAVI ROZHINA

Legal status (INPADOC)

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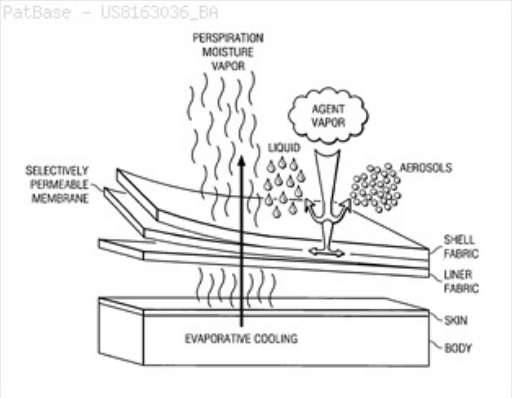
Patent	Date recorded	Event group	Code	Event	Details
US2016365580 AA	20161215	LSPB	+	published / reissued	

89) Family number: 50954345 (US8163036B)

Title: NANOPHASE MN(VII) OXIDE (NM70) AND NANOPHASE MN(III) OXIDE (NM30) INCORPORATED NONWOVENS

Abstract: Source: US8163036B NM7O and NM3O coated clay are embedded into a fabric matrix to produce a protective fabric. A NM7O blended garment can be manufactured for the purpose of containing malodors. The destruction of chemical warfare agents can also be accomplished by incorporating these materials into disposable protective clothing for military, Haz-Mat team and First responders. The fabrics so treated with MN7O have uses as diverse as for a disposable silver polish wipe. In the case of NM3O coated clay, the treated fabric can be used as a copper and brass polish.

Classifications:
International (IPC 8-9): C11D3/02 (Advanced/Invention)
CPC: D06M11/485 A62D5/00 B82Y30/00 C09G1/00 C09G1/02 C09K3/1454 D01F1/10
European: A62D5/00 C09G1/02 D01F1/10 D06M11/48B
US: 8/115.51 8/115.54 8/116.1



Family:

Publication number	Publication date	Application number	Application date
US8163036 BA	20120424	US20080103818	20080416

Priority:
US20070911934P 20070416 US20080103818 20080416

Probable Assignee: CHK GROUP INC
Assignee(s): (std): BHAT GAJANAN S ; CHK GROUP INC ; VEMPATI RAJAN K
Inventor(s): (std): VEMPATI RAJAN K ; BHAT GAJANAN S
Agent(s): CHARLES D

Legal status (INPADOC)

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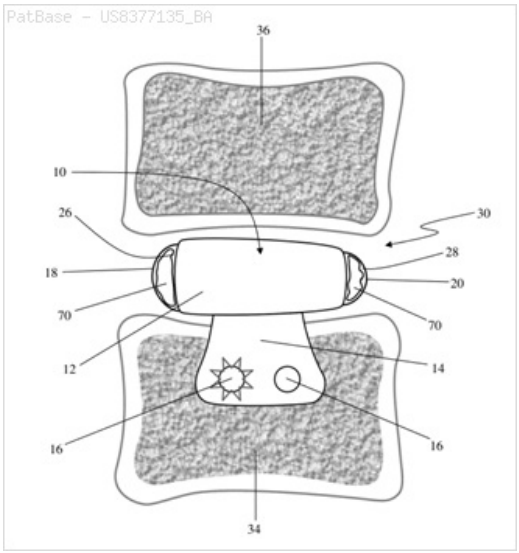
Patent	Date recorded	Event group	Code	Event	Details
US8163036 BA	20120424	LSGT	+	granted / extensions (spc, cpc, pte)	
US8163036 BA	20080611	LSAS	AS	ASSIGNMENT	OWNER NAME : CHK GROUP, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:VEMPATI, RAJAN K.; BHAT, GAJANAN S.; SIGNING DATES FROM 20080604 TO 20080609; REEL/FRAME:021078/0904
US8163036 BA	20151019	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4

90) Family number: 53036520 (US8377135B)

Title: TEXTILE-BASED SURGICAL IMPLANT AND RELATED METHODS

Abstract: Source: US8377135B A combination pre-filled and in situ filled implant for the replacement of an intervertebral disc of the spine, including a textile core and a flange with apertures dimensioned to receive screws or other affixation elements. The combination pre-filled and in situ filled implant may also have attached side pockets comprised of extra layers of embroidered fabric. The pockets on the implant may serve a dual purpose: to facilitate insertion and to expand the dimensions of the implant after insertion.

Classifications:
International (IPC 8-9): A61F2/44 (Advanced/Invention)
CPC: A61F2/442 A61F2/4611 A61F2002/30062 A61F2002/30131 A61F2002/30331 A61F2002/30487 A61F2002/30578 A61F2002/30733 A61F2002/308 A61F2002/30807 A61F2002/448 A61F2002/4495 A61F2002/4622 A61F2002/4627 A61F2310/00011 A61F2310/00329 A61F2/30965 A61F2/4637 A61F2002/30014 A61F2002/30019 A61F2002/30126 A61F2002/30153 A61F2002/30281 A61F2002/30405 A61F2002/30433 A61F2002/30448 A61F2002/30459 A61F2002/30461 A61F2002/30467 A61F2002/30472 A61F2002/30484 A61F2002/305 A61F2002/30556 A61F2002/30576 A61F2002/30586 A61F2002/30588 A61F2310/00017 A61F2310/00023 A61F2310/00161 A61F2310/00365
US: 623/17.11 623/17.15 623/17.16



Family:

Publication number	Publication date	Application number	Application date
US8377135 BA	20130219	US20090416048	20090331

Priority:
US20080041179P 20080331 US20090416048 20090331

Probable Assignee: NUVASIVE INC
Assignee(s): (std): BUTCHER PETER ; MCLEOD ALAN ; NUVASIVE INC ; REAH CHRISTOPHER
Assignee(s): BANK OF AMERICA NA ADMINISTRATIVE AGENT AS
Inventor(s): (std): BUTCHER PETER ; MCLEOD ALAN ; REAH CHRISTOPHER
Agent(s): JONATHAN; HEATHER; NUVASIVE INC

Legal status (INPADOC)

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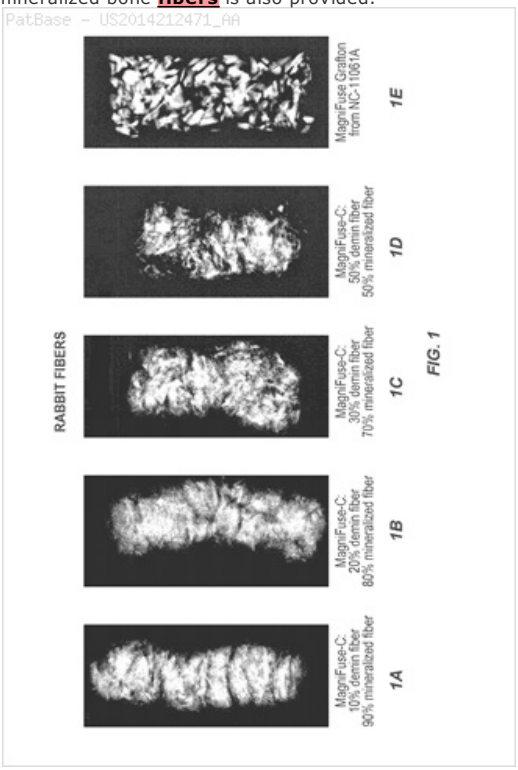
Patent	Date recorded	Event group	Code	Event	Details
US8377135 BA	20130219	LSGT	+	granted / extensions (spc, cpc, pte)	
US8377135 BA	20090713	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NUVASIVE, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MCLEOD, ALAN; REAH, CHRISTOPHER; BUTCHER, PETER; SIGNING DATES FROM 20090629 TO 20090630; REEL/FRAME:022945/0917
US8377135 BA	20160922	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8377135 BA	20161116	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT, CA OLDPARTY : NOTICE OF GRANT OF SECURITY INTEREST IN PATENTS; ASSIGNORS:NUVASIVE, INC.; IMPULSE MONITORING, INC.; REEL/FRAME:040634/0404 EFFECTIVE DATE : 20160208

91) Family number: 57086454 (US2014212471A)

Title: BONE **FIBER** COMPOSITIONS

Abstract: Source: US2014212471A An osteoinductive implantable composition comprising a mixture of demineralized bone **fibers** and mineralized bone **fibers** is provided. The mixture is visible under X ray and remodels more easily than comparable mixtures of demineralized bone matrix and surface demineralized cortical bone chips. The osteoinductive implantable compositions comprises demineralized bone **fibers** in an amount from about 30 vol percent to about 45 vol percent and mineralized bone **fibers** in an amount from about 55 vol percent to about 70 vol percent. The osteoinductive implantable compositions can be delivered in delivery systems including mesh coverings for administration at surgical sites. A method of treating a bone defect caused by injury, disease, wounds, or surgery utilizing the osteoinductive implantable composition comprising a mixture of demineralized bone **fibers** and mineralized bone **fibers** is also provided.

Classifications:
International (IPC 8-9): A61F2/28 A61K35/32 (Advanced/Invention)
CPC: A61K35/32 A61L27/3608 A61L2430/02
US: 424/443 424/549 623/23.63



Family:

Publication number	Publication date	Application number	Application date
US2014212471 AA	20140731	US20130751528	20130128

Priority:
US20130751528 20130128

Probable Assignee: WARSAW ORTHOPEDIC INC
Assignee(s): (std): WARSAW ORTHOPEDIC INC
Inventor(s): (std): WEI GUOBAO ; DRAPEAU SUSAN J

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2014212471 AA	20140731	LSPB	+	published / reissued	
US2014212471 AA	20130211	LSAS	AS	ASSIGNMENT	OWNER NAME : WARSAW ORTHOPEDIC, INC., INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:DRAPEAU, SUSAN J.; WEI, GUOBAO; SIGNING DATES FROM 20130125 TO 20130126; REEL/FRAME:029787/0096

92) Family number: 61913457 (WO16042556A1)

Title: SYNTHETIC-TEXTILE HYBRID FABRIC AND MEANS AND METHOD FOR MANUFACTURING SAME

Abstract: A hybrid fabric made of at least one textile base layer and at least one synthetic layer, where the synthetic layer is at least partially embedded within the textile base layer. The embedded synthetic layer imparts numerous qualities to the hybrid fabric formed and possible designs visible through the surface of the fabric. The hybrid fabric may be manufactured in different methods including hot and cold press, knitting, felting and use of intermediate linking adhesive or **polymeric** layer.

Classifications:

International (IPC 8-9): B32B15/00 B32B15/04 B32B7/00 (Advanced/Invention)

CPC: B32B29/007 B32B5/02 B32B5/024 B32B5/026 B32B5/08 B32B5/22 B32B5/245 B32B7/12 B32B27/065 B32B27/08 B32B27/10 B32B27/12 B32B27/18 B32B27/20 B32B27/22 B32B27/302 B32B27/304 B32B27/306 B32B27/32 B32B27/322 B32B27/34 B32B27/36 B32B27/365 B32B27/40 B32B2260/021 B32B2260/046 B32B2262/0246 B32B2262/0261 B32B2262/0269 B32B2262/0276 B32B2262/06 B32B2262/062 B32B2262/065 B32B2262/08 B32B2262/10 B32B2262/103 B32B2262/106 B32B2262/14 B32B2266/0278 B32B2270/00 B32B2272/00 B32B2307/306 B32B2307/3065 B32B2307/402 B32B2307/41 B32B2307/412 B32B2307/51 B32B2307/546 B32B2307/554 B32B2307/558 B32B2307/56 B32B2307/712 B32B2307/714 B32B2307/7145 B32B2307/72 B32B2307/724 B32B2307/75 B32B2437/00 B32B2437/02 B32B2479/00 B32B2571/02 B32B2605/00 B32B2607/02

Family:

Publication number	Publication date	Application number	Application date
WO16042556 A1	20160324	WO2015IL50941	20150916

Priority:

US20140050778P 20140916

Probable Assignee: ROSENTAL ELINOR

Assignee(s): (std): ROSENTAL ELINOR

Inventor(s): (std): ROSENTAL ELINOR

Agent(s): SAADO HEZY ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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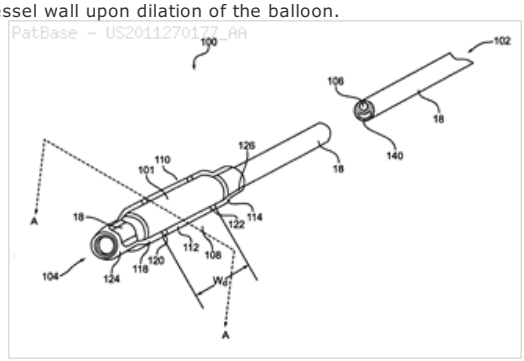
Patent	Date recorded	Event group	Code	Event	Details
WO16042556 A1	20160324	LSPB	+	published / reissued	

93) Family number: 45169712 (US2011270177A)

Title: DEVICE FOR TREATING HARDENED LESIONS

Abstract: Source: US2011270177A A balloon catheter is provided that may be used to dilate hardened regions of a stenosis on a vessel wall. The balloon catheter is provided with cutting elements that extend along a surface of a balloon. At least one bioactive is present, either on the cutting element, within the interior of the balloon, within the material of the balloon or on an outside surface of the balloon. The bioactive is delivered to the vessel wall upon dilation of the balloon.

Classifications:
International (IPC 8-9): A61B17/22 A61B17/32 A61B17/3207 A61D1/02 A61F2/958 A61M25/10 A61M29/00 A61M31/00 A61M37/00 (Advanced/Invention);
A61B17/00 A61M25/00 (Advanced/Non-invention)
CPC: A61B2017/00539 A61B2017/00778 A61B2017/22061 A61M2025/0057 A61M2025/1013 A61M2025/105 A61M2025/1061 A61M2025/1086 A61M2025/109 A61M25/104 A61B17/320725
European: A61B17/3207E A61M25/10P K61B17/00N2 K61B17/00R4 K61B17/22H5 K61M25/00S5 K61M25/10D1 K61M25/10Z19 K61M25/10Z21 K61M25/10Z3 K61M25/10Z8
US: 604/103.01 604/103.02 604/103.020P 604/103.05 604/103.08 604/103.080S 606/159 606/167



Family:

Publication number	Publication date	Application number	Application date
EP2376174 A1	20111019	EP20080876483	20081201
EP2376174 B1	20151125	EP20080876483	20081201
US2011270177 AA	20111103	US20080130420	20081201
US8870816 BB	20141028	US20080130420	20081201
WO10065030 A1	20100610	WO2008US85150	20081201

Priority:

US20070809158 20070531 US20080130420 20081201 WO2008US85150 20081201 US20100837834 20100716

Probable Assignee: COOK MEDICAL TECHNOLOGIES LLC

Assignee(s): (std): AGGERHOLM STEEN ; CHAMBERS SEAN D ; COOK INC ; GLOBAL THERAPEUTICS LLC ; COOK WILLIAM EUROP ; HORN JOE ; COOK MEDICAL TECHNOLOGIES LLC

Assignee(s): WILLIAM COOK EUROPE APS

Inventor(s): (std): AGGERHOLM STEEN ; CHAMBERS SEAN D ; HORN JOE

Agent(s): GARRATT PETER DOUGLAS; BRINKS GILSON AND LIONE; MILZ MICHAEL E

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP2376174 A1	20111019	LSPB	+	published / reissued	
EP2376174 A1	20111019	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20110525
EP2376174 A1	20150729	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150630
EP2376174 A1	20150916	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : COOK MEDICAL TECHNOLOGIES LLC
EP2376174 A1	20151125	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2376174 A1	20151130	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2376174 A1	20151215	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 762291 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20151215
EP2376174 A1	20151216	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D

EP2376174 A1	20160107	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602008041334 COUNTRY OF REF DOCUMENT : DE
EP2376174 A1	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20151230 YEAR OF FEE PAYMENT : 8
EP2376174 A1	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IE PAYMENT DATE : 20151231 YEAR OF FEE PAYMENT : 8
EP2376174 A1	20160325	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2376174 A1	20160415	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 762291 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20151125
EP2376174 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
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EP2376174 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
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EP2376174 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20151230 YEAR OF FEE PAYMENT : 8

EP2376174 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
EP2376174 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
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EP2376174 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20151231
EP2376174 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160226
EP2376174 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160325
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EP2376174 A1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
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EP2376174 A1	20160729	LSLE	REG	REFERENCE TO A	REF COUNTRY CODE : CH

				NATIONAL CODE	REF LEGAL EVENT CODE : PL
EP2376174 A1	20160826	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602008041334 COUNTRY OF REF DOCUMENT : DE
EP2376174 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
EP2376174 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
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EP2376174 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
EP2376174 A1	20160930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
EP2376174 A1	20160930	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20160831
EP2376174 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20151231
EP2376174 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20151231
EP2376174 A1	20161102	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20160826
EP2376174 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
EP2376174 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160125

EP2376174 A1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151125
EP2376174 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IE PAYMENT DATE : 20161125 YEAR OF FEE PAYMENT : 9
EP2376174 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20161125 YEAR OF FEE PAYMENT : 9
EP2376174 B1	20151125	LSGT	+	granted / extensions (spc, cpc, pte)	
US2011270177 AA	20111103	LSPB	+	published / reissued	
US2011270177 AA	20110720	LSAS	AS	ASSIGNMENT	OWNER NAME : COOK INCORPORATED, INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CHAMBERS, SEAN D.; REEL/FRAME:026623/0831 EFFECTIVE DATE : 20110525
US2011270177 AA	20110720	LSAS	AS	ASSIGNMENT	OWNER NAME : GLOBAL THERAPEUTICS, LLC, COLORADO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HORN, JOE; REEL/FRAME:026623/0954 EFFECTIVE DATE : 20110714
US2011270177 AA	20110720	LSAS	AS	ASSIGNMENT	OWNER NAME : WILLIAM COOK EUROPE APS, DENMARK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AGGERHOLM, STEEN; REEL/FRAME:026624/0058 EFFECTIVE DATE : 20110526
US2011270177 AA	20110722	LSAS	AS	ASSIGNMENT	OWNER NAME : COOK MEDICAL TECHNOLOGIES LLC, INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COOK INCORPORATED; REEL/FRAME:026632/0850 EFFECTIVE DATE : 20110531
US2011270177 AA	20110722	LSAS	AS	ASSIGNMENT	OWNER NAME : COOK MEDICAL TECHNOLOGIES LLC, INDIANA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:WILLIAM COOK EUROPE APS; REEL/FRAME:026632/0828 EFFECTIVE DATE : 20110526
US8870816 BB	20141028	LSGT	+	granted / extensions (spc, cpc, pte)	
US8870816 BB	20150922	LSRE	CC	CERTIFICATE OF CORRECTION	
WO10065030 A1	20100610	LSPB	+	published / reissued	
WO10065030 A1	20110601	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10065030 A1	20110720	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13130420 COUNTRY OF REF DOCUMENT : US