

Search query (3): [SP]: 1. building products, wherein the building products contain graphene and/or graphene oxide.2. building product according to claim 1, wherein the building product is a building panel, a partition wall brick, a screed, a plaster or a putty.3. building product according to claim 2, wherein the building product contains graphene and/or graphene oxide shavings of flakes.4. building product according to claim 3, wherein the graphene and/or the graphene oxide is distributed homogeneously in the building product.5. building product according to claim 4, wherein only a part of the building product contains graphene and/or graphene oxide.6. building product according to claim 5, wherein the building product is a building panel.7. building panel according to claim 6, wherein the building panel consists of at least one core layer and at least one outer layer, wherein at least either the core layer or the outer layer contains graphene and/or graphene oxide shavings.8. building product according to claim 7, wherein the building product comprises a binder that contains cement, particularly gypsum.9. method for producing a building product containing graphene and/or graphene oxide, comprising mixing graphene and/or graphene oxide, particularly in the form of shavings or flakes, with a cement-based binder and water, and optionally other additives, shaping the mixture and drying the building product that is shaped in this way.10. method according to claim 9, wherein the graphene and/or graphene oxide is used in the form of a suspension, particularly a suspension in water.11. method according to claim 10, wherein the suspension is produced by shearing graphite powder and adding a tenside.12. method according to claim 11, wherein a shear rate greater than 10^4 s⁻¹ is used to produce the suspension.13. use of graphene and/or graphene oxide in building products to improve their mechanical strength or increase the fire protection class of the building products, wherein the building products are particularly building products that contain cement, preferably gypsum.14. use according to claim 13, wherein the building products include building panels, partition wall bricks, screeds, plasters and putties.

Results: 8

Search history

Search FT=(graphene or graphene oxide and panel or drywall panel or gypsum plasterboard panel and film or layer) (Results 6761)

1:

Search FT=(graphene or graphene oxide and panel or drywall panel or gypsum plasterboard panel and film or layer) and IC=(E04C2/04) (Results 2)

2:

Search [SP]: 1. building products, wherein the building products contain graphene and/or graphene oxide.2. building product according to claim 1, wherein the building product is a building panel, a partition wall brick, a screed, a plaster or a putty.3. building product according to claim 2, wherein the building product contains graphene and/or graphene oxide shavings of flakes.4. building product according to claim 3, wherein the graphene and/or the graphene oxide is distributed homogeneously in the building product.5. building product according to claim 4, wherein only a part of the building product contains graphene and/or graphene oxide.6. building product according to claim 5, wherein the building product is a building panel.7. building panel according to claim 6, wherein the building panel consists of at least one core layer and at least one outer layer, wherein at least either the core layer or the outer layer contains graphene and/or graphene oxide shavings.8. building product according to claim 7, wherein the building product comprises a binder that contains cement, particularly gypsum.9. method for producing a building product containing graphene and/or graphene oxide, comprising mixing graphene and/or graphene oxide, particularly in the form of shavings or flakes, with a cement-based binder and water, and optionally other additives, shaping the mixture and drying the building product that is shaped in this way.10. method according to claim 9, wherein the graphene and/or graphene oxide is used in the form of a suspension, particularly a suspension in water.11. method according to claim 10, wherein the suspension is produced by shearing graphite powder and adding a tenside.12. method according to claim 11, wherein a shear rate greater than 10^4 s⁻¹ is used to produce the suspension.13. use of graphene and/or graphene oxide in building products to improve their mechanical strength or increase the fire protection class of the building products, wherein the building products are particularly building products that contain cement, preferably gypsum.14. use according to claim 13, wherein the building products include building panels, partition wall bricks, screeds, plasters and putties. (Results 8)

1) Family number: 55035006 (CN103359997A)

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Title: NANO FOAMED CONCRETE, REINFORCED INSULATION WALLBOARD AND PREPARATION METHOD OF REINFORCED INSULATION WALLBOARD

Abstract: The invention belongs to the field of building materials and construction technologies and relates to nano foamed concrete, a reinforced insulation wallboard and a preparation method of the reinforced insulation wallboard. The nano foamed concrete disclosed by the invention is prepared from the following ingredients in parts by weight: 100 parts of cement, 0.1-5 parts of desulfurized oil coke ash residue, 0.012 part of waterproofing agent, 10-30 parts of fly ash, 0.1-6 parts of superplasticizer, 50-200 parts of water, 1-20 parts of foamer and 0.01-5 parts of nano wave absorbing agent. Thus, when a wallboard product, prepared by embedding steel wire meshes in the nano foamed concrete disclosed by the invention, is applied nearby airports, docks, navigation marks, television stations and receiving stations or applied to concrete-based retaining walls of electromagnetic wave interference preventing scientific research departments, precise instrument plants and information leakage prevention high-grade buildings of national confidential units and the like, the most basic physical, mechanical, heat preservation and heat insulation properties are guaranteed on one hand, and the wallboard product has the capabilities of lowering noise and insulating sound on the other hand.

Classifications:

International (IPC 8-9): C04B28/04 C04B28/06
E04C2/288 (Advanced/Invention)

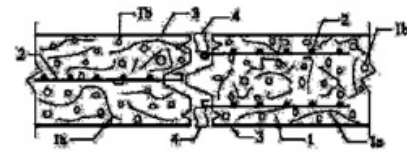


图 1

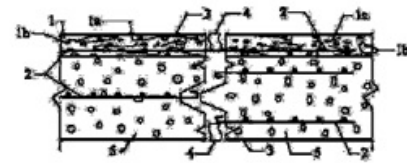


图 2

11

Family:

Publication number	Publication date	Application number	Application date
■ CN103359997 A	20131023	CN201310042110	20130204
■ CN103359997 B	20141210	CN201310042110	20130204

Priority:

CN201310042110 20130204

Probable Assignee: UNIV QINGDAO TECHNOLOGICAL**Assignee(s):** (std): QINGDAO TECHNOLOGICAL UNIV ; UNIV QINGDAO TECHNOLOGICAL**Inventor(s):** (std): GAO SONG ; LUO JIANLIN ; WEI XUE ; ZHANG SHUAI ; LI QIUYI ; ZHAO TIEJUN**2) Family number: 49386154 (WO11093765A1)**

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Title: BUILDING STRUCTURE COMPRISING BUILDING ELEMENTS AND MEANS FOR INTERLOCKING THE BUILDING ELEMENTS

Abstract: This invention relates to a building structure comprising a number of identical building elements (1) and means (9) for interlocking the building elements (1), wherein each building element (1) comprises at least two passages (3, 5, 7) intersecting at right angles. The invention is characterised in that the locking means consist of locking rods (9) received in the passages (3, 5, 7) and that the locking rods (9) bear partly against the walls of the passages (3, 5, 7) and partly against one another.

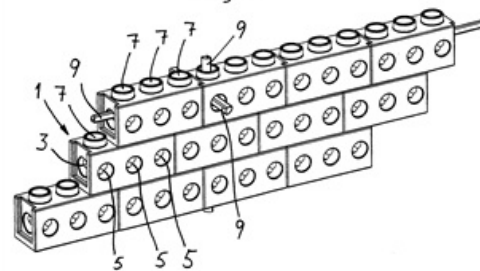
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E04B2/26 (Advanced/Invention)

CPC: E04B2/16 E04B2/26 E04B2002/0206 E04B2002/0223 E04B2/18 E04B2002/0247**European:** E04B2/16 E04B2/26 P04B2/02M1A P04B2/02M1E4

PatBase - WO11093765_A1

Fig.1

**Family:**

Publication number	Publication date	Application number	Application date
■ DE602011027749 D1	20160804	DE201160027749T	20110121
■ EP2529058 A1	20121205	EP20110737354	20110121
■ EP2529058 A4	20140326	EP20110737354	20110121
■ EP2529058 B1	20160629	EP20110737354	20110121
■ RU2012136714 A	20140310	RU20120136714	20110121
■ SE201000073 A1	20110730	SE20100000073	20100129
■ SE534480 C2	20110906	SE20100000073	20100129
■ WO11093765 A1	20110804	WO2011SE00014	20110121

Priority:

SE2010000073 20100129 EP20110737354 20110121 WO2011SE00014 20110121

Probable Assignee: MEDIA OCH IT SKOLAN I DJURSHOLM AKTIEBOLAG**Assignee(s):** (std): MEDIA OCH IT SKOLAN I DJURSHOLM AKTIEBOLAG ; SVENSSON ROLF ; SVENSSONS INNOVATIONS AB**Inventor(s):** (std): SVENSSON ROLF**Inventor(s):** ROLF SVENSSON**Agent(s):** ERIKSSON KJELL; ERIKSSON KJEIL**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**3) Family number: 49393172 (US2012305162A)**

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Title: GYPSUM PLASTER BOARD AND A METHOD FOR PRODUCING A GYPSUM PLASTER BOARD**Abstract:** Gypsum plaster board, containing a gypsum matrix and 0.1 to 10 percent by weight carbon particles, wherein the particle size (d50) of the carbon particles ranges from 0.5 to 4 mm.**Classifications:****International (IPC 8-9):** B32B13/00 B32B37/12 C04B11/00 C04B14/02 C04B14/28 C04B14/36 C04B22/10 C04B28/14

E04C2/04 (Advanced/Invention);

C04B11/00 (Advanced/Non-invention);

B32B13/00 C04B14/00 C04B28/00 E04C2/00 (Core/Invention)

CPC: B32B13/00 C04B14/024 C04B28/14 C04B211/0062 E04C2/043 C04B14/28 C04B20/0076 C04B2103/30**European:** B32B13/00 C04B14/02B2 C04B28/14 E04C2/04C M04B111/00T6B**US:** 1/1 106/680 106/784 156/45**Family:**

Publication number	Publication date	Application number	Application date
AU2011212357 AA	20110811	AU20110212357	20110208
AU2011212357 BB	20141218	AU20110212357	20110208
CN104136216 A	20141105	CN201180007016	20110208
CN104136216 B	20171027	CN201180007016	20110208
DE502011006941 D1	20150709	DE201150006941T	20110208
DK2533976 T3	20150727	DK20110702251T	20110208
EA022141 B1	20151130	EA20120001119	20110208
EA201201119 A1	20130130	EA20120001119	20110208
EP2533976 A1	20121219	EP20110702251	20110208
EP2533976 B1	20150527	EP20110702251	20110208
JP2013518803 T2	20130523	JP20120552365T	20110208
JP5758917 B2	20150805	JP20120552365T	20110208
SI2533976 T1	20150831	SI20110030540T	20110208
TR201509048 T4	20150821	TR20150009048T	20110208
UA102050 C2	20130527	UA20120010575	20110208
US2012305162 AA	20121206	US20110577681	20110208
US9283732 BB	20160315	US20110577681	20110208
WO11095634 A1	20110811	WO2011EP51801	20110208

Priority:

EP20100152909 20100208 EP20110702251 20110208 WO2011EP51801 20110208

Probable Assignee: KNAUF GIPS KG**Assignee(s):** (std): HUMMEL HANS ULRICH ; KNAUF GIPS KG ; SCHELLER LOTHAR ; STICH DIETMAR**Inventor(s):** (std): SCHELLER LOTHAR ; HUMMEL HANS ULRICH ; STICH DIETMAR**Inventor(s):** HANS ULRICH HUMMEL**Agent(s):** WRAYS; VON KREISLER SELTING WERNER PARTNERSCHAFT VON PATENTANWALTEN U RECHTSANWALTEN MBB; VON KREISLER SELTING WERNER PARTNERSCHAFT VON PATENTANWALTEN U RECHTSANWALTEN MBB; UGUR GUERSAD YALCINER; VENABLE LLP; ANNETTE K; KEITH G; VON KREISLER SELTING WERNER**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**4) Family number: 65976365 (US2018354856A)**

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Title: BUILDING PRODUCTS COMPRISING GRAPHENE OR GRAPHENE OXIDE IN THE BULK MATERIAL AND METHOD FOR PRODUCING SUCH BUILDING PRODUCTS**Abstract:** The invention relates to building products that contain graphene and/or graphene oxide in the bulk component thereof. The addition of graphene and/or graphene oxide improves the mechanical properties of said building products, particularly in terms of strength.

Classifications:

International (IPC 8-9): B28B1/00 B32B13/02 B32B13/04 B32B9/00 C01B32/182 C04B14/02 C04B14/36 C04B28/02 C04B28/14 E04C E04C1/00 E04C1/40 E04C2/04 E04C2/26 (Advanced/Invention);
E04C (Subclass/Invention)
International (IPC 1-7): E04C1/00 E04C2/04
CPC: C04B28/02 C04B28/14 C04B2111/00612 E04C1/00 E04C2/043 E04C2/044 B32B9/007 B32B13/02 B32B13/04 B32B2419/00 B32B2607/00 C04B14/022 E04C1/40 E04C2/26
US: 1/1 428/703

Family:

Publication number	Publication date	Application number	Application date
BR112018010843 A2	20181127	BR20181110843	20151218
CL2018001402 A1	20180622	CL20180001402	20180524
CO20180005330 A2	20180612	CO20180005330	20180522
CR20180292 A	20181101	CR20180000292	20151218
CU20180045 A7	20190503	CU20180000045	20151218
EP3384100 A1	20181010	EP20150823311	20151218
IL258560 A0	20180628	IL20150258560	20151218
JP2019502619 T2	20190131	JP20180516431T	20151218
US2018354856 AA	20181213	US20150780165	20151218
WO17092778 A1	20170608	WO2015EP02556	20151218

Priority:

DE201510015301 20151130 WO2015EP02556 20151218

Probable Assignee: KNAUF GIPS KG

Assignee(s): (std): KNAUF GIPS KG

Inventor(s): (std): KIEDRZYN GRZEGORZ ; WIETESKA MARCIN ; MARCIN WIETESKA ; GRZEGORZ KIEDRZYN

Agent(s): JARRY IP JARRY IP SPA; JUAN CARLOS CUESTA QUINTERO; GLEIM CHRISTIAN RAGNAR

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

5) Family number: 56902456 (CN103922687A)

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Title: GRAPHENE OXIDE ENHANCED GYPSUM COMPOSITE MATERIAL AND PREPARATION METHOD THEREOF

Abstract: The invention discloses a graphene oxide enhanced gypsum composite material and a preparation method thereof and belongs to the technical field of medical biomaterials. The technical scheme adopted by the invention is characterized in that the graphene oxide enhanced gypsum composite material is compounded of graphene oxide and gypsum, wherein the addition amount of graphene oxide is 0.06-0.12wt percent of gypsum. The invention also discloses a preparation method of the graphene oxide enhanced gypsum composite material. According to the preparation, graphene oxide is compounded into a gypsum plaster, so that the bending resistance and compressive strength of gypsum are improved, thus the mechanical property of the gypsum is improved, and furthermore the application field of the gypsum is enlarged.

Classifications:

International (IPC 8-9): C04B22/02 C04B28/14 (Advanced/Invention);
C04B22/02 (Advanced/Non-invention)

Family:

Publication number	Publication date	Application number	Application date
CN103922687 A	20140716	CN201410156654	20140418
CN103922687 B	20151209	CN201410156654	20140418

Priority:

CN201410156654 20140418

Probable Assignee: UNIV HENAN NORMAL

Assignee(s): (std): HENAN NORMAL UNIV ; UNIV HENAN NORMAL

Inventor(s): (std): YANG HONG ; NING QIANJI ; LYU YANJIE ; ZHANG ZHELIANG ; WANG PEI

6) Family number: 53956479 (WO13076372A1)

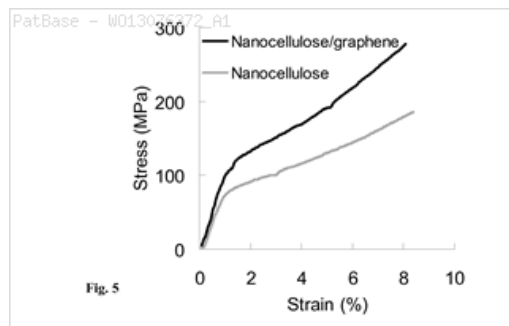
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Title: NANOCELLULOSE COMPOSITES

Abstract: Composite materials that utilize cellulose fibers are disclosed. The attachment between the cellulose fibers is strengthened by means of particles of graphite and/or graphene acting as binder. The composite material is prepared from a mixture containing water and cellulose, and graphite and/or graphene as an additive.

Classifications:

International (IPC 8-9): B82Y30/00 C01B31/04 C08K3/04 D21H11/00 (Advanced/Invention)
CPC: B82Y30/00 C08K3/04 D21H11/18 D21H13/50 D21H15/02 D21H15/08 D21H21/52 B82Y40/00 D21H11/00 C01B32/182 C01B32/20 C08K3/042



Family:

Publication number	Publication date	Application number	Application date
FI20116175 A	20130525	FI20110006175	20111124
WO13076372 A1	20130530	WO2012FI51159	20121123

Priority:

FI20110006175 20111124

Probable Assignee: TEKNOLOGIAN TUTKIMUSKESKUS VTT OY

Assignee(s): (std): TEKNOLOGIAN TUTKIMUSKESKUS VTT ; TEKNOLOGIAN TUTKIMUSKESKUS VTT OY

Inventor(s): (std): LAAKSONEN PAEIVI ; LINDER MARKUS

Agent(s): SEPPÖ LAINE OY

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 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

7) Family number: 49550754 (US2014329045A)

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Title: BUILDING MATERIALS

Abstract: The present invention relates to building materials, particularly building materials for placement on the outside of buildings.

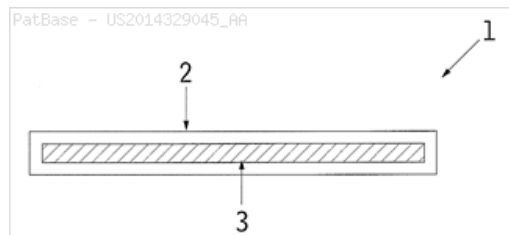
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International (IPC 8-9): C23C C23C18/54 C25D C25D3/38 C25D5/02 C25D5/56 E04B E04B1/00 E04C E04C2/00 E04C2/26 E04C2/30 E04D E04D1/22 E04F13/08 E04F13/12 (Advanced/Invention)

CPC: C23C18/54 C25D3/38 E04B1/00 E04C2/00 C04B26/02 C04B2111/00465 C04B2111/94 C25D5/18 E04C2/26 E04C2/30 C25D5/022 E04F13/0866 C25D5/56 E04F13/12 Y10T428/239 Y10T428/31533 Y10T428/31678 Y10T428/31692 Y10T428/31696

European: E04F13/08E E04F13/12

US: 205/118 205/164 428/419 428/457 428/461 428/462 428/76



Family:

Publication number	Publication date	Application number	Application date
AU2012277587 AA	20130103	AU20120277587	20120626
EP2723953 A1	20140430	EP20120733194	20120626
GB201110808 A0	20110810	GB20110010808	20110627
GB2493492 A1	20130213	GB20110010808	20110627
HK1181085 A1	20131101	HK20130108404	20130717
US2014329045 AA	20141106	US20120128252	20120626
WO13001286 A1	20130103	WO2012GB51493	20120626

Priority:

GB20110010808 20110627 WO2012GB51493 20120626

Probable Assignee: KARM RESEARCH GROUP LTD

Assignee(s): (std): JONES MARK ; KARM CONDUCTIVES GROUP LTD

Assignee(s): KARM RESEARCH GROUP LTD ; KARM CONDUCTIVES GROUP LIMITED

Inventor(s): (std): JONES MARK ; JONES MARK STEPHEN

Inventor(s): MARK STEPHEN JONES

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; BOND CHRISTOPHER WILLIAM; BENNY KONG AND YEUNG; FORRESTERS

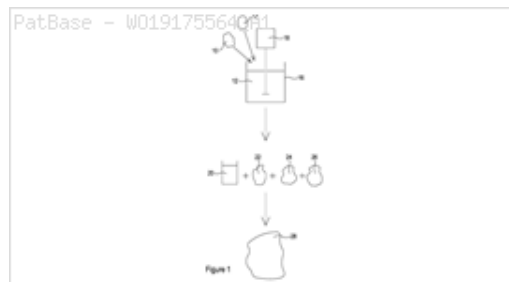
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Title: GRAPHENE REINFORCED CONCRETE

Abstract: A reinforced concrete material is described comprising a cementitious material (22) in which graphene is substantially uniformly distributed. A method of production of concrete is also described comprising the steps of forming a substantially uniform suspension (20) of graphene with water, and mixing the suspension (20) with a cementitious material (22) to form a concrete material (28).

Classifications:**International (IPC 8-9):** C01B32/182 C04B14/02 C04B20/06

C04B28/02 (Advanced/Invention)

CPC: C04B14/024 C04B20/068 C04B28/02**Family:**

Publication number	Publication date	Application number	Application date
GB201804261 A0	20180502	GB20180004261	20180316
WO19175564 A1	20190919	WO2019GB50686	20190312

Priority:

GB20180004261 20180316

Probable Assignee: UNIV OF EXETER**Assignee(s):** (std): UNIV OF EXETER**Assignee(s):** OF EXETER UNIV**Inventor(s):** (std): CRACIUN MONICA ; DIMOV DIMITAR ; RUSSO SAVERIO**Agent(s):** SOMERVELL THOMAS

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 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