

Search history

Search 1: cement grout and extruder machine and method (Results 0)
Search 2: fiber reinforcement and cement and extruder (Results 147)
Search 3: CPC=(b29b and b01f and b28b and b28c and b29c) (Results 9)
Search 4: 2 and 3 (Results 0)
Search 5: cement and fiber and 3 (Results 9)
Search 6: 2 and mix* (Results 146)
Search 7: 6 and second section (Results 3)

1) Family number: 43042041 (US2009082539A)

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Title: MEDICAL DEVICES MADE OF A POLYMER MATERIAL

Abstract: Medical device (Delta) comprising at least one part (pi) consisting of a polymer material (M) comprising at least one kinked rigid-rod polyarylene (P) of which more than 50 weight percent of the recurring units are recurring units (R) of one or more formulae consisting of an optionally substituted arylene group which is linked by each of its two ends to two other optionally substituted arylene groups via a direct C-C linkage. The recurring units (R) are a mix (mu) consisting of (i) between 0 and 75 mole percent, of rigid rod-forming arylene units (Ra) and (ii) between 25 and 100 mole percent of kink-forming arylene units (Rb), both contents being based on the total number of moles of the recurring units (R). Arylene units (Ra) and/or (Rb) may be optionally substituted by at least one monovalent substituting group.

Classifications:

International (IPC 8-9): A61B17/06 A61B17/34 A61B19/00 A61F2/28 A61F2/32 A61F2/38 A61F2/82 A61J1/14 A61L27/18 A61L27/26 A61L27/34 A61L27/44 A61L29/04 A61L29/06 A61L29/08 A61L31/04 A61L31/06 A61L31/10 A61M25/00 A61M5/00 A61M5/158 A61M5/32 C08G16/00 C08G16/06 C08G2/20 C08G61/10 C08G8/02 C08J11/04 C08L61/00 C08L65/00 C08L65/02 C08L71/00 C08L81/00 C08L81/06 (Advanced/Invention); A61B19/00 A61M5/00 C08F283/00 C08F283/08 C08G14/00 C08L65/02 C08L81/00 (Advanced/Non-invention); A61F2/32 A61F2/38 A61L27/00 A61L29/00 A61L31/04 A61L31/08 C08G16/00 C08G61/00 C08L65/00 (Core/Invention)
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European: A61L27/26 A61L27/34 A61L29/06 A61L31/06 A61M5/158 A61M5/32 A61M5/32D A61M5/32F C08G61/10 C08L65/00 C08L71/00 C08L81/06 K61M5/00 M08G261/00B1B M08G261/312 M08G261/314 M08G650/40 M08L65/02
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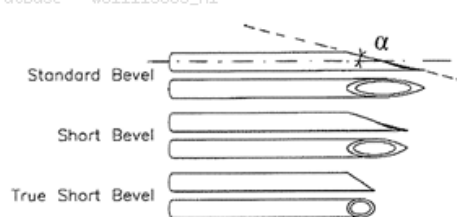


Figure 1

Family:

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Priority:

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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

2) Family number: 57468657 (US2014291886A)

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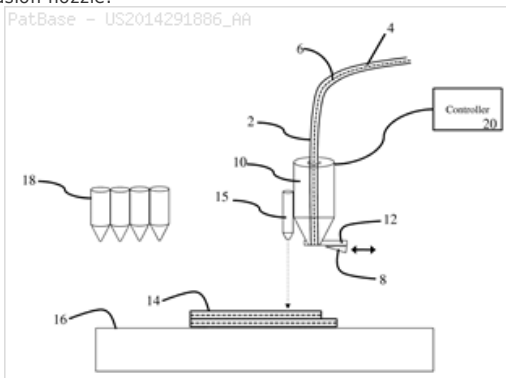
Title: THREE DIMENSIONAL PRINTING

Abstract: Various embodiments related to three dimensional printers, and reinforced filaments, and their methods of use are described. In one embodiment, a void free reinforced filament is fed into an extrusion nozzle. The reinforced filament includes a core, which may be continuous or semi-continuous, and a matrix material surrounding the core. The reinforced filament is heated to a temperature greater than a melting temperature of the matrix material and less than a melting temperature of the core prior to extruding the filament from the extrusion nozzle.

Classifications:

International (IPC 8-9): B22D11/01 B22F B22F1/00 B22F3/00 B22F3/10 B22F3/105 B22F3/11 B22F3/115 B22F3/12 B22F3/16 B26D1/08 B26D1/10 B28B1/30 B29B11/16 B29B15/12 B29B15/14 B29C B29C31/04 B29C31/08 B29C45/14 B29C47/00 B29C47/02 B29C47/06 B29C47/92 B29C48/00 B29C48/02 B29C48/06 B29C48/15 B29C48/154 B29C48/92 B29C48/106 B29C64/118 B29C64/135 B29C64/141 B29C64/153 B29C64/159 B29C64/165 B29C64/188 B29C64/194 B29C64/20 B29C64/205 B29C64/209 B29C64/214 B29C64/227 B29C64/245 B29C64/268 B29C64/295 B29C64/30 B29C64/314 B29C64/321 B29C64/386 B29C64/393 B29C64/40 B29C65/20 B29C65/40 B29C67/00 B29C69/00 B29C70/06 B29C70/12 B29C70/14 B29C70/16 B29C70/20 B29C70/28 B29C70/38 B29C70/40 B29C70/42 B29C70/52 B29C70/54 B29C70/56 B29C70/70 B29K105/08 B29K25/00 B29K63/00 B29K71/00 B29K77/00 B29K79/00 B29L31/30 B32B3/02 B32B38/14 B33Y10/00 B33Y30/00 B33Y40/00 B33Y40/10 B33Y50/00 B33Y50/02 B33Y70/00 B33Y80/00 B41J29/40 B41M5/36 C08K3/013 C08L101/00 D01D D01D5/08 D01F8/04 D04H1/54 G05B15/02 G05B19/19 G05B19/4099 G06F17/50 G06F30/00 (Advanced/Invention); B22F3/105 B22F3/11 B29C47/00 B29C47/08 B29C48/00 B29C64/118 B29C64/165 B29C64/209 B29C64/295 B29C64/40 B29C69/00 B29C70/16 B29C70/20 B29C70/54 B29K101/12 B29K105/00 B29K105/08 B29K105/10 B29K105/12 B29K105/16 B29K25/00 B29K307/04 B29K63/00 B29K71/00 B29K77/00 B29K79/00 B29L31/30 B29L31/34 B29L9/00 B33Y10/00 B33Y30/00 B33Y40/00 B33Y50/02 B33Y70/00 B33Y80/00 (Advanced/Non-invention); B22F B29C (Subclass/Invention)

CPC: B29K2105/10 B29K2105/253 B29K2105/06 B29C70/52 B29K2105/106 B29C64/227 B29C31/08 B29C67/0081 B29K2105/0067 G05B2219/37208 B22F3/003 B22F2207/13 B28B1/001 F27B1/00 F27D1/00 F27B5/04 F27B5/14 F27B15/14 F27D11/12 F27D19/00 F27D21/00 B29C47/0066 B29C48/02 B29C67/0088 B29C70/546 B29C67/0085 B29C2793/0027 B33Y80/00 B29B15/12 B29C48/0022 B29C64/188 B29C64/194 B29C70/205 B29C70/545 B29K2105/167 B29C48/05 B29C48/154 B29C48/2528 B29C48/92 B29C2948/92076 B29C2948/92571 B29C2948/92704 B29C2948/92904 B29B15/14 B33Y40/00 B22F1/0059 B22F3/1025 B22F1/0085 B22D11/01 B22F3/1021 B22F3/24 B22F5/10 B22F2003/244 B22F2005/103 B22F2998/10 B22F2999/00 B29C64/153 B22F3/1146 B22F2003/1046 B22F2003/1056 B22F2003/1057 B22F2003/1058 B29K2103/06 B29K2505/00 B22F3/1118 B29C64/245 B29C70/384 B29C70/524 B22F3/008 B22F2003/1059 B22F2003/248 B29C65/1654 B29C65/18 B29C66/1122 B29C66/47 B29C66/69 B29C66/72141 B29C66/72143 B29C66/836 B29C66/8362 B29C66/8432 B29C66/91231 B29K2105/105 B29K2105/12 B29K2307/04 B29K2309/08 B29C64/295 B29C2793/0081 B29C64/314 B29C64/218 B29B11/16 B29C64/393 G05B15/02 G06F30/00 B29K2101/12 G05B19/4099 G05B2219/35134 G05B2219/49007 Y02P90/265 B29C64/40 B29C45/1418 B29L2031/3091 B29L2031/3425 B29C70/38 B29C31/042



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Family:

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Probable Assignee: MARKFORGED INC

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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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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

3) Family number: 30514816 (US2004079060A)

PatBase

Title: CERAMIC EXHAUST FILTER

Abstract: An improved, efficient, and regenerable exhaust emission filter and filter system are provided which incorporate the use of an inorganic, non-woven fiber filter element. The filter is able to capture exhaust pollutants and particulates through the interwoven nature of the filter element and due to area enhancements applied to the filter element including microscopic enhancements. The filter has an improved life and is able to combust a greater percentage of trapped particulates due to the high temperatures the filter element can withstand. The filter element if formed from a non-woven fiber block which is machined or shaped into a filter foundation. The filter element can have a multitude of coatings and catalysts applied and can be wrapped in insulation and a casing. The improved exhaust emission filter is particularly useful for diesel engine exhausts.

Classifications:

International (IPC 8-9): C08J3/20 B01D B01D24/00 B01D35/06 B01D39/00 B01D39/06 B01D39/14 B01D39/20 B01D46/00 B01D46/04 B01D46/24 B01D46/52 B01D50/00 B01D51/00 B01D53/00 B01D53/02 B01D53/34 B01D53/46 B01D53/56 B01D53/86 B01D53/94 B01D59/00 B01D59/26 B01J B01J20/00 B01J21/00 B01J21/02 B01J21/16 B01J23/00 B01J23/02 B01J23/04 B01J23/10 B01J23/14 B01J23/22 B01J23/34 B01J23/42 B01J23/44 B01J23/46 B01J23/50 B01J23/52 B01J23/78 B01J29/89 B01J31/02 B01J32/00 B01J35/02 B01J35/04 B01J35/06 B01J37/02 B01J37/04 B01J37/08 B01J8/02 B21D51/16 B28B B28B1/00 B28B1/48 B28B1/52 B28B11/14 B28B3/00 B28B3/20 B29C B29C44/04 B29C47/00 B29C47/38 B29C48/395 B29C65/00 B29C67/20 B29D24/00 B32B18/00 B32B19/00 B32B3/12 B82Y30/00 C01B33/26

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H01J9/02 (Advanced/Invention);

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F01N3/10 F01N3/28 (Advanced/Non-invention);

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L01D258/01D L01D258/01G L01D267/20H L01D279/30 L01D46/24F8B L01D46/24F8B2B L01D46/24F8B2D L01D46/24F8B4

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L01J35/04 L01J35/06 L01J37/00C L29C47/00J8 L29C47/12 L29L31/60 M04B103/00W3 M04B103/00W6 M04B111/00M14

M04B111/00T5 M04B111/00T52 M04B111/34D M04B235/32B M04B235/32B2 M04B235/32D2 M04B235/32D4

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M04B235/34H M04B235/42C4 M04B235/44F M04B235/52D12 M04B235/52D4D M04B235/52D4D2 M04B235/52D4D4

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M04B235/72 M04B235/76 M04B235/80 M04B235/96F M04B237/58A2 M04B237/58D R01N13/02 R01N3/022B R01N3/022E

R01N3/28B4B R01N330/06 R01N330/10 R01N330/101 R01N370/22 R01N510/06 R01N510/0684 R01N570/18 R01N590/04

R01N610/02 R02M25/06 R02M25/07

US: 181/231 181/231S 210/435 210/496 210/509 210/510.1 264/156 264/162 264/176.1 264/176.100S 264/29.1

264/29.100S 264/299 264/345 264/42 264/42P 264/44 264/45.1 264/45.100P 264/46.1 264/46.100P 264/48 264/49 264/49S

264/621 264/628 264/630 264/630S 264/631 264/631S 264/640 264/651 264/87 264/DIG.48 29/890 422/168 422/169

422/169S 422/170 422/170P 422/171 422/171P 422/171S 422/173 422/173S 422/177 422/177P 422/177S 422/178 422/178S

422/179 422/180 422/180P 422/180S 422/181 422/182 422/211 422/211P 422/211S 422/255 422/255P 423/210 423/212

423/212P 423/212S 423/213.2 423/213.5 423/215.5 423/215.500P 423/235 423/235P 423/239.1 423/239.100P 423/239.100S

423/239.2 423/239.200S 423/327.2 423/327.200S 425/113 425/113S 428/116 428/116P 428/116S 428/131 428/131S

428/218 428/218S 428/304.4 428/304.400S 428/312.2 428/312.200S 428/312.6 428/312.600S 428/312.8 428/312.800S

428/688 428/688S 455/523 501/4 501/4P 501/6 501/7 501/80 501/80S 501/9 501/95.1 501/95.100P 501/95.100S 501/95.2

501/95.200S 502/150 502/150S 502/240 502/263 502/263S 502/300 502/300S 502/302 502/302S 502/319 502/319S

502/325 502/325S 502/330 502/330S 502/339 502/339S 502/340 502/340S 502/353 502/353S 502/407 502/415 502/439

502/527.14 502/80 502/80P 55/282.3 55/385.1 55/385.100P 55/385.3 55/385.300S 55/483 55/484 55/486 55/487 55/522

55/523 55/523P 55/524 55/524S 55/525 55/527 55/DIG.1 55/DIG.10 55/DIG.3 55/DIG.5 60/274 60/274S 60/285

60/285P 60/295 60/297 60/297S 60/299 60/299P 60/299S 60/301 60/301S 60/311 60/311S

PatBase - US2004079060_A1

Patent Application Publication Apr. 29, 2004 Sheet 1 of 8 US 2004/079060 A1

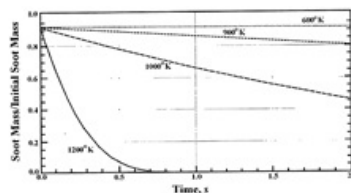
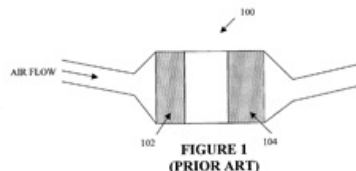


FIGURE 2

Publication number	Publication date	Application number	Application date
AT452695 E	20100115	AT20030809923T	20030730
AU2003257018 AA	20040525	AU20030257018	20030730
AU2006317688 AA	20070531	AU20060317688	20060721
AU2007284302 AA	20080221	AU20070284302	20070314
AU2007284302 BB	20120209	AU20070284302	20070314
BRPI0618693 A2	20110906	BR2006PI18693	20060721
CA2629180 AA	20080509	CA20062629180	20060721
CA2660833 AA	20090202	CA20072660833	20070314
CN101282918 A	20081008	CN200680037343	20060721
CN101505847 A	20090812	CN200780030663	20070314
CN101505847 B	20110907	CN200780030663	20070314
CN101524871 A	20090909	CN200910134157	20060721
CN101524871 B	20120606	CN200910134157	20060721
CN101575200 A	20091111	CN200910134158	20060721
CN101575201 A	20091111	CN200910134159	20060721
CN101575202 A	20091111	CN200910134164	20060721
CN101678559 A	20100324	CN200880017369	20080513
CN102007086 A	20110406	CN200980113650	20090410
CN102036933 A	20110427	CN200980113816	20090410
CN102196850 A	20110921	CN200980143576	20091028
CN1787869 A	20060614	CN20038025728	20030730
CN1787869 B	20100512	CN20038025728	20030730
DE202006017355 U1	20070405	DE200620017355U	20060721
DE202006017357 U1	20070426	DE200620017357U	20060721
DE60330700 D1	20100204	DE20036030700T	20030730
DE60330700 D1	20100204	DE20036030700	20030730
EP1558362 A1	20050803	EP20030809923	20030730
EP1558362 A4	20061018	EP20030809923	20030730
EP1558362 B1	20091223	EP20030809923	20030730
EP1951637 A2	20080806	EP20060788219	20060721
EP1951637 A4	20091028	EP20060788219	20060721
EP2051790 A2	20090429	EP20070758485	20070314
EP2051790 A4	20110504	EP20070758485	20070314
EP2146829 A1	20100127	EP20080755363	20080513
EP2146829 A4	20110302	EP20080755363	20080513
EP2265557 A2	20101229	EP20090733202	20090410
EP2265557 A4	20120905	EP20090733202	20090410
EP2265558 A2	20101229	EP20090733067	20090410
EP2265558 A4	20120905	EP20090733067	20090410
EP2384233 A2	20111109	EP20090824082	20091028
EP2384233 A4	20130109	EP20090824082	20091028
GB201100534 A0	20110302	GB20110000534	20081030
GB2473403 A1	20110309	GB20110000534	20081030
GB2473403 B2	20121010	GB20110000534	20081030
HK1092407 A1	20070209	HK20060112885	20061123
HK1092407 A3	20070209	HK20060112885	20061123
HK1092407 B	20101217	HK20060112885	20061123
IN02419CN2008 A	20090306	IN2008CN02419	20080515
IN03673CN2011 A	20120907	IN2011CN03673	20110527
IN07244CN2010 A	20110805	IN2010CN07244	20101110
IN07253CN2010 A	20110805	IN2010CN07253	20101110
IN07521CN2009 A	20100409	IN2009CN07521	20091222
JP2006503702 T2	20060202	JP20040548290T	20030730
JP2009515808 T2	20090416	JP20080541148T	20060721
JP2010501451 T2	20100121	JP20090524713T	20070314
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JP2011519334 T2	20110707	JP20110505106T	20090410
JP2011521868 T2	20110728	JP20110505107T	20090410
JP2012507464 T2	20120329	JP20110534691T	20091028
JP4746321 B2	20110810	JP20040548290T	20030730
KR101042755 B1	20110620	KR20057007378	20030730
KR20060083128 A	20060720	KR20057007378	20030730
KR20080068114 A	20080722	KR20087014038	20060721
KR20090057392 A	20090605	KR20097005568	20090318
MX2009001851 A1	20090415	MX20090001851	20070314
TW200728367 A	20070801	TW20060141143	20061107
US2004079060 AA	20040429	US20020281179	20021028
US2005042151 AA	20050224	US20040833298	20040428
US2005191218 AA	20050901	US20040008787	20041210
US2006120937 AA	20060608	US20050322544	20051230
US2006188416 AA	20060824	US20050305988	20051219
US2007107395 AA	20070517	US20050323429	20051230
US2007107396 AA	20070517	US20060468166	20060829
US2007108647 AA	20070517	US20060465758	20060818
US2007110645 AA	20070517	US20060465754	20060818
US2007111878 AA	20070517	US20050323430	20051230
US2007152364 AA	20070705	US20050322777	20051230
US2007220871 AA	20070927	US20060534142	20060921
US2008072551 AA	20080327	US20050322588	20051230
US2008112865 AA	20080515	US20070869139	20071009

US2008171650 AA	20080717	US20070930195	20071031
US2008199369 AA	20080821	US20080034431	20080220
US2008236145 AA	20081002	US20070695585	20070402
US2008241014 AA	20081002	US20080104977	20080417
US2008241032 AA	20081002	US20070837365	20070810
US2008242530 AA	20081002	US20080104969	20080417
US2008256936 AA	20081023	US20070736388	20070417
US2008292518 AA	20081127	US20070753011	20070524
US2008292842 AA	20081127	US20070859309	20070921
US2009000260 AA	20090101	US20080172217	20080712
US2009092786 AA	20090409	US20080263004	20081031
US2009136709 AA	20090528	US20090364014	20090202
US2009166910 AA	20090702	US20090349138	20090106
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US2009274602 AA	20091105	US20090433248	20090430
US2010048374 AA	20100225	US20090473562	20090528
US2010150790 AA	20100617	US20090481954	20090610
US2010247396 AA	20100930	US20100753935	20100405
US6946013 BB	20050920	US20020281179	20021028
US7486962 BB	20090203	US20060465754	20060818
US7550117 BB	20090623	US20040833298	20040428
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US7572416 BB	20090811	US20070930195	20071031
US7574796 BB	20090818	US20050305988	20051219
US7578865 BB	20090825	US20060465758	20060818
US7578979 BB	20090825	US20040008787	20041210
US7582270 BB	20090901	US20050322544	20051230
US7640732 BB	20100105	US20060534142	20060921
US7785544 BB	20100831	US20090433248	20090430
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US7862641 BB	20110104	US20090402795	20090312
US7901480 BB	20110308	US20090364014	20090202
US7938876 BB	20110510	US20080104969	20080417
US7938877 BB	20110510	US20080104977	20080417
US7959704 BB	20110614	US20080263004	20081031
US8038759 BB	20111018	US20080172217	20080712
US8057568 BB	20111115	US20080034431	20080220
WO04039477 A1	20040513	WO2003US23796	20030730
WO07061457 A2	20070531	WO2006US28530	20060721
WO07061457 A3	20071101	WO2006US28530	20060721
WO07079377 A2	20070712	WO2006US62614	20061227
WO07079377 A3	20071221	WO2006US62614	20061227
WO08021587 A2	20080221	WO2007US63935	20070314
WO08021587 A3	20080828	WO2007US63935	20070314
WO08027751 A1	20080306	WO2007US76376	20070821
WO08036431 A2	20080327	WO2007US64084	20070315
WO08036431 A3	20080619	WO2007US64084	20070315
WO08122022 A1	20081009	WO2008US59071	20080402
WO08122023 A1	20081009	WO2008US59073	20080402
WO08122024 A1	20081009	WO2008US59074	20080402
WO08147684 A1	20081204	WO2008US63495	20080513
WO09038985 A1	20090326	WO2008US75319	20080905
WO09129150 A2	20091022	WO2009US40243	20090410
WO09129150 A3	20100128	WO2009US40243	20090410
WO09129152 A2	20091022	WO2009US40245	20090410
WO09129152 A3	20100121	WO2009US40245	20090410
WO10008410 A1	20100121	WO2008US81757	20081030
WO10051292 A2	20100506	WO2009US62276	20091028
WO10051292 A3	20100722	WO2009US62276	20091028
ZA200908073 A	20100728	ZA20090008073	20091117
ZA201006831 A	20110629	ZA20100006831	20100927
ZA201006832 A	20110525	ZA20100006832	20100927
ZA201102778 A	20111228	ZA20110002778	20110414
ZA201102778 A	20120125	ZA20110002778	20110414

Priority:

US20020281179	20021028	WO2003US23796	20030730	US20040833298	20040428
US20040008787	20041210	US20050737237	20051116	US20050737237P	20051116
US20050305988	20051219	US20050322588	20051230	US20050322544	20051230
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US20080104969	20080417	WO2008US63495	20080513	US20080057169P	20080529
US20080172217	20080712	WO2008US81757	20081030	US20080263004	20081031
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US20100753935	20100405				

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ODEA ARTHUR J ; O DEA ARTHUR J

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