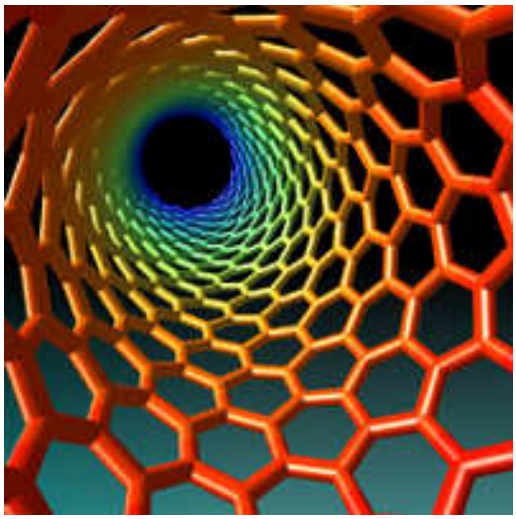
Alerta Tecnológico nº 65

INSTITUTO NACIONAL DA PROPRIEDADE INDUSTRIAL

Pedidos de Patente sobre Tecnologias de Conversão e Armazenamento Eletroquímico de Energia usando Nanotecnologia – Nº 1



Pedidos publicados no 1º semestre de 2011

Diretoria de Cooperação para o Desenvolvimento – DICOD
Centro de Disseminação da Informação Tecnológica – CEDIN
Coordenação de Estudos e Programas – CEPRO
Março de 2012

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1 - INTRODUÇÃO

1.1 - ALERTA TECNOLÓGICO

O Instituto Nacional da Propriedade Industrial (INPI) é uma Autarquia Federal, vinculada ao Ministério do Desenvolvimento, Indústria e Comércio Exterior (MDIC), responsável pela concessão de patentes, registros de desenhos industriais, registro de marcas, averbação de contratos de transferência de tecnologia e de franquia, registro de programas de computador, indicações geográficas e topografias de circuito integrado.

O Centro de Disseminação da Informação Tecnológica (CEDIN), subordinado à Diretoria de Cooperação para o Desenvolvimento (DICOD), mantém um acervo com a descrição dos pedidos de patente e de registros de desenho industrial. Uma de suas atribuições é divulgar e disseminar a utilização destas informações bibliográficas e técnicas. Para tanto, o CEDIN dispõe da Coordenação de Estudos e Programas – CEPRO, cuja incumbência é elaborar publicações fundamentadas, essencialmente, em informações extraídas de documentos de patente.

A patente é uma importante fonte formal de informação, por meio da qual pode-se ter acesso a detalhes técnicos de invenções que, em alguns casos, não estão descritos em outros meios de divulgação (livros, artigos técnicos etc).

O objetivo desta publicação semestral é o de alertar sobre os principais depositantes de patente em determinado setor e período de tempo, os países onde o primeiro depósito foi solicitado (país de prioridade), as áreas tecnológicas mais solicitadas e de divulgar os títulos dos pedidos de patente publicados mundialmente em determinado período. Desta forma, busca-se contribuir para a atualização periódica do público alvo deste Alerta Tecnológico.

Mais detalhes sobre cada pedido de patente como resumo, nome(s) do(s) inventor(es), cópia do documento completo etc. podem ser obtidos nas seguintes bases de patente disponíveis gratuitamente na internet:

1. Base Brasileira de Pedidos de Patente[1]: http://www.inpi.gov.br
2. Base do Escritório Europeu de Patentes[2]: http://worldwide.espacenet.com
3. Base do Escritório Americano de Patentes[3]: http://www.uspto.gov

Caso haja interesse em se conhecer o(s) depósito(s) de patente no Brasil, correspondente(s) aos pedidos de patente estrangeiros (família do pedido de patente[4]) listados na Tabela nº 2, sugere-se uma busca de família dos pedidos de interesse. Neste caso, o CEDIN informará os procedimentos a serem seguidos. Abaixo, seguem endereço e formas de contatar o CEDIN.

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As cópias integrais dos pedidos de patente de interesse podem ser solicitadas por meio do endereço copdocpat@inpi.gov.br ou por correio postal ao endereço anteriormente mencionado.

[1] Esta base contém somente pedidos de patente depositados e publicados no Brasil a partir de 1982.
[2] Contém pedidos de patente depositados e publicados em mais de 70 países.
[3] Contém somente pedidos depositados e publicados nos Estados Unidos.
[4] Uma família de patentes é a coleção de documentos de patente relacionados à mesma invenção ou a invenções correlacionadas, publicados em diferentes países. Cada documento de patente da família baseia-se, normalmente, nos dados do primeiro pedido depositado no país da prioridade. Existem diferentes estruturas de famílias de patente. Para este Alerta, o termo família de patentes refere-se ao conceito de "família simples", na qual todos os documentos de patente têm em comum o número e a data da prioridade unionista (WIPO, 2008).

1.2- PEDIDOS DE PATENTE SOBRE TECNOLOGIAS DE CONVERSÃO E ARMAZENAMENTO ELETROQUÍMICO DE ENERGIA USANDO NANOTECNOLOGIA

As tecnologias de conversão e armazenamento eletroquímico de energia que serão objetos de análise neste Alerta englobam as pilhas, as baterias, as células a combustível e os supercapacitores que utilizam a nanotecnologia em sua concepção.

A nanotecnologia é uma área do conhecimento multi-disciplinar e em franco desenvolvimento, fato corroborado pelo crescente número de pedidos de patente publicados no mundo conforme pode ser visto na série de Alertas Tecnológicos sobre Nanotecnologia que vem sendo publicados pelo INPI desde fevereiro de 2009 e que estão disponíveis para consulta em http://www.inpi.gov.br/index.php/quem-somos/noticias/notas/403-alerta-tecnologico.

O objetivo desta publicação é fornecer ao público interessado informações sobre uma aplicação específica da nanotecnologia, em função do elevado número de documentos publicados sobre a Nanotecnologia em geral. Assim, o INPI, por meio do CEDIN, vem prestar sua colaboração com a divulgação das informações contidas em documentos de patentes publicados sobre este assunto e, conseqüentemente, facilitar ao público interessado o acesso a tais informações.

A partir do presente trabalho serão divulgados, semestralmente, os pedidos de patente publicados no mundo sobre tecnologias de conversão e armazenamento eletroquímico de energia usando nanotecnologia.

De forma bem simples, define-se pilha como sendo um dispositivo que converte a energia química armazenada em seu interior em energia elétrica. Bateria é um conjunto de pilhas associadas em série ou em paralelo, de forma a fornecer a tensão ou a corrente desejada a carga elétrica conectada a mesma. Pilha e bateria são aqui utilizados indistintamente para descrever sistemas eletroquímicos fechados que armazenam energia. Células a

combustível são dispositivos eletroquímicos que produzem energia elétrica a partir da reação química entre o hidrogênio (puro ou um gás rico em hidrogênio) e um oxidante (oxigênio do ar). Os produtos das células a combustível são, além da energia elétrica gerada, energia térmica (calor gerado pela reação) e água resultante da combinação entre o hidrogênio e o oxigênio. Elas diferem das baterias pois não há componente acumulador de energia em seu interior, ou seja, a energia elétrica é produzida enquanto for mantido o fluxo dos reagentes (hidrogênio e oxigênio) que são introduzidos na célula pelo exterior. Os supercapacitores ou capacitores eletroquímicos destiguem-se dos demais capacitores pela sua grande capacidade de armazenar energia.

Para este levantamento, foram selecionados os pedidos de patente que contem no título ou no resumo palavras-chaves relacionadas a nanotecnologia (fuleren+ or nano+ or cnt or nems or graphen+). Além das palavras-chave, também foi utilizada a classe B82 (Nanotecnologia) da Classificação Internacional de Patentes.

Para obter um subconjunto de documentos referentes as tecnologias de conversão e armazenamento eletroquímico de energia foi definido um campo de busca com base na Classificação Internacional de Patentes: H01M (Processos ou meios, por ex., baterias, para a conversão direta da energia química em energia elétrica). Além disso, na recuperação dos documentos relacionados aos supercapacitores, foram utilizados nos títulos e resumos palavras-chave como supercapacitor, ultracapacitor, megacapacitor e capacitor de camada dupla, além de buscar pelas classificações: H01G9/016 (Terminais especialmente adaptados para capacitores de camada dupla), H01G9/038 (Eletrólitos especialmente adaptados para capacitores de camada dupla), H01G9/058 (Eletrodos especialmente adaptados para capacitores de camada dupla) e H01G9/155 (Capacitores de camada dupla).

2- RESULTADOS

No semestre pesquisado foram selecionados 399 documentos de patente que abordam as tecnologias de conversão e armazenamento eletroquímico de energia usando nanotecnologia.

De acordo com o Gráfico nº 1, pode-se identificar os países[5] de prioridade (país ou organização onde foi realizado o primeiro depósito do pedido de patente) e observar a ocorrência de documentos em cada país. Foram considerados os países de prioridade que constam em 5 ou mais pedidos de patente. Este gráfico revela que os cinco principais países de prioridade[6] são: China, Estados Unidos da América, Coréia, Japão e Alemanha.

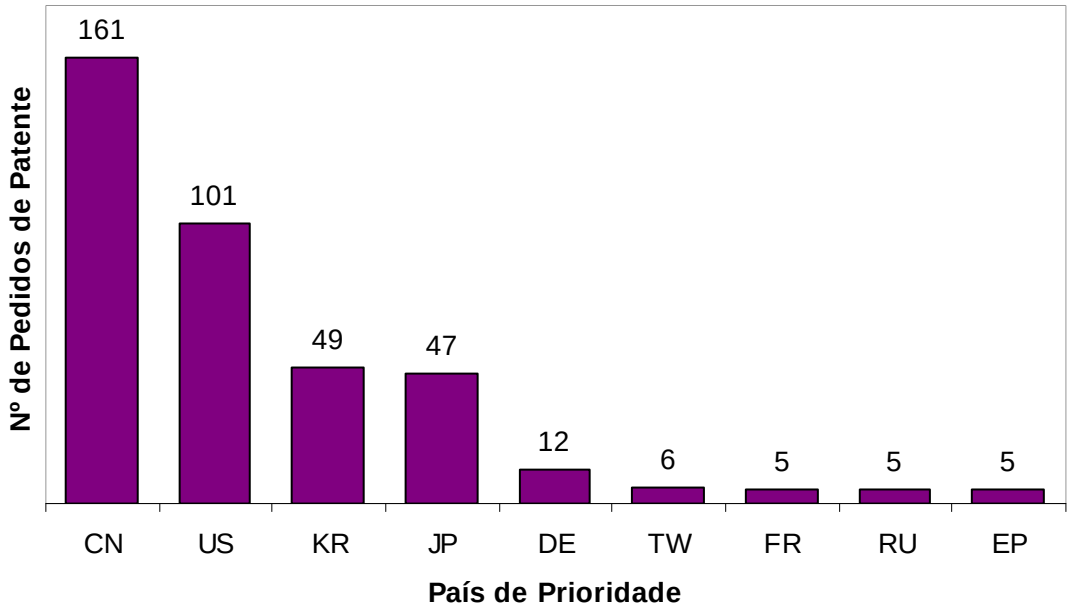
A partir dos resultados nele apresentados pode-se inferir que as tecnologias estão sendo desenvolvidas, principalmente, nos países indicados. Isto provavelmente é verdadeiro porque, geralmente, os depositantes solicitam a prioridade a partir de seus países de origem. Alternativamente, isto poderia indicar o interesse do primeiro depósito nos mercados destes países.

Existe uma grande concentração de pedidos com prioridade chinesa (cerca de 36%), o que reflete uma supremacia da pesquisa em mãos de empresas/instituições daquele país ou a escolha de primeiro depósito naquele país.

[5] A lista com os códigos dos países está disponível no Anexo I.

[6] Conforme estabelecido pela Convenção de Paris (CUP) em seu Art. 4º, o primeiro pedido de patente depositado em um dos países membros da Convenção serve de base para depósitos subseqüentes relacionados à mesma matéria, efetuados pelo mesmo depositante ou por seus sucessores legais. Tem-se, assim, o **Direito de Prioridade**. O prazo para exercer tal direito é de 12 meses, para invenção e modelo de utilidade. Ver art. 16, da Lei da Propriedade Industrial (LPI), nº 9.279/96 – disponível em www.inpi.gov.br.

Gráfico 1: Número de pedidos de patente publicados no mundo no 1º semestre de 2011 x País de prioridade



Fonte: INPI

O Gráfico nº 2 permite identificar as principais tecnologias relacionadas ao tema, descritas nos pedidos de patente publicados no período. Para este levantamento foram computadas somente as classificações presentes em mais de 20 documentos.

Pode-se verificar a seguir a descrição dos grupos principais encontrados:

H01M4 – Eletrodos.

H01M10 – Células secundárias; Sua fabricação.

H01M8 – Células a combustível; Sua fabricação.

H01G9 – Capacitores eletrolíticos, retificadores, detectores, dispositivos de chaveamento ou dispositivos sensíveis à luz ou dispositivos sensíveis à temperatura; Processos para sua fabricação.

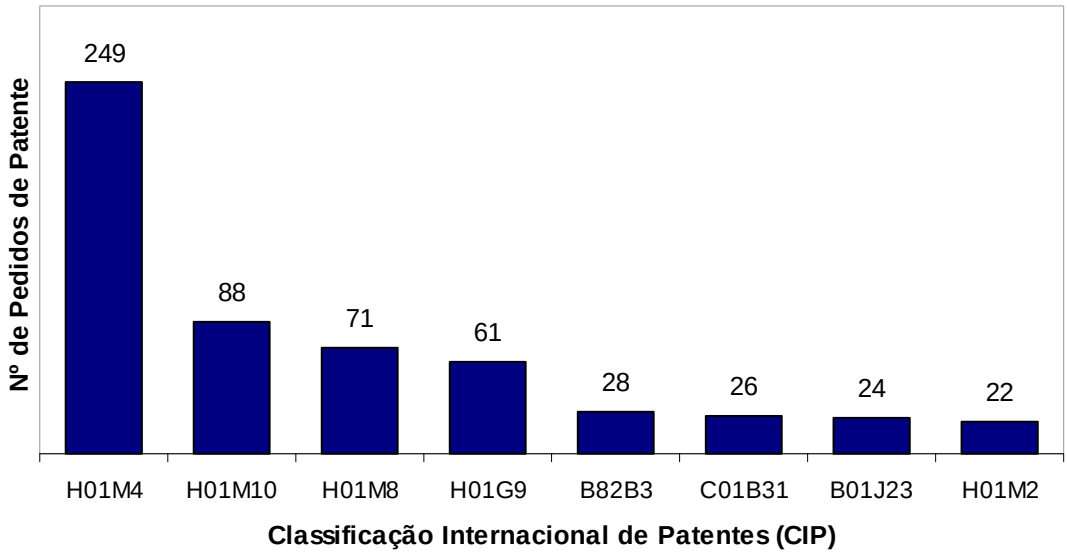
B82B3 – Fabricação ou tratamento de nano estruturas formadas por manipulação individual de átomos, moléculas, ou grupos limitados de átomos ou moléculas como unidades discretas.

C01B31 – Carbono; Seus compostos.

B01J23 – Catalisadores compreendendo metais ou óxidos ou hidróxidos de metais não incluídos no grupo B01J 21/00.

H01M2 – Detalhes estruturais ou processos de fabricação das partes não ativas.

Gráfico 2: Número de pedidos de patente publicados no mundo no 1º semestre de 2011 x Classificação Internacional de Patentes (CIP)



Fonte: INPI

Na Tabela nº 1, a seguir, são identificados os depositantes com maior número de pedidos de patente publicados no 1º semestre de 2011, sendo relacionados os que aparecem em 4 ou mais pedidos. A primeira coluna contém os nomes dos depositantes e a segunda, o total de documentos recuperados no período para cada um.

A partir desta tabela observa-se que das 9 empresas com maior número de pedidos depositados a maioria é chinesa. Este dado encontra-se compatível com o resultado mostrado no Gráfico nº 1, onde se encontra registrado que grande parte dos depósitos foram efetuados prioritariamente na China.

Tabela 1: Relação dos principais depositantes e do nº de pedidos de patente publicados no 1º semestre de 2011

Nome do Depositante	Total de Documentos
UNIV TSINGHUA [CN]	8
SUMITOMO BAKELITE CO [JP]	8
UNIV XIANGTAN [CN]	7
UNIV ZHEJIANG [CN]	6
UNIV SOUTH CHINA NORMAL [CN]	6
HYUNDAI MOTOR CO LTD [KR]	6
IRICO GROUP CORP [CN]	6
UNIV TIANJIN [CN]	5
3M INNOVATIVE PROPERTIES CO [US]	5

Fonte: INPI

A Tabela nº 2, a seguir, apresenta o número do pedido, com sua(s) prioridade(s), o(s) nome(s) depositante(s), a classificação internacional atribuída ao documento e seu título. Os pedidos de patente cujos nomes dos depositantes não foram indexados na base consultada não foram incluídos nesta tabela e podem ser consultados no Anexo II.

Foram encontrados 2 documentos de patente depositados no Brasil no período considerado, dos quais 1 foi efetuado por depositante brasileiro: PI0903038, depositado pela Comissao Nacional de Energia Nuclear. O outro pedido depositado no Brasil foi efetuado por depositante americano.

Tabela 2: Dados bibliográficos dos pedidos de patente publicados no mundo no 1º semestre de 2011 (ordenados pelo nome do primeiro depositante)

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
KR20110059624 A 20110602	US20080200044 20080828	3M INNOVATIVE PROPERTIES CO [US]	H01M4/64; B82B3/00; H01M4/04; H01M10/052	ELECTRODE INCLUDING CURRENT COLLECTOR WITH NANO-SCALE COATING AND METHOD OF MAKING THE SAME
EP2338193 A1 20110629	WO2009US54829 20090825; US20080091643P 20080825	3M INNOVATIVE PROPERTIES CO [US]	H01M4/86; H01M4/92; H01M8/10	FUEL CELL NANOCATALYST WITH VOLTAGE REVERSAL TOLERANCE
US2011151353 A1 20110623	US20100976168 20101222; US20090288882P 20091222	3M INNOVATIVE PROPERTIES CO [US]	H01M8/10	FUEL CELL ELECTRODE WITH NANOSTRUCTURED CATALYST AND DISPERSED CATALYST SUBLAYER
KR20110005807 A 20110119	US20080038864P 20080324	3M INNOVATIVE PROPERTIES CO [US]	H01M4/505; B82B3/00; H01M4/48; H01M4/50; H01M4/52; H01M4/525; H01M4/58; H01M10/05	HIGH VOLTAGE CATHODE COMPOSITIONS
US2011117449 A1 20110519	US201113009981 20110120; US20060469561 20060901; US20050743075P 20051223	3M INNOVATIVE PROPERTIES CO [US]	H01M10/056; H01B1/02; H01M4/134; H01M4/58; H01M4/62; H01M10/0525; H01M10/0569; H01M10/36	SILICON-CONTAINING ALLOYS USEFUL AS ELECTRODES FOR LITHIUM-ION BATTERIES
GB2472554 A 20110209	WO2009US42885 20090505; US20080050496P 20080505	ADA TECHNOLOGIES INC [US]	H01G9/058; H01B1/04	HIGH PERFORMANCE CARBON NANOCOMPOSITES FOR ULTRACAPACITORS
JP2011113833 A 20110609	JP20090269477 20091127	AKAMATSU NORIO	H01M4/66; H01M10/06; H01M10/12	LEAD STORAGE BATTERY AND METHOD OF MANUFACTURING THE SAME

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
CN101971398 A 20110209	WO2009US36485 20090309; US20080034797P 20080307; US20090399732 20090306	ALAN DEVOE; LAMBERT DEVOE	H01M8/02; H01M8/04; H01M8/12; H01M8/24	FUEL CELL DEVICE AND SYSTEM
US2011070495 A1 20110324	US20090565500 20090923	ALLIANCE SUSTAINABLE ENERGY [US]	H01M4/52; H01M4/02	METHOD OF FABRICATING ELECTRODES INCLUDING HIGH-CAPACITY, BINDER-FREE ANODES FOR LITHIUM-ION BATTERIES
US2011151283 A1 20110623	WO2007US77419 20070831	ALLIANCE SUSTAINABLE ENERGY [US]	H01M2/00; B05D5/12; C01D15/02; C01G31/00; C01G41/02; C01G45/12; C01G49/02; C01G51/02; C01G53/04; H01M4/48; H01M4/485; H01M4/50; H01M4/505; H01M4/52; H01M4/525; H01M4/86; H01M10/0525; H01M10/36	THIN FILM LITHIUM-BASED BATTERIES AND ELECTROCHROMIC DEVICES FABRICATED WITH NANOCOMPOSITE ELECTRODE MATERIALS
KR20110023048 A 20110308	KR20090080635 20090828	AMOGREENTECH CO LTD [KR]	H01M4/04; H01M4/02; H01M10/05	COMPOSITION FOR PREPARING A POSITIVE ELECTRODE OF A LITHIUM SECONDARY CELL, THE POSITIVE ELECTRODE PREPARED WITH THE COMPOSITION, AND THE LITHIUM SECONDARY CELL COMPRING THE POSITIVE ELECTRODE

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
KR20110023049 A 20110308	KR20090080637 20090828	AMOGREENTECH CO LTD [KR]	H01G9/058	COMPOSITION FOR PREPARING A POSITIVE ELECTRODE OF LITHIUM-ION CAPACITORS, THE POSITIVE ELECTRODE PREPARED WITH THE COMPOSITION, AND LITHIUM-ION CAPACITORS COMPRING THE POSITIVE ELECTRODE
WO2011068389 A2 20110609	KR20090120081 20091204	AMOGREENTECH CO LTD [KR]; SONG YONG SUL [KR]; KIM JONG SOO [KR]; KWON SANG KYUN [KR]; SEONG CHAE YONG [KR]	B82B3/00; B22F9/06; D01D5/00; H01M10/00	MULTICOMPONENT NANO COMPOSITE OXIDE POWDER AND A PREPARATION METHOD THEREFOR, A FABRICATION METHOD OF AN ELECTRODE USING THE SAME, A THIN FILM BATTERY HAVING THE ELECTRODE AND A FABRICATION METHOD FOR THE BATTERY
US2011111296 A1 20110512	US20100944596 20101111; US20090260292P 20091111	AMPRIUS INC [US]	H01M4/38; B05D5/12; H01M4/66; H01M4/70	OPEN STRUCTURES IN SUBSTRATES FOR ELECTRODES
WO2011060017 A2 20110519	US20090260297P 20091111	AMPRIUS INC [US]; DELHAGEN WILLIAM S [US]; FASCHING RAINER J [US]; LOVENESS GHYRN E [US]; HAN SONG [US]; BERDICHEVSKY EUGENE M [US]; STEFAN CONSTANTIN I [US]; CUI YI [US]; PLATSHON MARK C [US]	(A3) H01M4/02; B82B3/00; H01M4/04; H01M4/36; H01M10/0525	INTERMEDIATE LAYERS FOR ELECTRODE FABRICATION

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
CN102054973 A 20110511	CN20101548059 20101117	ANHUI NORMAL UNIVERSITY	H01M4/139; B82Y40/00; H01M4/36	PREPARATION METHOD AND APPLICATION OF MULTIFUNCTIONAL SNO2@C COMPOSITE NANOMETER MATERIAL
CN101953014 A 20110119	WO2009US35195 20090225; US20080067018P 20080225; US20080130679P 20080602; US20090392525 20090225	ANTHONY ROJESKI RONALD	H01M10/04; H01M10/36	HIGH CAPACITY ELECTRODES
TW201112466 A 20110401	US20090236387P 20090824	APPLIED MATERIALS INC [US]	H01M10/052	IN-SITU DEPOSITION OF BATTERY ACTIVE LITHIUM MATERIALS BY THERMAL SPRAYING
WO2011050204 A2 20110428	US20090254365P 20091023	APPLIED MATERIALS INC [US]; LOPATIN SERGEY D [US]; BREVNOV DMITRI A [US]; WANG CONNIE P [US]; BACHRACH ROBERT Z [US]	H01M4/04; B82B3/00; C23C2/00; H01M4/38; H01M10/0525	NUCLEATION AND GROWTH OF TIN PARTICLES INTO THREE DIMENSIONAL COMPOSITE ACTIVE ANODE FOR LITHIUM HIGH CAPACITY ENERGY STORAGE DEVICE
WO2011028613 A2 20110310	US20090239515P 20090903; US20100868230 20100825	APPLIED MATERIALS INC [US]; PUSHPARAJ VICTOR L [US]; NALAMASU OMKARAM [US]; VERHAVERBEKE STEVEN [US]	H01M4/04; B82B3/00; C23C10/06; H01G9/04; H01M4/38	POROUS AMORPHOUS SILICON-CARBON NANOTUBE COMPOSITE BASED ELECTRODES FOR BATTERY APPLICATIONS
US2011043965 A1 20110224	US20100836547 20100714; US20090225797P 20090715	APPLIED NANOTECH INC [US]	H01G9/155; B05D5/12; B23K26/00; B32B3/26; H01M10/26	APPLYING OPTICAL ENERGY TO NANOPARTICLES TO PRODUCE A SPECIFIED NANOSTRUCTURE

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
TW201115817 A 20110501	TW20090136790 20091030	ATOMIC ENERGY COUNCIL [TW]	H01M8/02	METHOD OF FABRICATING NANO PT CATALYST ON NANO-SIO2
EP2270905 A1 20110105	EP20090275043 20090615	BAE SYSTEMS PLC [GB]	H01M4/86; H01M4/88; H01M12/06	METAL-AIR ELECTROCHEMICAL CELLS AND METHODS OF MANUFACTURING SAME
WO2011017173 A2 20110210	US20090229058P 20090728	BANDGAP ENGINEERING INC; BUCHINE BRENT [US]; MILLER JEFF [US]; BLACK MARCIE [US]; MODAWAR FARIS [US]	H01M4/38; B82B3/00; H01L31/0224; H01M4/04; H01M10/0525	SILICON NANOWIRE ARRAYS ON AN ORGANIC CONDUCTOR
KR20110056515 A 20110530	US20090553527 20090903; US20080095421P 20080909; US20080099388P 20080923	BATTELLE MEMORIAL INSTITUTE [US]	H01G9/058; B82B3/00; H01G9/042	MESOPOROUS METAL OXIDE GRAPHENE NANOCOMPOSITE MATERIALS
KR20110039568 A 20110419	US20090460993 20090727; US20080084140P 20080728	BATTELLE MEMORIAL INSTITUTE [US]	C01B31/02; C01B31/04; H01M4/583; H01M10/00	NANOCOMPOSITE OF GRAPHENE AND METAL OXIDE MATERIALS
CA2768657 A1 20110127	US20090227407P 20090721; WO2010US42821 20100721	BATTELLE MEMORIAL INSTITUTE [US]	H01G9/00; H01G9/058	NICKEL-COBALT SUPERCAPACITORS AND METHODS OF MAKING SAME
CA2769294 A1 20110217	US20090462857 20090810; US20100852794 20100809; WO2010US45088 20100810	BATTELLE MEMORIAL INSTITUTE [US]	H01M4/62; H01M4/485; H01M4/505; H01M4/525; H01M4/66	SELF ASSEMBLED MULTI-LAYER NANOCOMPOSITE OF GRAPHENE AND METAL OXIDE MATERIALS

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
CN102054960 A 20110511	CN20091235950 20091030	BEIJING FANGNENG TECHNOLOGY CO LTD	H01M4/13; H01M4/133; H01M4/134; H01M4/139; H01M4/1393; H01M4/1395; H01M4/38; H01M10/052; H01M10/0525	NEGATIVE PLATE FOR LITHIUM BATTERY, MANUFACTURING METHOD AND APPLICATION THEREOF
CN101997119 A 20110330	CN20091090879 20090811	BEIJING NONFERROUS METAL	H01M4/62; H01M4/26; H01M4/32	ADDITIVE FOR POSITIVE ELECTRODE OF HIGH-TEMPERATURE NICKEL-HYDROGEN POWER BATTERY AND PREPARATION METHOD THEREOF AS WELL AS POSITIVE ELECTRODE SUBSTANCE OF BATTERY
TW201106522 A 20110216	US20090159722P 20090312; EP20090157136 20090401	BELENOS CLEAN POWER HOLDING AG [CH]	H01M4/136; H01M4/36; H01M4/62; H01M10/0525	NITRIDE AND CARBIDE ANODE MATERIALS
CN101935036 A 20110105	EP20090161106 20090526	BELENOS CLEAN POWER HOLDING AG [CH]	C01B31/04; H01M4/1393	STABLE DISPERSIONS OF SINGLE AND MULTIPLE GRAPHENE LAYERS IN SOLUTION
DE102010001632 A1 20110630	DE200910055223 20091223; DE201010001632 20100205	BOSCH GMBH ROBERT [DE]	H01M4/13; H01M4/131; H01M10/058	LITHIUM CELL HAVING IMPROVED CATHODE STRUCTURE AND PRODUCTION METHOD THEREFOR
DE102009040688 A1 20110324	DE200910040688 20090905	BRAEUTIGAM ANDRE [DE]; ROGGMANN SVEN [DE]	H01M8/06	INTEGRAL THERMOCHEMICAL ENERGY STORAGE AND ENERGY CONVERTER SYSTEM FOR REGULATED STORAGE AND DELIVERY OF ELECTRICAL ENERGY IN CLOSED, CELLULAR ASSEMBLED UNIT, HAS SOLID STORAGE CONTAINING GASEOUS HYDROGEN BOUND IN NANOSTRUCTURES

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CN102024948 A 20110420	CN20091190168 20090910	BYD CO LTD	H01M4/48; H01G9/04; H01M4/04	TIN-BASED COMPOSITE OXIDE MATERIAL AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF
CN102001702 A 20110406	CN20091189698 20090831	BYD CO LTD	C01G23/047; C01G23/053; H01G9/042; H01M4/48	TITANIUM DIOXIDE MATERIAL AND PREPARATION METHOD AND APPLICATION THEREOF
CN102106025 A 20110622	WO2009US51734 20090724; US20080135860P 20080724	CALIFORNIA INST OF TECHN; CENTRE NAT RECH SCIENT [FR]	H01M6/14; H01M4/36; H01M4/58	CARBON CATHODES FOR FLUORIDE ION STORAGE
US2011070142 A1 20110324	US20100950211 20101119; FR20030050375 20030728; US20040566041 20040727; WO2004FR50358 20040727	CENTRE NAT RECH SCIENT [FR]; TOULOUSE INST NAT POLYTECH [FR]	C01B33/04; C01B3/00; C01B3/04; C01B33/02; F17C11/00; H01M8/04	HYDROGEN RESERVOIR BASED ON SILICON NANO-STRUCTURES
CN102054990 A 20110511	CN20101573783 20101206	CHANGSHU INST TECHNOLOGY; UNIV NANTONG; UNIV JIANGSU	H01M4/88; D01D1/02; D01D5/00	METHOD FOR PREPARING NANO ELECTRO-CATALYST FOR ANODE OF ETHANOL FUEL CELL
US2011076589 A1 20110331	US20100807777 20100914; US20090277980P 20090930	CHAO CHENG-CHIEH [US]; CUI YI [US]; HSU CHING-MEI [US]; KIM YOUNG BEOM [US]; PRINZ FRIEDRICH B [US]	H01M8/10	NANO-PATTERNED ELECTROLYTES IN SOLID OXIDE FUEL CELLS
US2011027694 A1 20110203	US20100804705 20100726; US20090273404P 20090803	CHAO CHENG-CHIEH [US]; PRINZ FRIEDRICH B [US]; GUER TURGUT M [US]; SHIM JOON HYUNG [KR]	H01M8/10	SOLID-OXIDE FUEL CELLS WITH CONCENTRIC LAMINATING ELECTROLYTES IN A NANOPOROUS MEMBRANE

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CA2767482 A1 20110113	FR20090054726 20090708; WO2010FR51325 20100625	CHAPEL CHANTAL [FR]; FLEURY JEAN-MARC [FR]; LASOU GAUTHIER [FR]; ALONSO PHILIPPE [FR]	C25B9/06; C25B11/03; H01G9/048; H01L21/02; H01M4/86	SYSTEM FOR CONVERTING ENERGY WITH AN ENHANCED ELECTRIC FIELD
CN201881878U U 20110629	CN20102144701U 20100330	CHENGDU LIEHUZUO SCIENCE AND TECHNOLOGY CO LTD	B60K6/28; B60K6/36; B60L8/00; H01G9/20; H01L51/42; H01M10/44; H01M14/00; H02J7/00	EFFICIENT SOLAR ELECTRIC FUEL OIL HYBRID ELECTRIC VEHICLE
CN102087920 A 20110608	CN20101555933 20101123	CHERY AUTOMOBILE CO LTD	H01G9/04; H01L51/44; H01L51/48; H01M14/00	FLEXIBLE LIGHT ANODE AND PREPARATION METHOD THEREOF
CN101967009 A 20110209	CN20101539652 20101109	CHINA NAT OFFSHORE OIL CORP; CNOOC TIANJIN CHEMICAL RES & DESIGN INST	C01G23/00	METHOD FOR PREPARING LITHIUM TITANATE CATHODE MATERIAL FOR LITHIUM ION POWER BATTERIES
CN102088075 A 20110608	CN20091241357 20091207	CHINESE ACAD INST CHEMISTRY	H01M4/137; B32B5/18; H01G9/04; H01M4/1399	ELECTRODE MATERIAL OF CONDUCTIVE POLYANILINE COMPOSITE MEMBRANE AND PREPARATION METHOD THEREOF
CN101935072 A 20110105	CN20101263949 20100826	CHINESE ACAD INST CHEMISTRY	C01G49/14; H01M4/1397; H01M4/58; H01M10/0525	FERROUS LITHIUM SULPHATE FLUORIDE AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF
CN102005611 A 20110406	CN20101521132 20101021	CHINESE ACAD INST CHEMISTRY	H01M10/0565; C08K3/22; C08K3/34; C08K5/098; C08L27/16; C08L27/18; C08L29/04; C08L29/14; C08L33/12; C08L53/00; C08L71/02	POLYMER ELECTROLYTE AND PREPARATION METHOD AND APPLICATION THEREOF
CN102034958 A 20110427	CN20091093624 20090925	CHINESE ACAD PHYSICS INST	H01M4/02; B82B1/00; B82B3/00; H01M4/04; H01M4/58; H01M4/62; H01M10/38	MESOPOROUS PHOSPHATE ANODE MATERIAL WITH OLIVINE STRUCTURE AND PREPARATION METHOD AND USE THEREOF

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
US2011143198 A1 20110616	KR20090123317 20091211	CHOI NAM-SOON [KR]; HAN MAN-SEOK [KR]; KIM TAE-KEUN [KR]; HONG JIN-KYU [KR]; KIM SUNG-SOO [KR]	H01M4/505; C08L1/00; C08L27/12; H01M4/13; H01M4/50	BINDER AND POSITIVE ACTIVE MATERIAL COMPOSITION FOR RECHARGEABLE LITHIUM BATTERY, AND RECHARGEABLE LITHIUM BATTERY INCLUDING SAME
CN102054981 A 20110511	CN20101236405 20100722	CITIC GUOAN MENGGULI POWER TECHNOLOGY CO LTD	H01M4/38; H01M4/134; H01M4/1395	ANODE MATERIAL DOPED WITH HYDROGEN AND CARBON ELEMENTS AND PREPARATION METHOD THEREOF
BRPI0903038 A2 20110510	BR2009PI03038 20090819	COMISSAO NAC ENERGIA NUCLEAR [BR]	H01M8/10	LIGAS METÁLICAS PARA USO COMO ELETROCATALISADORES EM CÉLULAS A COMBUSTÍVEL DE BAIXA TEMPERATURA DE OPERAÇÇO
CN101971394 A 20110209	WO2009IN00100 20090212; IN2008DE00371 20080212	COUNCIL SCIENT IND RES	H01M4/58; H01M4/62; H01M4/86; H01M4/90; H01M4/96; H01M8/10	COMPOSITION WITH ENHANCED PROTON CONDUCTIVITY
US2011151290 A1 20110623	US20090642057 20091218	CUI LI-FENG [US]; CHAN CANDACE K [US]; RUFFO RICCARDO [IT]; PENG HAILIN [CN]; CUI YI [US]	H01M10/44; H01M4/02; H01M4/04	CRYSTALLINE-AMORPHOUS NANOWIRES FOR BATTERY ELECTRODES
CN102110821 A 20110629	CN20091248845 20091228	DALIAN CHEMICAL PHYSICS INST	H01M4/90; B01J21/18; B01J23/42; B01J23/44; B01J23/89; B01J32/00; H01M4/88; H01M4/92; H01M4/96	FUEL CELL CATHODE CATALYST WITH HIGH STABILITY SUITABLE FOR DYNAMIC CONDITIONS
CN102101056 A 20110622	CN20091248477 20091216	DALIAN CHEMICAL PHYSICS INST	B01J27/057; B01J23/46; B01J23/89; H01M4/88; H01M4/92	HIGH-STABILITY FUEL-CELL CATALYST MODIFIED BY OXIDE AND PREPARATION METHOD THEREOF

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
CN102104159 A 20110622	CN20091248533 20091218	DALIAN CHEMICAL PHYSICS INST	H01M8/02; H01M4/88; H01M4/98	NOVEL GAS DIFFUSION LAYER USED FOR FUEL CELL, PREPARATION AND APPLICATION
CN102024991 A 20110420	CN20101524140 20101029	DAMING ZHAO	H01M10/08; H01M10/12	LOW-ACID, LOW-SODIUM AND HIGH-ENERGY SILICON ENERGY ELECTROLYTE AND PREPARATION METHOD THEREOF
WO2011062019 A1 20110526	JP20090263035 20091118	DENKI KAGAKU KOGYO KK [JP]; KAWASAKI TAKASHI [JP]; SAKASHITA HIROSHI [JP]; SAWAI TAKEHIKO [JP]; SAITO SHINJI [JP]	H01M4/58; H01M2/16; H01M4/36; H01M4/62; H01M10/052; H01M10/0566	POSITIVE-ELECTRODE MATERIAL FOR A LITHIUM ION SECONDARY BATTERY, AND MANUFACTURING METHOD THEREFOR
US2011151335 A1 20110623	DE200910055223 20091223; EP20100152775 20100205	DEROMELAERE GAETAN [DE]; AUMAYER RICHARD [DE]; EISELE ULRICH [DE]; SCHUMANN BERND [DE]; KOENIGSMANN MARTIN HOLGER [DE]	H01M4/58; B05D5/12; C25D15/00; H01M4/04; H01M10/0562	LITHIUM-SULFUR CELL AND METHOD FOR MANUFACTURING
US2011151321 A1 20110623	US20100968151 20101214; US20090288025P 20091218	DESIGNED NANOTUBES LLC [US]	H01M4/583; H01G9/00; H01M4/04; H01M4/66; H01M10/26	HIGH PERFORMANCE ENERGY STORAGE AND COLLECTION DEVICES CONTAINING EXFOLIATED MICROTUBULES AND SPATIALLY CONTROLLED ATTACHED NANOSCALE PARTICLES AND LAYERS
CN102024952 A 20110420	CN20101261957 20100818	DONGGUAN AMPEREX ELECTRONICS TECHNOLOGY CO LTD	H01M4/62; H01M4/13; H01M4/139; H01M4/66; H01M10/0525	LITHIUM ION BATTERY ANODE PLATE, PREPARATION METHOD THEREOF AND LITHIUM ION BATTERY USING LITHIUM ION BATTERY ANODE PLATE
CN102082291 A 20110601	CN20101612445 20101229	DONGGUAN SHANSHAN BATTERY MATERIALS CO LTD	H01M10/0561	LITHIUM ION BATTERY ELECTROLYTE CONTAINING NANOPARTICLES

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KR20110005854 A 20110119	WO2008IB51418 20080414	DOW GLOBAL TECHNOLOGIES INC [US]	H01M4/58; C01B25/45; H01M10/0525	LITHIUM MANGANESE PHOSPHATE/CARBON NANOCOMPOSITES AS CATHODE ACTIVE MATERIALS FOR SECONDARY LITHIUM BATTERIES
US2011117432 A1 20110519	WO2008IB52832 20080715; WO2009IB52543 20090615	DOW GLOBAL TECHNOLOGIES LLC [US]	H01M4/58; H01M4/26; H01M4/62	INORGANIC BINDERS FOR BATTERY ELECTRODES AND AQUEOUS PROCESSING THEREOF
KR20110053985 A 20110524	WO2008IB53142 20080805	DOW GLOBAL TECHNOLOGIES LLC [US]	H01M4/58; C01B25/37; C01B25/45; H01M10/052	LITHIUM METAL PHOSPHATE/CARBON NANOCOMPOSITES AS CATHODE ACTIVE MATERIALS FOR RECHARGEABLE LITHIUM BATTERIES
JP2011082485 A 20110421	JP20090210319 20090911; JP20100081491 20100331	DOWA HOLDINGS CO LTD; UNIV TOHOKU	H01G9/058; C01B31/02; H01G9/00	ELECTRIC DOUBLE-LAYER CAPACITOR AND MANUFACTURING METHOD OF THE SAME
US2011143217 A1 20110616	US20100899832 20101007; US20090286628P 20091215	DU PONT [US]	H01M10/056; H01M2/16	ELECTROCHEMICAL CELL COMPRISING A SEPARATOR COMPRISING A NANOWEB CONSISTING ESSENTIALLY OF NANOFIBERS OF FULLY AROMATIC POLYIMIDE
US2011139331 A1 20110616	US20100899847 20101007; US20090286623P 20091215	DU PONT [US]	H01M4/04; B32B37/00	METHOD FOR INCREASING THE STRENGTH AND SOLVENT RESISTANCE OF POLYIMIDE NANOWEBS

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
US2011143207 A1 20110616	US20100899801 20101007; US20090286618P 20091215	DU PONT [US]	H01M4/505; H01M2/16; H01M4/583; H01M4/64	MULTI-LAYER ARTICLE COMPRISING POLYIMIDE NANOWEB
CH701864 A2 20110331	CH20090001495 20090929	EISENRING ROLF [CH]	H02J7/00; H01L31/04	METHOD FOR INCREASING EFFICIENCY OF E.G. LEDS, UTILIZED IN SOLAR POWER PLANT, INVOLVES CONNECTING QUANTUM BATTERY WITH STACK OF PHOTO-DIODES VIA FREQUENCY-BROAD BAND LINE, AND SUPPLYING QUANTUM BATTERY OR SUPER-CAPACITORS BY PHOTO-DIODES
US2011091788 A1 20110421	DE200810028552 20080616; WO2009EP04354 20090616	ELCOMAX GMBH [DE]; LANXESS DEUTSCHLAND GMBH [DE]; RHEIN CHEMIE RHEINAU GMBH [DE]	H01M8/04; H01M8/10	GAS DIFFUSION ELECTRODES COMPRISING FUNCTIONALISED NANOPARTICLES
EP2270914 A1 20110105	FR20090053861 20090611	ELECTRICITE DE FRANCE [FR]	H01M8/06; H01M8/10; H01M8/12	FUEL CELL WITH BUILT-IN HYDROGEN PURIFICATION MEMBRANE
US2011065009 A1 20110317	FR20080053066 20080513; WO2009FR50857 20090511	ELECTRICITE DE FRANCE [FR]	H01M8/22; H01M4/52	IRON-AIR ACCUMULATOR WITH LITHIUM MEDIATOR
WO2011006698 A1 20110120	DE200910033739 20090717	EVONIK DEGUSSA GMBH [DE]; MAISELS ARKADI [DE]; STOMMEL YVES GORAT [CN]; STENGER FRANK [DE]; MIESSEN MARTIN [DE]; ZIMMERMANN JUTTA [DE]; DANNEHL MANFRED [DE]; PILGRAM PETER [DE]	C01B31/00; H01M4/133; H01M4/134; H01M4/136; H01M4/1395; H01M4/1397; H01M4/38	NANOSTRUCTURED SILICON-CARBON COMPOSITES FOR BATTERY ELECTRODES

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
KR20110000100 A 20110103	KR20090057469 20090626	FEMVIX [KR]	H01G9/058; H01G9/004	SUPERCAPACITOR AND METHOD FOR MAKING THE SAME
KR20110000099 A 20110103	KR20090057467 20090626	FEMVIX [KR]	H01G9/058; H01G9/042	SUPERCAPACITOR AND METHOD FOR MAKING THE SAME
US2011143263 A1 20110616	US20100770084 20100429	FORD GLOBAL TECH LLC [US]	H01M4/02; B01J23/00; B01J23/38; B01J23/42; B01J23/755	CATALYST LAYER HAVING THIN FILM NANOWIRE CATALYST AND ELECTRODE ASSEMBLY EMPLOYING THE SAME
DE102009037144 A1 20110217	DE200910037144 20090806	FRAUNHOFER GES FORSCHUNG [DE]	H01M8/02	CONTACT ELEMENT FOR ELECTRICALLY CONTACTING E.G. LITHIUM ION ACCUMULATOR TO STORE CURRENT IN CELL AND TO DISCHARGE CURRENT FROM CELL, HAS LOW TEMPERATURE CO-FIRED CERAMIC LAYER FORMED ON SIDE OF TWO-DIMENSIONAL LATTICE STRUCTURE
JP2011129417 A 20110630	JP20090287922 20091218	FUJI ELECTRIC CO LTD	H01M4/86; B01J23/89; H01M4/96	ELECTRODE CATALYST AND FUEL CELL USING THE SAME
JP2011098843 A 20110519	JP20090252649 20091104	FUJI ELECTRIC HOLDINGS	C01B31/04; B01J27/20; B01J37/12; C25B13/04; H01B1/06; H01M8/02	SOLID ACID AND METHOD FOR PRODUCING THE SAME

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
JP2011032541 A 20110217	JP20090180675 20090803	FURUKAWA ELECTRIC CO LTD; FURUKAWA BATTERY CO LTD	B22F1/00; B22F9/02; B22F9/14; C22C13/00; C22C30/02; C22C30/04; H01M4/36; H01M4/38; H01M4/62	NANOSIZE PARTICLE, NEGATIVE ELECTRODE MATERIAL FOR LITHIUM ION SECONDARY BATTERY CONTAINING THE NANOSIZE PARTICLE, NEGATIVE ELECTRODE FOR LITHIUM ION SECONDARY BATTERY, LITHIUM ION SECONDARY BATTERY, AND METHOD FOR PRODUCING THE NANOSIZE PARTICLE
JP2011034839 A 20110217	JP20090180759 20090803	FURUKAWA ELECTRIC CO LTD; FURUKAWA BATTERY CO LTD	H01M4/38; B22F1/00; B22F9/02; B22F9/14; C01B33/06; C22C11/00; C22C12/00; C22C13/00; C22C18/00; C22C21/00; C22C28/00; H01M4/36	NANOSIZED PARTICLES, NANOSIZED-PARTICLES-INCLUDED NEGATIVE ELECTRODE MATERIAL FOR LITHIUM ION SECONDARY BATTERY, NEGATIVE ELECTRODE FOR LITHIUM ION SECONDARY BATTERY, LITHIUM ION SECONDARY BATTERY, AND METHOD OF MANUFACTURING NANOSIZED PARTICLES

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JP2011034836 A 20110217	JP20090180733 20090803	FURUKAWA ELECTRIC CO LTD; FURUKAWA BATTERY CO LTD	H01M4/38; B22F1/00; B22F9/02; B22F9/14; C01B33/02; C01B33/06; C22C11/00; C22C12/00; C22C13/00; C22C18/00; C22C21/00; C22C28/00; H01M4/134; H01M4/36; H01M4/62	NANOSIZED PARTICLES, NANOSIZED-PARTICLES-INCLUDED NEGATIVE ELECTRODE MATERIAL FOR LITHIUM ION SECONDARY BATTERY, NEGATIVE ELECTRODE FOR LITHIUM ION SECONDARY BATTERY, LITHIUM ION SECONDARY BATTERY, AND METHOD OF MANUFACTURING NANOSIZED PARTICLES
WO2011041468 A1 20110407	US20090246741P 20090929	GEORGIA TECH RES INST [US]; STREAMLINE NANOTECHNOLOGIES INC [US]; YUSHIN GLEB [US]; MAGAZYNSKYY OLEKSANDR [US]; DIXON PATRICK [US]; HERTZBERG BENJAMIN [US]	H01M4/58	ELECTRODES, LITHIUM-ION BATTERIES, AND METHODS OF MAKING AND USING SAME
CN102070782 A 20110525	US20090623000 20091120	GM GLOBAL TECH OPERATION; UKRAINIAN ACADEMY OF SCIENCES L V	C08G73/02; B82Y30/00; B82Y40/00; C08G61/12; C08G73/06; C08K3/22; C08L65/00; C08L79/02; C08L79/04; H01M4/1391; H01M4/62	HYBRID TWO- AND THREE-COMPONENT HOST-GUEST NANOCOMPOSITES AND METHOD FOR MANUFACTURING THE SAME
CN102084522 A 20110601	WO2009US43282 20090508; US20080123529 20080520	GM GLOBAL TECH OPERATIONS	H01M4/583; H01M4/13; H01M4/58; H01M4/64; H01M10/0525; H01M10/36	INTERCALATION ELECTRODE BASED ON ORDERED GRAPHENE PLANES

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CN101944619 A 20110112	US20090465913 20090514; US20100718330 20100305	GM GLOBAL TECH OPERATIONS INC [US]	H01M4/88; H01M2/16; H01M4/86; H01M8/02	FABRICATION OF ELECTRODES WITH MULTIPLE NANOSTRUCTURED THIN CATALYTIC LAYERS
DE102010022231 A1 20110113	US20090472697 20090527	GM GLOBAL TECH OPERATIONS INC [US]	H01M4/86; H01M8/02	METHOD TO ENHANCE THE DURABILITY OF CONDUCTIVE CARBON COATING OF PEM FUEL CELL BIPOLAR PLATES
DE102010020169 A1 20110210	US20090465913 20090514; US20100701095 20100205	GM GLOBAL TECH OPERATIONS INC [US]	H01M4/88; H01M8/02	PREPARATION OF NANOSTRUCTURED THIN CATALYTIC LAYER-BASED ELECTRODE INK
CN102024571 A 20110420	CN20091093880 20090923	GRADUATE UNIVERSITY OF CHINESE ACADEMY OF SCIENCES GUCAS	H01G9/04; H01G9/20; H01L51/44; H01L51/48; H01M14/00	METHOD FOR PREPARING NANO WAFER PHOTON ANODE OF FLEXIBLE DYE-SENSITIZED SOLAR CELL
DE102009019822 A1 20110303	DE200910019822 20090813	GRIMM ARNOLD [DE]	H01M4/1395; H01M10/052	METHOD FOR MANUFACTURING AND INSERTION OF AMORPHOUS LITHIUM NANO-PARTICLE FOR INSERTION IN HIGH SPEED LITHIUM BATTERIES AND ACCUMULATORS, INVOLVES MANUFACTURING MULTIPLE PARTICLE AND WELDING PARTICLE WITH LASER AT CONDUCTING MATERIAL
JP2011070802 A 20110407	JP20090218830 20090924	GS YUASA CORP	H01M4/131; H01M4/36; H01M4/58	NONAQUEOUS ELECTROLYTE SECONDARY BATTERY
CN102005613 A 20110406	CN20101527015 20101026	GUANGXI SWAN STORAGE BATTERY CO LTD; UNIV SOUTH CHINA NORMAL	H01M10/08	COLLOID ELECTROLYTE OF STORAGE BATTERY AND PREPARATION METHOD THEREOF

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CN102082264 A 20110601	CN20101589649 20101215	GUANGXI TIANTIAN SCIENCE AND TECHNOLOGY DEV CO LTD	H01M4/1397; B82Y40/00	METHOD FOR PREPARING PRESOMA OF ACTIVE ELECTRODE MATERIAL OF NANO-LITHIUM ION BATTERY AND APPLICATION THEREOF
CN101969143 A 20110209	CN20101291269 20100921	GUOPEI CHEN	H01M10/12; H01M4/66; H01M4/73	METHOD FOR PREPARING NANO HIGH-ENERGY MAINTENANCE-FREE LEAD-ACID BATTERY
CN101937999 A 20110105	CN20101276961 20100909	HARBIN INST OF TECHNOLOGY	H01M4/88; B01J23/42; B01J23/44; B01J23/50; B01J23/52; H01M4/90	PREPARATION METHOD OF SUPPORTED BINARY ALLOY DIRECT ALCOHOL FUEL CELL CATALYST WITH POROUS HOLLOW SPHERE STRUCTURE
US2011149465 A1 20110623	JP20080312358 20081208; WO2009JP05898 20091106	HASHIMOTO YASUHIRO [JP]; ASARI TAKUMA [JP]; KUMAGAI HIRONORI [JP]; HAYASHI SHIGEO [JP]	H01G4/30; H01G9/00	ELECTRIC DOUBLE LAYER CAPACITOR AND METHOD FOR MANUFACTURING THE SAME
CN102013477 A 20110413	CN20101537386 20101110	HEBEI LITAO BATTERY MATERIALS CO LTD	H01M4/139; H01M4/1397	METHOD FOR PREPARING LITHIUM IRON PHOSPHATE/CARBON COMPOSITE MATERIAL OF LITHIUM ION BATTERY
CN102097618 A 20110615	CN20111005663 20110112	HEFEI GUOXUAN HIGH TECH POWER ENERGY CO LTD	H01M4/1397	METHOD FOR PREPARING CARBON COATED CATHODE MATERIAL LIFEXM1YM2ZPO4
CN102005565 A 20110406	CN20101533583 20101106	HEFEI GUOXUAN HIGH TECH POWER ENERGY CO LTD	H01M4/1397	METHOD FOR PREPARING CARBON-COATED LITHIUM IRON PHOSPHATE NANOPARTICLES
CN102044700 A 20110504	CN20091184915 20091019	HEFEI INST PHYSICAL SCI CAS	H01M10/0562; H01M10/058	LITHIUM LANTHANUM BISMUTHATE-BASED SOLID ELECTROLYTE MATERIAL AND PREPARATION METHOD THEREOF

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
CN102110812 A 20110629	CN20111024357 20110124	HENAN SUN RISING LITHIUM ENERGY TECHNOLOGY CO LTD	H01M4/1397	METHOD FOR PREPARING CARBON NANO TUBE COMPOSITE LITHIUM IRON PHOSPHATE POWER BATTERY MATERIAL
WO2011078901 A1 20110630	IN2009CH03150 20091221	HONEYWELL INT INC [US]; RAGHURAMA RAJU [IN]	C25D3/56; H01L21/20; H01M4/02	SUPERCAPACITOR BASED ON MNO2 AND TIO2 COMPOSITES
CN101989655 A 20110323	CN20091063403 20090803	HONGTAO ZHANG; LI FAN; HUI XU	H01M4/58; H01M4/04; H01M4/36; H01M4/48	NANO SILICON CARBIDE USED FOR LITHIUM-ION BATTERY CATHODE MATERIAL
US2011114875 A1 20110519	US20100946905 20101116; US20090281262P 20091116	HUANG GUIQING [US]	H01M4/90	ELECTROCHEMICALLY ACTIVE MATERIALS AND PRECURSORS THERETO
CN101950680 A 20110119	CN20101265362 20100827	HUBEI GREATSEA NEWPOWER TECHNOLOGY CO LTD	H01G9/042	NANO NICKEL OXIDE COMPOSITE ELECTRODE FOR SUPER CAPACITOR AND PREPARATION METHOD THEREOF
CN101964416 A 20110202	CN20101517845 20101025	HUNAN CHANGYUAN LICO CO LTD	H01M4/1391; H01M10/0525	PREPARATION METHOD OF LITHIUM ION BATTERY ANODE MATERIAL LITHIUM MANGANATE AND AUTOMOBILE LITHIUM ION BATTERY
CN102013517 A 20110413	CN20101534033 20101105	HUNAN TIANHENG NEW ENERGY CO LTD	H01M10/0565; H01M2/26; H01M4/131; H01M4/133; H01M4/62	POLYMER LITHIUM ION LOW-TEMPERATURE BATTERY
CN102097640 A 20110615	CN20111005825 20110112	HUNAN UNIVERSITY OF SCIENCE AND TECHNOLOGY	H01M8/06; H01M4/88; H01M4/90; H01M8/10	METHOD FOR MANUFACTURING FUEL CELL CAPABLE OF SYNTHESIZING ACETIC ACID SIMULTANEOUSLY
CN102024955 A 20110420	CN20101525310 20101030	HUNAN UNIVERSITY OF SCIENCE AND TECHNOLOGY	H01M4/92; H01M4/88	THREE-DIMENSIONAL MESH NANO POROUS PALLADIUM-RUTHENIUM ELECTRODE MATERIAL FOR FUEL CELL AND PREPARATION METHOD THEREOF

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
JP2011129937 A 20110630	CA20022367290 20020116	HYDRO QUEBEC	H01G9/038; C08F283/00; C08F290/06; C08G65/26; C08G65/333; C08L33/12; C08L71/02; C09D133/12; H01B1/06; H01G9/02; H01G9/058; H01M4/48; H01M4/485; H01M4/50; H01M4/505; H01M4/52; H01M4/525; H01M4/58; H01M4/587; H01M10/052; H01M10/0565; H01M10/36	HIGHLY-STABLE POLYMERIC ELECTROLYTE, AND USE THEREOF IN ELECTROCHEMICAL SYSTEM
KR20110040565 A 20110420	KR20090097885 20091014	HYOSUNG CORP [KR]	H01M4/02; H01M4/04; H01M10/36	SULFUR POSITIVE ELECTRODES AND METHOD FOR PREPARING THE SAME
CN102082275 A 20110601	KR20090116575 20091130	HYUNDAI MOTOR CO LTD [KR]	H01M4/86; H01M4/88; H01M4/90	ELECTRODE FOR POLYMER ELECTROLYTE MEMBRANE FUEL CELL AND METHOD FOR FORMING MEMBRANE-ELECTRODE ASSEMBLY USING THE SAME
CN102059126 A 20110518	KR20090111516 20091118	HYUNDAI MOTOR CO LTD [KR]; KOREA INST SCI & TECH [KR]	B01J23/89; H01M4/92	PREPARATION METHOD FOR PTCO NANOCUBE CATALYST
US2011123908 A1 20110526	KR20090114623 20091125	HYUNDAI MOTOR CO LTD [KR]; SNU R&DB FOUNDATION [KR]	H01M4/96; B01J21/18; B01J23/44; B01J23/755	METHOD FOR PREPARING NANO-SIZED METAL PARTICLES ON A CARBON SUPPORT
US2011104588 A1 20110505	KR20090103747 20091029	HYUNDAI MOTOR CO LTD [KR]; SNU R&DB FOUNDATION [KR]	H01M4/92; B01J21/18; B01J23/40	METHOD OF PREPARING NANO-SIZED CATALYST ON CARBON SUPPORT
US2011129763 A1 20110602	KR20090117211 20091130	HYUNDAI MOTOR CO LTD [KR]; SNU R&DB FOUNDATION [KR]	H01M4/583; B01J8/00; B01J21/18; B05D7/00; H01M4/90	SYNTHESIS METHODS OF CORE-SHELL NANOPARTICLES ON A CARBON SUPPORT

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KR20110062293 A 20110610	KR20090118971 20091203	HYUNDAI MOTOR CO LTD [KR]; UNIV NAT CHONNAM IND FOUND [KR]	H01M4/04; H01M4/36; H01M10/05	ANODE MATERIAL WITH HIGH RATE-CAPABILITY AND HIGH CAPACITY FOR LITHIUM SECONDARY BATTERY AND PROCESS FOR SYNTHESIZING THE SAME
KR101037766B B1 20110527	KR20100098956 20101011	IB GRAPHENE CO LTD [KR]	H01M4/583; B82B3/00; H01M4/133; H01M10/0525	METHOD FOR MANUFACTURING THE SECONDARY BATTERY USING GRAPHENE
CN102017254 A 20110413	WO2009SE00108 20090226; SE20080000464 20080227; US20080064295P 20080227	IMPACT COATINGS AB	H01M8/02; C04B35/565; C23C30/00	ELECTRODE WITH A COATING, METHOD IN PRODUCTION THEREOF AND USE OF A MATERIAL
TW201119049 A 20110601	TW20090140008 20091124; TW20100140432 20101123	IND TECH RES INST [TW]	H01L31/04; H01L31/0224; H01M14/00	QUANTUM DOT DYE-SENSITIZED SOLAR CELL
US2011003235 A1 20110106	TW20090122508 20090703	INER AEC EXECUTIVE YUAN [TW]	H01M8/10; H01M8/00	SOLID OXIDE FUEL CELL AND MANUFACTURING METHOD THEREOF
CN102030325 A 20110427	CN20101535177 20101103	INST ELECTRICAL ENG CAS	C01B31/04	METHOD FOR PREPARING BIOCOMPATIBLE GRAPHENE
CN102005307 A 20110406	CN20101295214 20100928	INST ELECTRICAL ENG CAS	H01G9/042	PREPARATION METHOD OF GRAPHENE SUPPORTED RUTHENIUM OXIDE ELECTRODE MATERIALS

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CN101974207 A 20110216	CN20101513378 20101020	INST OF CHEMICAL MATERIALS CHINA ACADEMY OF ENGINEERING PHYSICS	C08L63/00; B29C43/58; C08K3/04; C08K5/41; C08K7/00; C08K13/04; H01B1/24; H01M4/96	NANO-GRAPHITE SHEET-BASED COMPOSITE MATERIAL WITH HIGH ELECTRIC CONDUCTIVITY AND PREPARATION METHOD THEREOF
CN101937774 A 20110105	CN20101217061 20100623	INST OF PHYSICS CAS	H01G9/00; H01G9/04	PREPARATION METHOD OF WINDING TYPE SUPER CAPACITOR
CN101950684 A 20110119	CN20101294290 20100928	IRICO GROUP CORP	H01G9/042; H01B1/20; H01B13/00; H01G9/20; H01L51/48; H01M14/00	METHOD FOR PREPARING DSC LIGHT ANODE SCATTERING LAYER SLURRY
CN101935029 A 20110105	CN20101297222 20100929	IRICO GROUP CORP	C01B25/45; H01M4/58	METHOD FOR PREPARING LITHIUM IRON PHOSPHATE MATERIAL
CN101964418 A 20110202	CN20101293815 20100928	IRICO GROUP CORP	H01M4/1397	METHOD FOR PREPARING LITHIUM IRON PHOSPHATE-DOPED NANO POWDER FOR LITHIUM ION BATTERY
CN101976736 A 20110216	CN20101294870 20100928	IRICO GROUP CORP	H01M4/58; C01B25/45; H01M4/1397	METHOD FOR SYNTHESIZING LITHIUM ION BATTERY ANODE MATERIAL
CN101941687 A 20110112	CN20101293811 20100927	IRICO GROUP CORP	C01B25/45; H01M4/1397; H01M4/58	METHOD FOR SYNTHETIZING LITHIUM ION BATTERY ANODE MATERIAL LIFEPO4
CN101944602 A 20110112	CN20101293718 20100927	IRICO GROUP CORP	H01M4/1397; H01M4/58	PREPARATION METHOD OF NANO-TERNARY COMPLEX LITHIUM-ION BATTERY CATHODE MATERIAL
BRPI0707932 A2 20110531	US20060773538P 20060215; WO2007US04182 20070214	ISTVAN RUDYARD LYLE [US]	C01B3/08; B82B1/00; B82B3/00; H01M4/58	CARBONOS ATIVADOS MESOPOROSOS
US2011143022 A1 20110616	US201113021041 20110204; US20060324370 20060104	JANG BOR Z [US]; ZHAMU ARUNA [US]; SONG LULU [US]	H01M8/00	HIGHLY CONDUCTIVE COMPOSITES FOR FUEL CELL FLOW FIELD PLATES AND BIPOLAR PLATES

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
CN101997140 A 20110330	CN20101293763 20100928	JANGSU HUAFU POWER STORAGE NEW TECHNOLOGY DEV CO LTD	H01M10/08	POLYMER COLLOID ELECTROLYTE FOR LEAD-ACID STORAGE BATTERY
WO2011025021 A1 20110303	JP20090200422 20090831	JAPAN SCIENCE & TECH AGENCY [JP]; UNIV TOKYO [JP]; HASHIMOTO KAZUHITO [JP]; ISHII KAZUYUKI [JP]; NAKAMURA RYUHEI [JP]; WATANABE KAZUYA [JP]; ZHAO YONG [JP]	H01M8/16; H01M4/86	ELECTRODE FOR MICROBIAL FUEL CELL, AND MICROBIAL FUEL CELL USING SAME
CN102074687 A 20110525	CN20101596287 20101220	JIANGSU DELI CHEMICAL CO LTD	H01M4/1397	HYDROTHERMAL SYNTHESIS METHOD FOR PREPARING NANO-SCALE CARBON-COATED LITHIUM IRON PHOSPHATE
CN102013522 A 20110413	CN20101543795 20101115	JIANGSU SHUANGDENG GROUP CO LTD	H01M10/08	COLLOIDAL ELECTROLYTE FOR LEAD-ACID STORAGE BATTERY
CN101950805 A 20110119	CN20101286644 20100920	JIANGSU WANLI BATTERY CO LTD	H01M4/1397	SIZE MIXING METHOD OF NANOMETER LITHIUM IRON PHOSPHATE MATERIAL
CN101974828 A 20110216	CN20101501343 20100930	JIANGXI XIANCAI NANO FIBER TECHNOLOGY CO LTD	D04H3/00; C08G73/10; D01F6/78; H01M2/16	COPOLYMERIZED POLYIMIDE NANOFIBER NONWOVEN AND PREPARATION METHOD AND APPLICATION THEREOF
CN101997123 A 20110330	CN20091017868 20090814	JINAN BLUE NANO INC; YI DING	H01M4/90; B01J23/52; B01J35/10; B01J37/30; H01M4/88	NANO POROUS ALLOY FUEL BATTERY CATALYST AND PREPARATION METHOD THEREOF
KR101007504B B1 20110112	KR20090108344 20091111	JO JAE WON [KR]; MYUNG SEUNG TAEK [KR]	H01M4/505; B82B3/00; H01M4/48; H01M10/0525	CATHODE MATERIAL FOR LITHIUM SECONDARY BATTERY AND METHOD FOR MANUFACTURING OF AS THE SAME

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
RU2419907 C1 20110527	RU20100116079 20100423	JUG INVEST LTD [VG]	H01G9/155	MULTIPLE-ELEMENT ELECTROCHEMICAL CAPACITOR AND ITS MANUFACTURING METHOD
KR20110041448 A 20110421	KR20110021205 20110310	KIM KYUNG SIK [KR]; KIM YOUNG JIN [KR]	H01M4/60; B82B3/00; H01M2/16; H01M4/58	COMPOSITE FOR SEPARATOR OF POLYMER BATTERY
WO2011025259 A2 20110303	KR20090078876 20090825; KR20100039471 20100428	KOLON INC [KR]; KOLON INC [KR]; KOLON FASHION MATERIAL INC [KR]; LEE MOO-SEOK [KR]; SHIN YONG-CHEOL [KR]; RYU JAE HEE [KR]; KIM NA YOUNG [KR]; KIM KYOUNG-JU [KR]; KIM CHUL KI [KR]; LEE YONG HWAN [KR]; KANG YUN KYUNG [KR]	H01M8/10; C08J5/22; C08J7/00; H01B1/06; H01M8/02	POLYMER ELECTROLYTE MEMBRANE FOR A FUEL CELL, AND METHOD FOR PREPARING SAME
KR20110053027 A 20110519	KR20090109814 20091113	KOREA ADVANCED INST SCI & TECH [KR]	H01M4/04; B82B3/00; H01M10/05	ANODE ACTIVE MATERIAL OF LITHIUM SECONDARY BATTERY AND MANUFACTURING METHOD THEREOF
KR20110049629 A 20110512	KR20090105375 20091103	KOREA ELECTRONICS TELECOMM [KR]	H01M4/48; H01M4/583; H01M10/0525	METHOD FOR PREPARING 1-D TITANIUM OXIDE NANOTUBECLUSTER-GRAPHITE ANODE ACTIVE MATERIAL FOR LITHIUM RECHARGEABLE BATTERIES AND ANODE ACTIVE MATEIRAL OBTAINED BY THE METHOD

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
CN102097613 A 20110615	KR20090124013 20091214	KOREA ELECTRONICS TELECOMM [KR]; ULSAN NAT INST SCIENCE AND TECHNOLOGY ACADEMY INDUSTRY RES COOPERATION	H01M4/139; H01M4/36	METHOD OF MANUFACTURING CATHODE ACTIVE MATERIAL FOR LITHIUM SECONDARY BATTERY AND CATHODE ACTIVE MATERIAL OBTAINED BY THE METHOD
KR20110043400 A 20110427	KR20090099836 20091020	KOREA ELECTRONICS TELECOMM [KR]; UNIST ACADEMY INDUSTRY RES CORP [KR]	H01M4/48; B82B3/00; H01M10/0525	METHOD FOR PREPARING 1-D TITANIUM OXIDE NANOTUBECLUSTER ANODE ACTIVE MATERIAL FOR LITHIUM RECHARGEABLE BATTERIES AND ANODE ACTIVE MATEIRAL OBTAINED BY THE METHOD
KR20110001368 A 20110106	KR20090058875 20090630	KOREA ENERGY RESEARCH INST [KR]	H01M4/88; H01M8/02; H01M8/12	MANUFACTURING METHOD OF FUNCTIONAL LAYER OF ANODE FOR SOLID OXIDE FUEL CELL AND FUNCTIONAL LAYER THEREFROM
KR20110049471 A 20110512	KR20090106490 20091105	KOREA ENERGY RESEARCH INST [KR]	H01M4/66; H01G9/042; H01M4/04	THE CARBON NANOFIBER COATED ALUMINUM CURRENT COLLECTOR WITH IMPROVED ADHESION STRENGTH AND CONTACT CONDUCTIVITY AND THE FABRICATION METHOD THEREOF
KR20110026186 A 20110315	KR20090083978 20090907	KOREA IND TECH INST [KR]	(A B1) H01M2/16; C08J5/22	HYDROPHILIC POLYOLEFIN SEPARATOR, METHOD FOR MANUFACTURING THE PRODUCTION AND SECONDARY BATTERY USING THEREOF

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KR20110041287 A 20110421	KR20090098381 20091015	KOREA IND TECH INST [KR]	B22F9/24; B82B3/00; H01M8/04; H01M8/12	MANUFACTURING METHOD OF NANO-CESCSZ POWDER AND MANUFACTURING METHOD OF ELECTROLYTE AND CELL FOR SOLID OXIDE FUEL CELL HAVING THE POWDER
KR20110058223 A 20110601	KR20090114933 20091126	KOREA INST CERAMIC ENG & TECH [KR]	H01G9/042; H01G9/058	MANUFACTURING METHOD OF GRAPHENE ELECTRODE FOR SUPERCAPACITOR AND SUPERCAPACITOR GRAPHENE ELECTRODE MANUFACTURED BY THE METHOD
KR20110062665 A 20110610	KR20090119452 20091204	KOREA INST SCI & TECH [KR]	H01M4/02; H01M4/04	ELECTRODE FOR USING IN A SECONDARY BATTERY AND METHOD FOR MANUFACTURING THE SAME
KR20110071653 A 20110629	KR20090128277 20091221	KOREA INST SCI & TECH [KR]	B82B3/00; H01M10/42	METHOD FOR CONTINUOUS PREPARATION OF LITHIUM-CONTAINING PHOSPATE NANOPARTICELS FOR POSITIVE ACTIVE MATERIALS
KR20110051955 A 20110518	KR20090108785 20091111	KOREA INST SCI & TECH [KR]	H01M8/12; H01M8/02	METHOD OF NON-SHRINKAGE FABRICATION OF METAL OXIDE THIN FILM FOR SOLID OXIDE FUEL CELL BY LOW TEMPERATURE

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
WO2011033975 A1 20110324	JP20090214216 20090916	KURARAY CO [JP]; HAYAKAWA TOMOHIRO [JP]; HAYASHI HIDEO [JP]; KAMADA HIDEKI [JP]; HOSOYA TAKAYOSHI [JP]; KAWAI HIROYUKI [JP]	H01M2/16	SEPARATOR FOR NON-AQUEOUS BATTERIES, NON-AQUEOUS BATTERY USING SAME, AND PRODUCTION METHOD FOR SEPARATOR FOR NON-AQUEOUS BATTERIES
US2011143202 A1 20110616	US20100967232 20101214; US20090286536P 20091215	L LIVERMORE NAT SECURITY LLC [US]	H01M4/36; H01M4/04; H01M4/46; H01M4/485; H01M4/80; H01M10/04	MONOLITHIC THREE-DIMENSIONAL ELECTROCHEMICAL ENERGY STORAGE SYSTEM ON AEROGEL OR NANOTUBE SCAFFOLD
WO2011038233 A1 20110331	US20090246018P 20090925	L LIVERMORE NAT SECURITY LLC [US]; FARMER JOSEPH C [US]	H01M10/39; H01M10/0525; H01M10/0562; H01M12/06	HIGH-PERFORMANCE RECHARGEABLE BATTERIES WITH FAST SOLID-STATE ION CONDUCTORS
WO2011050307 A2 20110428	US20090286858P 20091216; US20090253890P 20091022; US20090255571P 20091028	L LIVERMORE NAT SECURITY LLC [US]; WANG YINMIN [US]; WANG XIANYING [CN]; HAMZA ALEX V [US]	H01M14/00; B82B1/00; H02N99/00	NANODEVICES FOR GENERATING POWER FROM MOLECULES AND BATTERYLESS SENSING
WO2011016014 A2 20110210	IT2009TO00626 20090807	LAM BA ENGINEERING & CONSULTING S R L [IT]; CELANI FRANCESCO [IT]; NAKAMURA MISA [IT]; MARINI PAOLO [IT]; DI STEFANO VITTORIO [IT]	B01J21/08; B01J23/755; B01J23/89; C01B3/00; H01M4/38; H01M8/04	NANOSTRUCTURED THIN LAYERS HAVING HIGH CATALYTIC ACTIVITY ON SURFACES OF NICKEL AND ITS ALLOYS AND A PROCESS FOR OBTAINING THEM

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US2011097631 A1 20110428	KR20080057996 20080619; KR20090015436 20090224; WO2009KR03185 20090615	LEE HAIWON [KR]; LEE TAE-JAE [KR]; SEO JUNG-EUN [KR]	H01M8/02; B32B3/10; B32B3/30; H01L21/04; H01L29/66; H01L31/02; H01L31/04	ORGANIC/INORGANIC COMPOSITE COMPRISING THREE-DIMENSIONAL CARBON NANOTUBE NETWORKS, METHOD FOR PREPARING THE ORGANIC/INORGANIC COMPOSITE AND ELECTRONIC DEVICE USING THE ORGANIC/INORGANIC COMPOSITE
KR20110054619 A 20110525	KR20090111341 20091118	LG CHEMICAL LTD [KR]	H01M4/58; B82B3/00; H01M4/62; H01M10/05	ANODE MIXTURE FOR LITHIUM SECONDARY BATTERY AND LITHIUM SECONDARY BATTERY USING THE SAME
KR20110029321 A 20110323	KR20090086945 20090915	LG CHEMICAL LTD [KR]	H01M4/02; H01M4/48; H01M4/58; H01M4/64	ELECTRODE FOR LITHIUM SECONDARY BATTERY AND LITHIUM SECONDARY BATTERY COMPRISING THE SAME
WO2011074905 A2 20110623	KR20090126591 20091218; KR20100118698 20101126	LG CHEMICAL LTD [KR]; KIM HYUK [KR]; CHOI SEONG HO [KR]; SUNG KYUNGA [KR]; LEE SANGWOO [KR]; NOH TAE GEUN [KR]; KIM JI SOO [KR]	H01M8/02; B82B3/00; H01M8/10	MACROMOLECULAR ELECTROLYTE MEMBRANE FOR A FUEL CELL, AND A MEMBRANE ELECTRODE BINDER MATERIAL AND A FUEL CELL COMPRISING THE SAME
CN101964413 A 20110202	CN20101505803 20101013	LINYI GELON BATTERY MATERIAL CO LTD	H01M4/136; H01M4/1397	NANOSCALE LITHIUM IRON PHOSPHATE ELECTRODE MATERIAL AND PREPARATION METHOD THEREOF

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
US2011033746 A1 20110210	US20090462857 20090810	LIU JUN [US]; AKSAY ILHAN A [US]; CHOI DAIWON [US]; KOU RONG [US]; NIE ZIMIN [US]; WANG DONGHAI [US]; YANG ZHENGUO [US]	H01M4/133; B32B9/00	SELF ASSEMBLED MULTI-LAYER NANOCOMPOSITE OF GRAPHENE AND METAL OXIDE MATERIALS
US2011111299 A1 20110512	US20100901526 20101009; US20090460993 20090727; US20080084140P 20080728	LIU JUN [US]; CHOI DAIWON [US]; YANG ZHENGUO [US]; WANG DONGHAI [US]; GRAFF GORDON L [US]; NIE ZIMIN [US]; VISWANATHAN VILAYANUR V [US]; ZHANG JASON [US]; XU WU [US]; KIM JIN YONG [US]	H01M4/131; H01M4/62	LITHIUM ION BATTERIES WITH TITANIA/GRAPHENE ANODES
EP2335309 A1 20110622	WO2009US56749 20090911; US20080096262P 20080911	LOCKHEED CORP [US]	H01M4/58; H01M4/134; H01M4/1395; H01M4/62	NANOSTRUCTURED ANODE FOR HIGH CAPACITY RECHARGEABLE BATTERIES
US2011111294 A1 20110512	US20100938951 20101103; US20090257728P 20091103	LOPEZ HEMAN A [US]; ANGUCHAMY YOGESH KUMAR [US]; DENG HAIXIA [US]; HAN YONGBONG [US]; MASARAPU CHARAN [US]; VENKATACHALAM SUBRAMANIAN [US]; KUMAR SUJEET [US]	H01M4/583; H01M4/48; H01M4/485; H01M4/505; H01M4/525; H01M4/62	HIGH CAPACITY ANODE MATERIALS FOR LITHIUM ION BATTERIES
WO2011063037 A2 20110526	US20090261869P 20091117	LUMIMOVE INC DBA CROSSLINK [US]; KINLEN PATRICK J [US]; JUNG JUNE-HO [US]; KIM YOUNG-GI [US]; MBUGUA JOSEPH [US]	C08L65/00	CONDUCTIVE POLYMER COMPOSITES

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KR20110051249 A 20110517	US20080089406P 20080815	MASSACHUSETTS INST TECHNOLOGY [US]	H01M4/88; H01G9/155; H01L31/00	LAYER-BY-LAYER ASSEMBLIES OF CARBON-BASED NANOSTRUCTURES AND THEIR APPLICATIONS IN ENERGY STORAGE AND GENERATION DEVICES
US2011043037 A1 20110224	US20080022799P 20080122; WO2009US31728 20090122; US20090864217 20090122	MCILROY DAVID N [US]; NORTON GRANT [US]	H02J3/28; B05D5/12; C25B11/00; C25B11/04; C25B11/08; H01G9/035; H01G9/04; H01G9/058; H01L21/36; H02J9/00; H02M3/06	NANOSTRUCTURED HIGH SURFACE AREA ELECTRODES FOR ENERGY STORAGE DEVICES
CN102110807 A 20110629	CN20111029477 20110127	MCNAIR TECHNOLOGY CO LTD	H01M4/139; H01M4/62; H01M10/058	PREPARATION METHOD OF TIN OXIDE/CARBON NANO TUBE COMPOSITE NEGATIVE ELECTRODE MATERIAL AND APPLICATION OF MATERIAL
CN102064323 A 20110518	CN20101581078 20101209	MEDICAL COLLEGE OF THE CHINESE PEOPLE S ARMED POLICE FORCES	H01M4/485; H01M4/1391	MESOPOROUS VANADIUM DIOXIDE NANO STRIP MATERIAL AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF
JP2011071122 A 20110407	US19970948627 19971010	MINNESOTA MINING & MFG	H01M4/86; H01M8/02; C25B9/10; H01B1/22; H01B1/24; H01B13/00; H01M4/88; H01M8/10	MEMBRANE ELECTRODE ASSEMBLIES
WO2011076979 A1 20110630	FI20090000495 20091222; FI20100000143 20100409; FI20100006077 20101018	MOILANEN PASI [FI]; VIRTANEN JORNA [US]	H01G9/042; B82Y30/00; B82Y40/00; H01G9/155	FABRICATION AND APPLICATION OF POLYMER-GRAPHITIC MATERIAL NANOCOMPOSITES AND HYBRIDE MATERIALS

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
US2011008677 A1 20110113	JP20080071111 20080319; WO2009JP56029 20090318	NAKANE KENJI [JP]; HATTORI TAKESHI [JP]; YAMAMOTO TAKETSUGU [JP]	H01M4/02; B05D3/02	ELECTRODE AND BATTERY HAVING THE SAME
CN102040217 A 20110504	CN20091236552 20091026	NAT CT FOR NANOSCIENCE AND TECHNOLOGY OF CHINA	C01B31/02	METHOD FOR PREPARING GRAPHENE
CN102039124 A 20110504	CN20091236423 20091021	NAT CT FOR NANOSCIENCE AND TECHNOLOGY OF CHINA	B01J23/52; B01J23/42; B01J23/44; B01J35/02; B01J37/00; H01M4/92	PLATINUM-INDUCED AURUM CORE/ PALLADIUM PLATINUM ISLAND-SHAPED ALLOY SHELL STRUCTURE NANOROD SOLUTION AND PREPARATION METHOD
JP2011054565 A 20110317	JP20100180873 20100812	NAT INST OF ADVANCED IND SCIEN [JP]	H01M8/02; H01B1/06; H01B13/00; H01M8/10	METHOD FOR MANUFACTURING PROTON CONDUCTOR, ELECTROLYTE FOR FUEL CELL, OR PROTON CONDUCTIVE DEVICE
AT498592T T 20110315	JP20030386694 20031117; JP20040271984 20040917; WO2004JP16981 20041116	NAT INST OF ADVANCED IND SCIEN [JP]	C03C14/00; B82B1/00; C03B8/02; C03C17/00; C04B35/46; H01M4/131; H01M4/48; H01M4/485; H01M4/50; H01M4/505; H01M4/52; H01M4/525; H01M4/62; H01M10/05; H01M10/0525; H01M10/36	NANOCRYSTAL OXIDE/GLASS COMPOSITE MESOPOROUS POWDER OR THIN FILM, PROCESS FOR PRODUCING THE SAME, AND UTILIZING THE POWDER OR THIN FILM, VARIOUS DEVICES, SECONDARY BATTERY AND LITHIUM STORING DEVICE
CN102097622 A 20110615	CN20111020323 20110118	NAT UNIV DEFENSE TECHNOLOGY; BEIJING INST OF NEAR SPACE VEHICLE S SYSTEM ENGINEERING	H01M4/38; H01M4/13; H01M4/139; H01M10/052; H01M10/0568; H01M10/0569; H01M10/058	SULFUR-CONTAINING COMPOSITE ANODE MATERIAL, ANODE PLATE AND LI-S (LITHIUM-SULFUR) SECONDARY BATTERY AND PREPARATION METHOD THEREOF

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
EP2279054 A2 20110202	WO2009IE00016 20090408; US20080071392P 20080425; IE20080000326 20080425; US20080136809P 20081006	NAT UNIV IRELAND [IE]	B22F1/00; C09D11/00; H01L31/02; H01L31/0224; H01M4/88; H01M8/00	AN INK COMPRISING NANOSTRUCTURES
CN102079518 A 20110601	CN20091253511 20091129	NINBO UNIVERSITY	C01B25/455; H01M4/58	LOW-TEMPERATURE LIQUID-PHASE PREPARATION METHOD FOR LIVPO4F AS LITHIUM-ION BATTERY CATHODE MATERIAL
WO2011069348 A1 20110616	CN20091155316 20091211	NINGBO INST OF MATERIALS TECHNOLOGY AND ENGINEERING CHINESE ACADEMY OF SCIENCES [CN]; LIU ZHAOPING [CN]; ZHOU XUFENG [CN]	H01M4/58; C01B25/45; H01M10/0525	LITHIUM IRON PHOSPHATE POSITIVE ELECTRODE ACTIVE MATERIAL MODIFIED BY GRAPHENE, PREPARATION METHOD AND LITHIUM ION SECONDARY BATTERY THEREOF
WO2011015043 A1 20110210	CN20091100907 20090806	NINGBO INST OF MATERIALS TECHNOLOGY AND ENGINEERING CHINESE ACADEMY OF SCIENCES [CN]; WANG JIANXIN [CN]; WANG WEIGUO [CN]; YAN XUEDONG [CN]	C01F17/00; C01G45/02; C01G51/04; C01G53/04	SCALED NANOPOWDER SYNTHESIS PROCESS FOR SOLID OXIDE FUEL CELL
CN102068983 A 20110525	CN20101595758 20101220	NINGBO UNIVERSITY OF TECHNOLOGY	B01J23/42; B01J21/18; B01J23/46; B01J32/00; H01M4/88; H01M4/92	PREPARATION METHOD OF PROTON EXCHANGE MEMBRANE FUEL CELL CATALYST

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
WO2011040022 A1 20110407	JP20090229006 20090930; JP20100106032 20100501; JP20100106124 20100506	NIPPON CHEMICON [JP]; K & W LTD [JP]; NAOI KATSUHIKO [JP]; NAOI WAKO [JP]; ISHIMOTO SHUICHI [JP]; TAMAMITSU KENJI [JP]	H01M4/48; H01G9/058; H01M4/36; H01M10/052; H01M10/0566	NEGATIVE ELECTRODE ACTIVE MATERIAL, METHOD FOR PRODUCING THE NEGATIVE ELECTRODE ACTIVE MATERIAL, AND LITHIUM ION SECONDARY BATTERY USING THE NEGATIVE ELECTRODE ACTIVE MATERIAL
JP2011108525 A 20110602	JP20090263110 20091118	NITTO DENKO CORP	H01M8/24; H05K3/28	WIRING CIRCUIT BOARD AND FUEL CELL HAVING THE SAME
CN101935016 A 20110105	US20090459339 20090630	NOKIA CORP [FI]	B82B3/00; H01M10/0525	METHOD FOR MAKING NANOWIRES AND APPARATUS CONTAINING THEM
US2011091773 A1 20110421	US20090579563 20091015	NOKIA CORP [FI]	H01M4/583; H01M4/02; H01M4/58; H01M4/88	NANO-STRUCTURED LITHIUM-SULFUR BATTERY AND METHOD OF MAKING SAME
WO2011063541 A2 20110603	US20090264985P 20091130; US20100381598P 20100910	OC OERLIKON BALZERS AG [LI]; REYNOLDS GLYN JEREMY [US]; MARTIENSSEN ROSALINDA [DE]	(A3) H01G9/058; C01G55/00; H01G4/12; H01G9/155	CORE-SHELL NANOPARTICLES IN ELECTRONIC BATTERY APPLICATIONS
WO2011063539 A2 20110603	US20090264985P 20091130	OC OERLIKON BALZERS AG [LI]; REYNOLDS GLYN JEREMY [US]; MARTIENSSEN ROSALINDA [DE]	H01G9/058	ELECTRONIC BATTERY WITH NANO-COMPOSITE
JP2011063458 A 20110331	JP20090213632 20090915	OTSUKA CHEMICAL CO LTD	C01B31/02; H01G9/058; H01M4/62	CARBON NANOTUBE POWDER, AUXILIARY CONDUCTIVE AGENT FOR ELECTRODE, ELECTRODE USING THE SAME, AND ELECTRIC STORAGE DEVICE USING THE ELECTRODE

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
JP2011009129 A 20110113	JP20090153381 20090629	PANASONIC CORP [JP]	H01M4/88; B01J27/045; B01J37/02; B01J37/08; H01M4/92	CATALYTIC ELECTRODE DISPERSED WITH CATALYTIC NANOPARTICLES
US2011014542 A1 20110120	JP20080063190 20080312; JP20080211218 20080819; WO2009JP01050 20090309	PANASONIC CORP [JP]	H01M8/10; B05D5/12; B29C47/64	FIBER MANUFACTURING METHOD, FIBER MANUFACTURING APPARATUS AND PROTON-EXCHANGE MEMBRANE FUEL CELL
CN101939868 A 20110105	WO2009JP01319 20090325; JP20080104424 20080414	PANASONIC CORP [JP]	H01M4/96; H01M4/88; H01M8/10	FUEL CELL COMPRISING OXYGEN ELECTRODE WITH SURFACE NANOSTR
WO2011058723 A1 20110519	JP20090257437 20091110	PANASONIC CORP [JP]; KUROHA TOMOHIRO; NOMURA TAKAIKI; HATO KAZUHITO; TANIGUCHI NOBORU; SUZUKI TAKAHIRO; TOKUHIRO KENICHI	C25B9/00; B01J35/02; C01B3/04; C25B1/02; H01M8/06; H01M14/00	PHOTOELECTROCHEMICAL CELL AND ENERGY SYSTEM USING SAME
US2011117462 A1 20110519	US201113006031 20110113; US20060489274 20060718	PELTON WALTER E [US]	H01M8/04	METHODS AND APPARATUSES FOR DISTRIBUTED FUEL CELLS WITH NANOTECHNOLOGY
US2011117436 A1 20110519	US20100948697 20101117; US20090262011P 20091117; US20100301932P 20100205	PHYSICAL SCIENCES INC [US]	H01M4/583; B05D5/12	SILICON WHISKER AND CARBON NANOFIBER COMPOSITE ANODE

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
CN102104143 A 20110622	CN20101562416 20101129	PINLI TANG	H01M4/1397	HYDROTHERMAL SYNTHESIS METHOD OF COMPOSITE MATERIAL FOR HIGH-PERFORMANCE POWER BATTERY
WO2011023110 A1 20110303	CN20091170997 20090825	POSITEC GROUP LTD [CN]; CHEN PU [CA]; KO YAN [CN]	H01M10/0525; H01M4/136; H01M10/0569	LITHIUM SULPHUR BATTERY
WO2011037428 A2 20110331	KR20090091832 20090928	POSTECH ACAD IND FOUND [KR]; LEE SANGMIN [KR]; HWANG WOON BONG [KR]	H01M8/02; H01M8/24	SEPARATOR FOR A FUEL CELL, A PRODUCTION METHOD THEREFOR AND A FUEL CELL STACK COMPRISING THE SAME
CN102034985 A 20110427	CN20101548567 20101115	QINGDAO INST OF BIOENERGY AND BIOPROCESS TECHNOLOGY CHINESE ACADEMY OF	H01M4/86; H01M4/88; H01M4/90	OXYGEN ELECTRODE OF LITHIUM AIR BATTERY AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF
US2011091787 A1 20110421	US20100964570 20101209; US20060394456 20060331	QUANTUMSPHERE INC [US]	H01M8/10; H01M4/38	COMPOSITIONS OF NANOMETAL PARTICLES CONTAINING A METAL OR ALLOY AND PLATINUM PARTICLES FOR USE IN FUEL CELLS
US2011091796 A1 20110421	US20100961100 20101206; US20060482290 20060707; US20050254629 20051020	QUANTUMSPHERE INC [US]	H01M8/04; B01J31/06; B01J35/10; H01M2/14; H01M4/02; H01M4/583; H01M4/64	ELECTROCHEMICAL CATALYSTS
US2011123901 A1 20110526	US201113021593 20110204; US20040983993 20041108	QUANTUMSPHERE INC [US]	H01M8/10; C25B9/00	NANO-MATERIAL CATALYST DEVICE

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
US2011038099 A1 20110217	US20070937039 20071108; US20070893564P 20070307	REGALADO JULIUS [US]; WEST JON K [US]; BURNS ROBERT L [US]; KOHLER MARK [US]	H01G9/155; B32B37/02; B32B38/00	ULTRACAPACITOR POWER STORAGE DEVICE
WO2011005965 A2 20110113	US20090223753P 20090708	RENSSELAER POLYTECH INST [US]; GASDA MICHAEL DAVID [US]; EISMAN GLENN [US]; GALL DANIEL [US]	H01M4/88; B82B3/00; H01M4/92; H01M8/10	PORE FORMATION BY IN SITU ETCHING OF NANOROD ELECTRODES
KR101040572B B1 20110616	KR20100098886 20101011	REPUBLIC KR FORESTRY RES INST [KR]	H01M10/0525; B01D71/10; C08J5/18; H01M2/16	POROUS SEPARATOR USING CELLULOSE NANOFIBRILS AND PREPARATION METHOD THEREOF
US2011086280 A1 20110414	FR20080003019 20080602; WO2009FR00622 20090528	ROUSTAEI ALEX [FR]	H01M8/06; C25B1/02; C25B9/00; C25B15/00	SYSTEMS FOR THE ON-DEMAND PRODUCTION OF POWER AS A SOLE SOURCE OR AIDING OTHER POWER SOURCES, IN THE TRANSPORTATION AND HOUSING FIELD.
WO2011068391 A2 20110609	KR20090119919 20091204	ROUTE JJ CO LTD [KR]; HONG JI JUN [KR]; BYUN KI TAEK [KR]	H01M4/583; H01M4/505; H01M4/525; H01M10/0525	ANODE ACTIVE MATERIAL PRECURSOR AND ACTIVE MATERIAL FOR A RECHARGEABLE LITHIUM BATTERY COMPRISING HOLLOW NANOFIBROUS CARBON, AND A PRODUCTION METHOD THEREFOR
US2011013344 A1 20110120	KR20090065535 20090717	SAMSUNG ELECTRO MECH [KR]	H01G9/058; B05D5/12	POLARIZABLE ELECTRODE FOR CAPACITOR AND ELECTRIC DOUBLE LAYER CAPACITOR HAVING THE SAME

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
US2011043967 A1 20110224	KR20090051160 20090609	SAMSUNG ELECTRO MECH [KR]	H01G9/004; H01G13/00	SUPER CAPACITOR AND METHOD OF FABRICATING THE SAME
KR20110016979 A 20110218	KR20110008645 20110128	SAMSUNG ELECTRO MECH [KR]; UNIV SUNGKYUNKWAN FOUND [KR]	H01G9/042; C01B31/02; H01M4/02	COMPOSITE ELECTRODE AND METHOD FOR MANUFACTURING THE SAME
US2011159367 A1 20110630	KR20090136217 20091231; KR20100068590 20100715	SAMSUNG ELECTRONICS CO LTD [KR]; IUCF HYU [KR]	H01M4/02; B05D5/12; H01B13/00; H01M4/42; H01M4/58	NEGATIVE ELECTRODE INCLUDING METAL/METALLOID NANOTUBES, LITHIUM BATTERY INCLUDING THE NEGATIVE ELECTRODE, AND METHOD OF MANUFACTURING THE NEGATIVE ELECTRODE
US2011039184 A1 20110217	US20100911352 20101025; KR20040088218 20041102; US20050262812 20051101	SAMSUNG SDI CO LTD [KR]	H01M8/10; B01J21/18; C09C1/44; H01M4/38	CARBON NANOSPHERE WITH AT LEAST ONE OPENING, METHOD FOR PREPARING THE SAME, CARBON NANOSPHERE-IMPREGNATED CATALYST USING THE CARBON NANOSPHERE, AND FUEL CELL USING THE CATALYST
JP2011052222 A 20110317	KR20060090278 20060918	SAMSUNG SDI CO LTD [KR]	C08J5/22; C08G65/40; C08K3/00; C08L81/06; H01B13/00	METHOD OF PRODUCING ELECTROLYTE MEMBRANE USING NANOCOMPOSITE ION COMPLEX
CN102064325 A 20110518	KR20090111536 20091118	SAMSUNG SDI CO LTD [KR]	H01M4/62; B82Y30/00; H01M10/0525	SUPER-CONDUCTIVE NANOPARTICLE, SUPER-CONDUCTIVE NANOPARTICLE POWDER, AND LITHIUM BATTERY COMPRISING POWDER

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
DE102009046564 A1 20110512	DE200910046564 20091110	SB LIMOTIVE CO LTD [KR]; SB LIMOTIVE GERMANY GMBH [DE]	H01M10/48; G01R31/36	BATTERIE-STEUERGERÄT-ARCHITEKTUR
DE102009054939 A1 20110622	DE200910054939 20091218	SB LIMOTIVE CO LTD [KR]; SB LIMOTIVE GERMANY GMBH [DE]	H01M4/133; H01M10/052	GALVANIC ELEMENT
US2011136017 A1 20110609	US200913056745 20090731; US20080085790P 20080801; WO2009US52511 20090731	SEEO INC [US]	H01M10/056; H01M4/24; H01M4/26; H01M4/36; H01M10/04	HIGH CAPACITY ANODES
CN101939869 A 20110105	WO2009US31356 20090116; US20080021613P 20080116	SEEO INC [US]; UNIV CALIFORNIA	H01M6/16	GEL POLYMER ELECTROLYTES FOR BATTERIES
JP2011097036 A 20110512	JP20090226135 20090930; JP20100214818 20100927	SEMICONDUCTOR ENERGY LAB	H01G9/016; H01G9/058	CAPACITOR
US2011136024 A1 20110609	US20100960142 20101203; US20090267327P 20091207	SEYMOUR FRASER WADE [US]	H01M12/06; B01J21/18	MULTIFUNCTIONAL MATERIAL COMPRISING A HIGHLY POROUS CARBON STRUCTURE WITH NANOSCALE MIXED METAL OXIDE DEPOSITS FOR CATALYSIS
CN102005569 A 20110406	CN20091194712 20090828	SHANGHAI BAOSTEEL CHEMICAL CO LTD; UNIV EAST CHINA SCIENCE & TECH	H01M4/36; H01M4/04; H01M4/38	COMPOSITE CATHODE MATERIAL FOR LITHIUM ION BATTERY AND PREPARATION METHOD THEREOF

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
CN102054979 A 20110511	CN20091109961 20091029	SHANGHAI BYD CO LTD	H01M4/36; H01M4/139; H01M4/62; H01M4/64; H01M10/052	BATTERY ELECTRODE, PREPARATION METHOD THEREOF AND BATTERY
CN102107909 A 20110629	CN20111004482 20110111	SHANGHAI INST CERAMICS	C01G45/02; B82Y40/00; H01G9/042	METHOD FOR PREPARING MESOPOROUS NANO MANGANESE DIOXIDE
CN102034615 A 20110427	CN20101530300 20101103	SHANGHAI LIANFU NEW ENERGY TECHNOLOGY CO LTD	H01G9/048; H01G9/20; H01L51/48; H01M14/00	PREPARATION METHOD OF DYE-SENSITIZED SOLAR CELL PROVIDED WITH LIGHT REFLECTING LAYER
CN102044702 A 20110504	CN20101585650 20101214	SHANGHAI NAT ENGINEERING RES CT FOR NANOTECHNOLOGY CO LTD	H01M10/0565	COMPOSITE POLYMER ELECTROLYTE FOR LITHIUM ION BATTERY AND PREPARATION METHOD THEREOF
CN102044665 A 20110504	CN20101571024 20101202	SHANGHAI NAT ENGINEERING RES CT FOR NANOTECHNOLOGY CO LTD	H01M4/1391	PREPARATION METHOD OF YTTRIUM-CONTAINING LITHIUM TITANATE SERVING AS CATHODE MATERIAL OF LITHIUM ION SECONDARY BATTERY
CN101937989 A 20110105	CN20101253084 20100813	SHANGHAI ZHONGKE SHENJIANG ELECTRIC VEHICLE CO LTD	H01M4/1391; H01M4/13	THREE-DIMENSIONAL NANOPOROUS METAL-OXIDE ELECTRODE MATERIAL OF LITHIUM ION BATTERY AND PREPARATION METHOD THEREOF
CN102086032 A 20110608	CN20091188665 20091207	SHENZHEN BAK BATTERY CO LTD	C01B25/45; H01M4/58	PREPARATION METHOD AND APPLICATION OF MICRO/NANO STRUCTURED LIFEPO4 COMPOUND
CN101997120 A 20110330	CN20101503321 20101009	SHENZHEN CITY BTR NANOMETER TECHNOLOGY CO LTD; SHENZHEN BEITERUI NEW ENERGY TECHNOLOGY CO LTD	H01M4/62; C01B31/04	LITHIUM ION BATTERY CONDUCTIVE ADDITIVE AND PREPARATION METHOD THEREOF

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
WO2011072547 A1 20110623	CN20091189027 20091216	SHENZHEN DYNANONIC CO LTD [CN]; KONG LINGYONG [CN]; JI XUEWEN [CN]; WANG YUNSHI [CN]	H01M4/587; C01B25/45; H01M4/505; H01M4/525	COMPOSITE POSITIVE ELECTRODE MATERIAL WITH CORE-SHELL STRUCTURE FOR LITHIUM ION BATTERY AND PREPARING METHOD THEREFOR
WO2011055549 A1 20110512	JP20090255084 20091106	SHIBAURA INST TECHNOLOGY [JP]; MATSUMOTO SATOSHI [JP]	C01B31/02; H01G9/058	DIELECTRIC MATERIAL AND ELECTROCHEMICAL ELEMENT COMPRISING SAME
CN101944592 A 20110112	CN20101181432 20100525	SHIDA GENG	H01M4/133; H01M4/134; H01M4/1393; H01M4/1395; H01M4/38	HIGH-CAPACITY SILICON-COPPER/CARBON COMPOSITE CATHODE MATERIAL OF LITHIUM ION BATTERY AND PRODUCTION PROCESS THEREOF
CN101986442 A 20110316	CN20101181386 20100525	SHIDA GENG	H01M4/13; H01M4/139; H01M4/62	LITHIUM ION BATTERY CATHODE MATERIAL CONTAINING THREE-DIMENSIONAL CONDUCTIVE STRUCTURE AND PREPARATION METHOD THEREOF
CN101986443 A 20110316	CN20101181391 20100525	SHIDA GENG	H01M4/133; H01M4/1393; H01M4/36	LITHIUM SULFUR BATTERY ANODE MATERIAL AND PREPARATION METHOD THEREOF
CN102013471 A 20110413	CN20101181399 20100525	SHIDA GENG	H01M4/133; H01M4/1393	NOVEL HIGH-ENERGY SI-C COMPOSITE NEGATIVE ELECTRODE MATERIAL OF LITHIUM ION BATTERY AND PRODUCTION TECHNIQUE THEREOF

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
US2011097627 A1 20110428	JP20090247922 20091028	SHINETSU CHEMICAL CO [JP]	H01M10/052; H01M4/48; H01M4/583	NEGATIVE ELECTRODE MATERIAL FOR NON-AQUEOUS ELECTROLYTE SECONDARY BATTERIES, MANUFACTURING METHOD THEREFOR, AND LITHIUM-ION SECONDARY BATTERIES
JP2011124237 A 20110623	JP20010007655 20010116; JP20010228825 20010730; JP20110002765 20110111	SHOWA DENKO KK	H01M4/96; H01M4/86	CATALYST COMPOSITION FOR FUEL CELL AND ITS APPLICATION
WO2011019431 A1 20110217	US20090232831P 20090811; US20100695405 20100128	SIEMENS ENERGY INC [US]; LU CHUN [US]; HUANG KEVIN [US]; RUKA ROSWELL J [US]	H01G9/22; H01G9/058	POROUS CARBON OXIDE NANOCOMPOSITE ELECTRODES FOR HIGH ENERGY DENSITY SUPERCAPACITORS
CN102067257 A 20110518	WO2009GB00444 20090219; GB20080003003 20080219	SOLARPRINT LTD	H01G9/20; H01M6/16	ELECTROLYTE COMPOSITION
US2011123852 A1 20110526	US20100782126 20100518; US20090179034P 20090518	SRINIVASAN RENGASWAMY [US]; MARANCHI JEFFREY P [US]; BAIRD LANCE M [US]; DEACON RYAN M [US]; FRANCOMACARO ARTHUR S [US]; BIERMANN PAUL J [US]; LEESE CRAIG B [US]; PECK GARY E [US]	H01M10/36; B05D5/12; H01M10/04	THIN FILM ELECTRODES AND BATTERY CELLS, AND METHODS OF FABRICATION

Número do Documento	Prioridade (s)	Depositante	Classificação Internacional de Patentes	Título
WO2011078585 A2 20110630	KR20090129361 20091222; KR20100014723 20100218; KR20100061995 20100629	SUH KWANG SUCK [KR]; KIM JONG EUN [KR]; KIM TAE YOUNG [KR]	H01M4/583; C01B31/02; C08K3/04; H01G9/042; H01M4/60; H01M8/02	ELECTROCHEMICAL DEVICE
US2011039157 A1 20110217	JP20080118759 20080430; WO2009JP58101 20090423	SUMITOMO BAKELITE CO [JP]	H01M4/58; H01B1/22; H01B1/24; H01M4/02; H01M4/133; H01M4/134; H01M4/1393; H01M4/1395; H01M4/583	ANODIC CARBON MATERIAL FOR LITHIUM SECONDARY BATTERY, METHOD FOR MANUFACTURING THE SAME, LITHIUM SECONDARY BATTERY ANODE, AND LITHIUM SECONDARY BATTERY
JP2011096491 A 20110512	JP20090248742 20091029	SUMITOMO BAKELITE CO [JP]	H01M4/587; C01B31/02; H01M4/36; H01M4/38	CARBON MATERIAL FOR LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE, LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE, AND LITHIUM SECONDARY BATTERY

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JP2011090943 A 20110506	JP20090244618 20091023	SUMITOMO BAKELITE CO [JP]	H01M4/587; H01M4/36; H01M4/38	CARBON MATERIAL FOR LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE, THE LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE AND MANUFACTURING METHOD OF THE LITHIUM SECONDARY BATTERY AND CARBON MATERIAL FOR THE LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE
EP2333879 A1 20110615	WO2009JP66038 20090914; JP20080253251 20080930	SUMITOMO BAKELITE CO [JP]	H01M4/58; H01M4/36; H01M4/38; H01M4/48	CARBON MATERIAL FOR NEGATIVE ELECTRODE OF LITHIUM SECONDARY BATTERY, NEGATIVE ELECTRODE OF LITHIUM SECONDARY BATTERY, LITHIUM SECONDARY BATTERY AND METHOD FOR PRODUCING CARBON MATERIAL FOR NEGATIVE ELECTRODE OF LITHIUM SECONDARY BATTERY

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JP2011076744 A 20110414	JP20090224188 20090929	SUMITOMO BAKELITE CO [JP]	H01M4/13; H01M4/36; H01M4/62	LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE MIXTURE, LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE, AND LITHIUM SECONDARY BATTERY
JP2011076743 A 20110414	JP20090224187 20090929	SUMITOMO BAKELITE CO [JP]	H01M4/13; C01B31/02; C01B33/113; H01M4/133; H01M4/134; H01M4/36; H01M4/38; H01M4/587; H01M4/62	LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE MIXTURE, LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE, AND LITHIUM SECONDARY BATTERY
JP2011076742 A 20110414	JP20090224186 20090929	SUMITOMO BAKELITE CO [JP]	H01M4/13; C01B31/02; C01B33/113; H01M4/133; H01M4/134; H01M4/36; H01M4/38; H01M4/587; H01M4/62	LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE MIXTURE, LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE, AND LITHIUM SECONDARY BATTERY
JP2011076741 A 20110414	JP20090224185 20090929	SUMITOMO BAKELITE CO [JP]	H01M4/13; C01B31/02; C01B33/12; H01M4/133; H01M4/134; H01M4/36; H01M4/38; H01M4/587; H01M4/62	LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE MIXTURE, LITHIUM SECONDARY BATTERY NEGATIVE ELECTRODE, AND LITHIUM SECONDARY BATTERY

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JP2011062761 A 20110331	JP20090213687 20090915	SUMITOMO ELECTRIC INDUSTRIES; UNIV HIROSHIMA	B82B1/00; B82B3/00; C01B31/02; C08G77/60; C08K3/04; C08L83/16; H01L31/04; H01L51/05; H01L51/30; H01L51/40; H01M14/00	ORGANOSILICON POLYMER-SINGLE WALL CARBON NANOTUBE COMPLEX, OXIDE SEMICONDUCTOR USING THE SAME, PHOTO-ELECTRODE, AND METHOD FOR MANUFACTURING THE PHOTO-ELECTRODE
CN102066263 A 20110518	WO2009JP61744 20090626; JP20080168633 20080627; JP20080314958 20081210	SUMITOMO OSAKA CEMENT CO LTD	C01G51/00; H01M4/86; H01M8/12	COMPOSITE CERAMIC POWDER, PROCESS FOR PRODUCTION OF SAME AND SOLID OXIDE FUEL CELL
JP2011098848 A 20110519	JP20090253337 20091104	SUMITOMO OSAKA CEMENT CO LTD	C01G25/00; C04B35/48	ZIRCONIA-BASED COMPOSITE CERAMIC FINE PARTICLES, METHOD FOR PRODUCING THE SAME AND ZIRCONIA-BASED COMPOSITE CERAMIC FINE PARTICLE DISPERSION
CN101950593 A 20110119	CN20101288329 20100921	SUZHOU INST NANO TECH & NANO B	H01B1/04; H01B1/06; H01B1/08; H01G9/058	COMPOSITE MATERIAL AND APPLICATION THEREOF SERVING AS SUPER CAPACITOR ELECTRODE MATERIAL
TW201101563 A 20110101	EP20090157135 20090401	SWATCH GROUP RES & DEV LTD [CH]	H01M4/136; C01B25/45; C09J9/02; H01B1/00; H01M4/62; H01M10/052	ELECTRICALLY CONDUCTIVE NANOCOMPOSITE MATERIAL COMPRISING SACRIFICIAL NANOPARTICLES AND OPEN POROUS NANOCOMPOSITES PRODUCED THEREOF

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JP2011009165 A 20110113	JP20090154069 20090629	TAIYO KAGAKU KK	H01M4/90; H01M4/86; H01M8/10	NANOPARTICLE TRANSITION METAL OXYNITRIDE ELECTRODE CATALYST
WO2011018908 A1 20110217	JP20090187729 20090813; JP20090272239 20091130; WO2010JP52852 20100224	TOKYO INST TECH [JP]; YAMAGUCHI TAKEO [JP]; KIKUCHI YUMA [JP]; LEE JU-MYEUNG [JP]; OHASHI HIDENORI [JP]; TAMAKI TAKANORI [JP]	C07F19/00; C01G25/06; C07F7/00; C07F9/38; H01B1/06; H01B13/00; H01M8/02; H01M8/10	METHOD FOR PRODUCING STRONGLY ACIDIC ZIRCONIUM PARTICLES, METHOD FOR PRODUCING PROTON CONDUCTING MATERIAL AND PROTON CONDUCTING FILM, PROTON CONDUCTING FILM, ELECTRODE FOR FUEL CELL, FILM-ELECTRODE JOINED BODY, FUEL CELL
JP2011076948 A 20110414	JP20090228886 20090930	TORAY INDUSTRIES	H01B5/00; C01B31/02; C01B31/04; H01M4/36; H01M4/587; H01M4/62	CONDUCTIVE COMPLEX, AND NEGATIVE ELECTRODE FOR LITHIUM ION BATTERY
CN101953001 A 20110119	WO2009US35686 20090302; US20080035783P 20080312	TOYOTA ENG & MFG NORTH AMERICA; UNIV WATERLOO	H01M4/58; B82B3/00; H01M10/36	SULFUR-CARBON MATERIAL
WO2011074122 A1 20110623	WO2009JP71176 20091218	TOYOTA MOTOR CO LTD [JP]; MIZUNO FUMINORI [JP]; NISHIKORI HIDETAKA [JP]; HIGASHI SHOUGO [JP]	H01M12/06; H01M4/86; H01M12/08	AIR ELECTRODE FOR USE IN AIR BATTERY, AND AIR BATTERY COMPRISING AIR ELECTRODE

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WO2011058416 A1 20110519	JP20090258396 20091111	TOYOTA MOTOR CO LTD [JP]; YOSHIDA SATOSHI [JP]; HAMA YUICHIRO [JP]; HORI MASARU [JP]; HIRAMATSU MINEO [JP]; KANO HIROYUKI [JP]	H01M4/04; H01M4/134; H01M4/1395; H01M4/38; H01M4/62; H01M4/66; H01M10/0525	NEGATIVE ELECTRODE FOR LITHIUM SECONDARY BATTERY, METHOD FOR PREPARING THE NEGATIVE ELECTRODE, LITHIUM SECONDARY BATTERY HAVING THE NEGATIVE ELECTRODE, AND VEHICLE HAVING THE LITHIUM SECONDARY BATTERY
WO2011058417 A1 20110519	JP20090258395 20091111	TOYOTA MOTOR CO LTD [JP]; YOSHIDA SATOSHI [JP]; HAMA YUICHIRO [JP]; HORI MASARU [JP]; HIRAMATSU MINEO [JP]; KANO HIROYUKI [JP]	H01M4/04; H01M4/131; H01M4/1391; H01M4/485; H01M4/62; H01M4/66; H01M10/0525	POSITIVE ELECTRODE FOR LITHIUM SECONDARY BATTERY, METHOD FOR PREPARING THE POSITIVE ELECTRODE, LITHIUM SECONDARY BATTERY HAVING THE POSITIVE ELECTRODE, AND VEHICLE HAVING THE LITHIUM SECONDARY BATTERY
JP2011108423 A 20110602	JP20090260268 20091113	TOYOTA MOTOR CORP	H01M4/96; H01M4/88; H01M8/02; H01M8/10	FUEL CELL AND METHOD FOR MANUFACTURING MEMBRANE ELECTRODE ASSEMBLY
JP2011129426 A 20110630	JP20090288039 20091218	TOYOTA MOTOR CORP	H01M8/02; H01M4/88; H01M4/96; H01M8/10	METHOD OF MANUFACTURING MEMBRANE ELECTRODE ASSEMBLY

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US2011104576 A1 20110505	US20100915580 20101029; US20100360027P 20100630; US20090280025P 20091029	UCHICAGO ARGONNE LLC [US]	H01M12/06	LITHIUM-OXYGEN ELECTROCHEMICAL CELLS AND BATTERIES
US2011077147 A1 20110331	US20100961870 20101207; US20080338736 20081218; US20070008605P 20071220	UCHICAGO ARGONNE LLC [US]	H01M4/88; B01J23/42	NANOSEGREGATED SURFACES AS CATALYSTS FOR FUEL CELLS
US2011104551 A1 20110505	US20100938638 20101103; US20090280627P 20091105	UCHICAGO ARGONNE LLC [US]	H01M4/485; H01M4/525; H01M4/54; H01M4/56; H01M4/58; H01M4/583; H01M4/60; H01M6/42; H01M10/26	NANOTUBE COMPOSITE ANODE MATERIALS SUITABLE FOR LITHIUM ION BATTERY APPLICATIONS
RU2421849 C1 20110620	RU20090145306 20091207	UCHREZHDENIE ROSSIJSKOJ AKADEMII NAUK FIZ TEKHN INST IM A F IOFFE RAN [RU]	B82B1/00; H01M4/88	METHOD OF MAKING CATALYTIC MATERIAL FOR FUEL CELL
RU2422952 C1 20110627	RU20100116056 20100422	UCHREZHDENIE ROSSIJSKOJ AKADEMII NAUK INST EHLEKTROFIZIKI URAL SKOGO OTDEL RAN IEHF URO RAN [RU]	B82B1/00; C04B35/48; H01M8/12	VOLUME SOLID ELECTROLYTE FOR HIGH-TEMPERATURE ELECTROTECHNICAL DEVICES AND METHOD OF ITS MANUFACTURING

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RU2414776 C1 20110320	RU20100104605 20100209	UCHREZHDENIE ROSSIJSKOJ AKADEMII NAUK INST EHLEKTROFIZIKI URAL SKOGO OTDEL RAN IEHF URO RAN [RU]; UCHREZHDENIE ROSSIJSKOJ AKADEMII NAUK INST ORCH SINTEZA IM I JA POSTOVSKOGO URAL SKOGO OTDEL RAN IOS [RU]	H01M8/12	STABLE SUSPENSION OF ISOPROPANOL SLURRY ON POLYVINYLBUTYRAL BONDING MATERIAL FROM NANOPOWDER WITH ADDITION OF DISPERSANT (VERSIONS) AND ITS OBTAINING METHOD
RU2422950 C1 20110627	RU20100119817 20100519	UCHREZHDENIE ROSSIJSKOJ AKADEMII NAUK INST T MIKROEHLEKTRONIKI I OSOBOCHISTYKH MATERIALOV RAN IPTM R [RU]	B82B1/00; H01M8/02	METHOD OF MAKING SILICION-BASED ELECTRODES OF FUEL CELLS COATED WITH NANO-CATALYSTS
CN101954298 A 20110126	CN20091088812 20090720	UNIV BEIHANG	B01J37/34; B01J23/42; B01J23/46; B01J23/52; B01J23/62; B01J23/89; B01J37/18; H01M4/90; H01M4/92	HIGHLY DISPERSED CARBON NANOTUBE CARRIED CATALYST AND PREPARATION METHOD OF PRECURSOR THEREOF
CN101969123 A 20110209	CN20101285978 20100917	UNIV BEIJING CHEMICAL	H01M4/38; H01M4/133; H01M4/1393	C/C COAXIAL NANO-FIBER COMPOSITE MEMBRANE CATHODE MATERIAL FOR LITHIUM BATTERY AND PREPARATION METHOD THEREOF
CN102088091 A 20110608	CN20101609205 20101217	UNIV BEIJING CHEMICAL	H01M4/88; B01J23/89; H01M4/90	CARBON-CARRYING SHELL TYPE COPPER-PLATINUM CATALYST FOR FUEL CELL AND PREPARATION METHOD THEREOF
CN101944620 A 20110112	CN20101242566 20100802	UNIV BEIJING JIAOTONG	H01M4/90; B01J23/62; B01J23/63; B01J23/89; B01J35/02; H01M4/88	FUEL CELL CATALYST TAKING MULTI-ELEMENT COMPOUND AS CARRIER AND PREPARATION METHOD THEREOF

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CN102034612 A 20110427	CN20101575341 20101201	UNIV BEIJING SCIENCE & TECH	H01G9/04; H01G9/20; H01L51/48; H01M14/00	METHOD FOR PREPARING AL2O3-ZNO NANOROD ARRAY COMPOSITE ELECTRODE
CN101937985 A 20110105	CN20101256906 20100819	UNIV BEIJING SCIENCE & TECH; HEBEI SHANXIN TAIRUI BATTERY TECHNOLOGY CO LTD	H01M4/13; H01M4/139	GRAPHENE/TITANIUM DIOXIDE LITHIUM ION BATTERY CATHODE MATERIAL AND PREPARATION METHOD
CN102054989 A 20110511	CN20101574637 20101206	UNIV CHANGSHA SCIENCE	H01M4/86; H01M4/88	BIPOLAR PLATE FOR PROTON EXCHANGE MEMBRANE FUEL CELL AND MANUFACTURE METHOD THEREOF
CN102093712 A 20110615	CN20101552735 20101113	UNIV CHINA PETROLEUM	C08L79/02; C08G73/02; C08K7/06; C08K9/02; D01F9/12; D01F11/12; H01G9/04; H01G9/058	PREPARATION METHOD OF COMPOSITE SUPER CAPACITOR ELECTRODE MATERIAL
CN102013490 A 20110413	CN20101527355 20101102	UNIV CHINA THREE GORGES CTGU	H01M4/58; H01M4/1397	HIGH RATE LITHIUM IRON PHOSPHATE ANODE MATERIAL AND PREPARATION METHOD THEREOF
CN102024965 A 20110420	CN20101542730 20101115	UNIV CHONGQING	H01M8/04	METHOD FOR IMPROVING STABILITY OF FUEL CELL CATALYST AND UTILIZATION RATE OF CATALYST
CN102017241 A 20110413	WO2009US34912 20090223; US20080030868P 20080222; US20080083764P 20080725; US20080111268P 20081104; US20080116162P 20081119	UNIV COLORADO STATE RES FOUND	H01M10/36	LITHIUM-ION BATTERY

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US2011045352 A1 20110224	US20100858785 20100818; US20090235892P 20090821	UNIV CORNELL [US]	H01M4/131; C30B1/02; D02G3/00; H01M4/02	MESOPOROUS CO3O4 NANOPARTICLES, ASSOCIATED METHODS AND APPLICATIONS
CN102010594 A 20110413	CN20101520465 20101026	UNIV DONGHUA	C08L79/02; C08G61/12; C08G73/02; C08G73/06; C08K5/549; C08K9/04; C08L65/00; C08L79/04; H01G9/042	METHOD FOR PREPARING CONDUCTIVE POLYMER/SILSESQUIOXANE COMPOSITE ELECTRODE MATERIAL
CN102089240 A 20110608	WO2009EP05110 20090714; DE200810033097 20080715; DE200810045231 20080830	UNIV DUISBURG ESSEN	C01B31/00; H01M4/04; H01M4/08; H01M4/133; H01M4/134; H01M4/1393; H01M4/1395; H01M4/38; H01M4/58; H01M4/587	INTERCALATION OF SILICON AND/OR TIN INTO POROUS CARBON SUBSTRATES
CN101935452 A 20110105	CN20101274152 20100907	UNIV EAST CHINA SCIENCE & TECH	C08L79/02; C08G73/02; C08K3/04; C08K7/00; C08K9/04; H01G9/042	PREPARATION METHOD OF SULFONATED CARBON NANO TUBE (CNT) LOADED POLYANILINE NANOROD SUPER CAPACITOR ELECTRODE MATERIAL
US2011111279 A1 20110512	US20100942863 20101109; US20090259599P 20091109	UNIV FLORIDA STATE RES FOUND [US]	H01M4/13; B29C39/00; B32B5/00; B32B5/02; B32B5/16; D21H17/63; H01M2/16	BINDER-FREE NANOCOMPOSITE MATERIAL AND METHOD OF MANUFACTURE

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US2011008705 A1 20110113	US20100839124 20100719; US20090505070 20090717; US20070670687 20070202; US20100320639P 20100402; US20080081851P 20080718; US20060764504P 20060202	UNIV FLORIDA STATE RES FOUND [US]	H01M8/10	CATALYTIC ELECTRODE WITH GRADIENT POROSITY AND CATALYST DENSITY FOR FUEL CELLS
WO2011009124 A2 20110120	US20100320639P 20100402; US20090505070 20090717	UNIV FLORIDA STATE RES FOUND [US]; ZHENG JIAN-PING [US]; LIANG ZHIYONG [US]; WANG BEN [US]; ZHANG CHUN [US]; ZHU WEI [US]	H01M4/90; B01J23/00; B82B3/00; H01M4/88; H01M8/10	CATALYTIC ELECTRODE WITH GRADIENT POROSITY AND CATALYST DENSITY FOR FUEL CELLS
CN102074690 A 20110525	CN20101604083 20101224	UNIV FUDAN	H01M4/1397	METHOD FOR SYNTHESIZING BATTERY ANODE MATERIAL LIFEPO4 BY USING CONTROLLABLE CARBON CLAD FEPO4
CN102074378 A 20110525	CN20111049506 20110302	UNIV FUDAN	H01G9/042; H01G9/15	PREPARATION METHOD FOR SOLID STATE SUPER CAPACITOR
CN102086302 A 20110608	CN20091199748 20091204	UNIV FUDAN	C08L79/02; B82B3/00; C08G73/02; C08K3/22	PREPARING METHOD FOR MOLYBDENUM OXIDE - POLYANILINE COMPOSITE NANOWIRE AND NANOTUBE
CN102064315 A 20110518	CN20101596832 20101221	UNIV FUZHOU	H01M4/1391; B82Y40/00; H01M4/131	METHOD FOR PREPARING SPINEL LITHIUM TITANATE NANO PIECE AND APPLICATION OF SPINEL LITHIUM TITANATE NANO PIECE IN LITHIUM BATTERY

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US2011059378 A1 20110310	US20100868481 20100825; US20090241296P 20090910	UNIV HONG KONG [CN]	H01M8/06; B01J21/18; B01J23/56; C01B3/22	CATALYST FOR HYDROGEN GENERATION FROM SMALL ORGANIC MOLECULES
CN102034965 A 20110427	CN20101535047 20101108	UNIV HUAZHONG NORMAL	H01M4/139	PREPARATION METHOD OF MANGANESE DIFLUORIDE AND GRAPHITE NANOCOMPOSITE FOR CATHODE MATERIAL OF LITHIUM ION BATTERY
CN102074714 A 20110525	CN20101594026 20101217	UNIV HUNAN	H01M4/96; H01M4/88	METHOD FOR PREPARING FUEL CELL BIPOLAR PLATE BY USING TRANSITION METAL-GRAPHITE INTERLAYER COMPLEX AS FILLER
JP2011071064 A 20110407	JP20090223296 20090928	UNIV IWATE; UNIV KOBE	H01M4/13; H01M4/48; H01M4/62	NEGATIVE ELECTRODE FOR NONAQUEOUS ELECTROLYTE SECONDARY BATTERY, AND NONAQUEOUS ELECTROLYTE SECONDARY BATTERY EQUIPPED WITH THE NEGATIVE ELECTRODE
CN102074683 A 20110525	CN20101581833 20101210	UNIV JIANGNAN	H01M4/1393; B82Y40/00	POROUS CARBON NANOFIBER ANODE MATERIAL FOR LITHIUM ION BATTERY AND PREPARATION METHOD THEREOF
CN102000590 A 20110406	CN20101523435 20101029	UNIV JIANGSU	B01J23/89; H01M4/88; H01M4/90	PREPARATION METHOD OF GRAPHITE/FEPT NANO-CATALYST FOR FUEL CELL
CN102024573 A 20110420	CN20101594692 20101218	UNIV JIAOTONG SOUTHWEST	H01G9/042; H01G9/20; H01L31/18; H01M14/00	METHOD FOR PREPARING SENSITIZED ZNO NANO-PLATE PHOTO-ANODE OF PBS QUANTUM DOT

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WO2011015174 A1 20110210	DE200910035745 20090801	UNIV KIEL CHRISTIAN ALBRECHTS [DE]; BAHR JOERG [DE]; CARSTENSEN JUERGEN [DE]; FOELL HELMUT [DE]; RIEMENSCHNEIDER OLIVER [DE]; HARTZ HAUKE [DE]; OSSEI-WUSU EMMANUEL [DE]	H01M4/04; H01M4/134; H01M4/1395	ELECTRODE FOR LITHIUM-ION ACCUMULATORS
WO2011066818 A1 20110609	DE200910056530 20091204	UNIV KIEL CHRISTIAN ALBRECHTS [DE]; FOELL HELMUT [DE]; CARSTENSEN JUERGEN [DE]; BAHR JOERG [DE]; OSSEI-WUSU EMMANUEL [DE]	H01L29/06; B82Y10/00; B82Y40/00; H01M10/0562	NANOWIRE STRUCTURE HAVING EXPOSED, REGULARLY ARRANGED NANOWIRE ENDS AND METHOD FOR PRODUCING SUCH A STRUCTURE
US2011020713 A1 20110127	US20100895424 20100930; US20070837291 20070810	UNIV LELAND STANFORD JUNIOR	H01M6/04; H01M4/134; H01M4/38; H01M6/16; H01M10/052; H01M10/36	NANOWIRE BATTERY METHODS AND ARRANGEMENTS
JP2011076931 A 20110414	JP20090228539 20090930	UNIV NAGOYA; TOYOTA MOTOR CORP; NU ECO ENGINEERING KK	H01M4/58; H01M4/36	POSITIVE ELECTRODE MATERIAL FOR LITHIUM ION SECONDARY BATTERY, AND METHOD FOR MANUFACTURING THE SAME
CN101969128 A 20110209	CN20101290615 20100926	UNIV NANCHANG	H01M4/88; H01M4/92	METHOD FOR CONTROLLABLY LOADING METAL PLATINUM ON SURFACE OF MULTI-WALL CARBON NANOTUBE THROUGH IN-SITU SYNTHESIS

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US2011065570 A1 20110317	US20100946170 20101115; CN20071022235 20070510; US20090524561 20090724; WO2008CN70936 20080512	UNIV NANJING [CN]	H01M4/88; B01J27/24	ELECTRODE CATALYST OF CARBON NITRIDE NANOTUBES SUPPORTED BY PLATINUM AND RUTHENIUM NANOPARTICLES AND PREPARATION METHOD THEREOF
CN102070186 A 20110525	CN20101554945 20101123	UNIV NANJING AERONAUTICS	C01G23/00; B82Y40/00	PREPARATION METHOD OF SPINEL TYPE NANO LITHIUM TITANATE
CN102086034 A 20110608	CN20101590224 20101213	UNIV NANJING POSTS & TELECOMM	C01B31/00; C01B31/02	CARBON-NANO-TUBE PREPARED FROM POPLAR CATKIN AND WILLOW CATKIN AS RAW MATERIALS AND PREPARATION METHOD
CN102024996 A 20110420	CN20101561071 20101126	UNIV NANKAI	H01M10/36; H01M4/134; H01M4/136; H01M4/1397; H01M4/62; H01M10/38	HIGH-PERFORMANCE RECHARGEABLE MAGNESIUM BATTERY AND MANUFACTURING METHOD THEREOF
CN102082270 A 20110601	CN20101573608 20101203	UNIV NANKAI	H01M4/505; B82Y25/00; B82Y40/00; C01G45/12; H01M4/1391	MANGANESE SPINEL NANO MATERIAL AS WELL AS PREPARATION METHOD AND APPLICATION OF MANGANESE SPINEL NANO MATERIAL
US2011014550 A1 20110120	US20080808162 20081212; US20070013909P 20071214; WO2008SG00477 20081212	UNIV NANYANG TECH [SG]	H01M8/00; H01M4/02	NANOSTRUCTURED MATERIAL LOADED WITH NOBLE METAL PARTICLES

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WO2011021982 A1 20110224	WO2009SG00288 20090820	UNIV NANYANG TECH [SG]; MAK WAI FATT [SG]; WEE TSYH YING GRACE [SG]; SALIM TEDDY [SG]; SRINIVASAN MADHAVI [SG]; MHAISALKAR SUBODH [SG]; BOEY YIN CHIANG FREDDY [SG]	H01L31/058; H01L31/05; H01L35/04; H01M8/04; H01M12/04	INTEGRATED ELECTRODE ARCHITECTURES FOR ENERGY GENERATION AND STORAGE
TW201106518 A 20110216	TW20090126146 20090804	UNIV NAT TAIWAN [TW]	H01M14/00; C01B33/44; H01L31/04	USES OF NANOSHEETS OF EXFOLIATED CLAY AND METHOD OF RAPIDLY ADSORBING CATION
TW201106517 A 20110216	TW20090126018 20090803	UNIV NAT YUNLIN SCI & TECH [TW]	H01M14/00; H01L31/042	CAPABLE OF INCREASING THE PHOTOVOLTAIC CONVERSION EFFICIENCY OF DYE-SENSITIZED SOLAR CELL
TWI343831B B 20110621	US20020103803 20020325	UNIV NORTH CAROLINA [US]	B01J16/00; B82B3/00; B05D1/18; B05D1/20; C01B31/02; H01G9/00; H01G9/058; H01J9/02; H01M4/04; H01M4/86; H01M6/02; H01M10/04	METHOD FOR ASSEMBLING NANO OBJECTS
CN102091661 A 20110615	CN20101601448 20101223	UNIV NORTHWEST NORMAL	B01J32/00; B01J27/24; H01M4/88; H01M4/90	FERROFERRIC OXIDE-CARBON AND NITROGEN COMPOSITE AND PREPARATION AND APPLICATION THEREOF
CN102078816 A 20110601	CN20101601428 20101223	UNIV NORTHWEST NORMAL	B01J27/057; B01J32/00; H01M4/88; H01M4/90	SELENIUM/CARBON COMPOUND MATERIAL, PREPARATION OF SELENIUM/CARBON COMPOUND MATERIAL AND APPLICATION OF SELENIUM/CARBON COMPOUND MATERIAL IN FUEL-CELL CATALYST PREPARATION

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CN102107147 A 20110629	CN20101601458 20101223	UNIV NORTHWEST NORMAL	B01J32/00; B01J21/06; B01J21/18; B01J23/42; H01M4/90; H01M4/92	TITANIUM DIOXIDE AND CARBON COMPOSITE MATERIAL, PREPARATION AND APPLICATION THEREOF
US2011111303 A1 20110512	US20100940241 20101105; US20090258801P 20091106	UNIV NORTHWESTERN [US]	H01M4/58; H01M4/583; H01M4/62	ELECTRODE MATERIAL COMPRISING GRAPHENE COMPOSITE MATERIALS IN A GRAPHITE NETWORK FORMED FROM RECONSTITUTED GRAPHENE SHEETS
JP2011088814 A 20110506	CN20091110320 20091023	UNIV QINGHUA; HON HAI PREC IND CO LTD [TW]	C01B31/02; H01G9/058	METHOD FOR MAKING CARBON NANOTUBE COMPOSITE
US2011045351 A1 20110224	US20100859297 20100819; US20090236094P 20090823	UNIV RAMOT [IL]	H01M4/52; C25D3/12; C25D3/20; C25D3/38; C25D3/54; C25D5/02; H01M4/56; H01M4/58	HIGH-POWER NANOSCALE CATHODES FOR THIN-FILM MICROBATTERIES
WO2011072255 A1 20110616	US20090285259P 20091210	UNIV RICE WILLIAM M [US]; AJAYAN PULICKEL M [US]; OU FUNG SUONG [US]; SHAJIUMON MANIKOTH M [FR]; GOWDA SANKETH R [US]; REDDY ARAVA L M [US]	H01M4/04; H01M4/131; H01M4/134; H01M4/1391; H01M4/1395; H01M4/38; H01M4/48; H01M4/52; H01M4/525; H01M4/66; H01M4/70; H01M4/80; H01M10/04; H01M10/0565; H01M10/058	CONFORMAL COATING ON NANOSTRUCTURED ELECTRODE MATERIALS FOR THREE-DIMENSIONAL APPLICATIONS
WO2011057263 A1 20110512	US20090280815P 20091109	UNIV RUTGERS [US]; AMATUCCI GLENN G [US]; BADWAY FADWA [US]; HALAJKO ANNA [US]	H01M4/58	METAL FLUORIDE COMPOSITIONS FOR SELF FORMED BATTERIES

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CN102092791 A 20110615	CN20111063644 20110316	UNIV SHAANXI NORMAL	C01G45/02	METHOD FOR PREPARING DEMIXED MANGANESE OXIDE FLOWER SPHERES WITH LARGE SPECIFIC SURFACE AREAS
CN101969113 A 20110209	CN20101291060 20100921	UNIV SHANGHAI	H01M4/139; H01M4/13	PREPARATION METHOD OF GRAPHENE-BASE TIN DIOXIDE COMPOSITE ANODE MATERIAL FOR LITHIUM ION BATTERIES
CN102082262 A 20110601	CN20101619479 20101231	UNIV SHANGHAI JIAOTONG	H01M4/1393	METHOD FOR PREPARING NANO-CARBON COATED LITHIUM BATTERY ANODE MATERIAL
CN102074692 A 20110525	CN20101618690 20101231	UNIV SHENZHEN	H01M4/1399; H01M4/62	PREPARATION METHOD FOR SIMILAR GRAPHENE DOPED LITHIUM ION BATTERY POSITIVE ELECTRODE MATERIAL
KR20110026648 A 20110316	KR20090084391 20090908	UNIV SOONGSIL RES CONSORTIUM [KR]	H01M4/90; B01J37/08; B01J37/16; H01M4/88	ALLOY METALLIC NANOSTRUCTURE AND METHOD OF IT FOR FUEL CELL
KR20110056472 A 20110530	KR20110045968 20110516	UNIV SOONGSIL RES CONSORTIUM [KR]	H01M4/86; B82B3/00; H01M4/88; H01M8/10	CATALYST ELECTRODE OF CORE/SHELL NANOSTRUCTURE SUPPORTS AND METHOD OF IT FOR FUEL CELL
AU2009326846 A1 20110630	AU20080906329 20081208; WO2009AU01588 20091208; AU20090326846 20091208	UNIV SOUTH AUSTRALIA	C25C3/00; C25B9/06; C25C3/06; C25C3/20; C25C5/00; C25C7/00; C25D1/00; C25D1/08; C25D1/16; H01M4/04	FORMATION OF NANOPOROUS MATERIALS
CN102104171 A 20110622	CN20111020969 20110118	UNIV SOUTH CHINA NORMAL	H01M10/0565	LITHIUM ION BATTERY GEL POLYMER ELECTROLYTE, PREPARATION METHOD AND APPLICATION THEREOF

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CN102104129 A 20110622	CN20091214102 20091222	UNIV SOUTH CHINA NORMAL	H01M2/16	MICROPORE PARTITION PLATE SPECIALLY FOR COLLOID STORAGE BATTERY,
CN102044709 A 20110504	CN20101535413 20101105	UNIV SOUTH CHINA NORMAL	H01M10/10; H01M10/12	STORAGE BATTERY COLLOIDAL ELECTROLYTE AND PREPARATION METHOD THEREOF
CN102044711 A 20110504	CN20101578688 20101208	UNIV SOUTH CHINA NORMAL	H01M10/10	STORAGE BATTERY COLLOIDAL ELECTROLYTE CONTAINING ACICULAR NANO CRYSTAL WHISKER AND PREPARATION METHOD THEREOF
CN101958413 A 20110126	CN20101259694 20100820	UNIV SOUTH CHINA NORMAL	H01M4/131; H01M4/48	TITANIUM DIOXIDE NANO-ROD CATHODE MATERIAL OF POWER LITHIUM ION BATTERY AND PREPARATION METHOD THEREOF
CN101964423 A 20110202	CN20101278373 20100911	UNIV SOUTH CHINA TECH	H01M4/90; B01J23/656; B01J37/00; H01M4/88	DIRECT METHANOL FUEL CELL ANODE CATALYST PT/ MNO2-RUO2/ CNTS AND PREPARATION METHOD THEREOF
CN102005581 A 20110406	CN20101509057 20101015	UNIV SOUTH CHINA TECH	H01M4/90; B01J27/14; H01M4/88	FUEL CELL CATHODE CATALYST OF P-MCNTS (PHOSPHOR-DOPING MULTI-CARBON NANOTUBES) AND PREPARATION METHOD THEREOF
CN102082285 A 20110601	CN20111000599 20110105	UNIV SOUTHEAST	H01M8/16; H01M4/88	METHOD FOR MANUFACTURING MICROBIOLOGICAL FUEL CELL (MFC) BASED ON COMPOSITE NANO-INTERFACE
WO2011029006 A2 20110310	US20090240120P 20090904	UNIV TEXAS [US]; BIELAWSKI CHRISTOPHER W [US]; RUOFF RODNEY S [US]; AGNIHOTRI DILEEP K [US]; DREYER DANIEL R [US]; STOLLER MERYL D [US]; ZHU YANWU [US]	H01G9/038; H01G9/058	IONIC LIQUIDS FOR USE IN ULTRACAPACITOR AND GRAPHENE-BASED ULTRACAPACITOR

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CN101982408 A 20110302	CN20101512207 20101020	UNIV TIANJIN	C01B31/04	GRAPHENE THREE-DIMENSIONAL MATERIAL AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF
CN101937994 A 20110105	CN20101261797 20100825	UNIV TIANJIN	H01M4/38; H01M4/139	GRAPHENE/ALUMINUM COMPOSITE CATHODE MATERIAL OF LITHIUM ION BATTERY AND PREPARATION METHOD THEREOF
CN101944593 A 20110112	CN20101281627 20100915	UNIV TIANJIN	H01M4/133; H01M4/136; H01M4/1397	POSITIVE POLE MATERIAL OF LITHIUM ION BATTERY WITH NANOMETER STRUCTURE AND PREPARATION METHOD THEREOF
CN102108132 A 20110629	CN20111020967 20110119	UNIV TIANJIN	C08J7/14; C08G8/02; C08J5/18; C08K3/22; C08K9/04; C08L61/16; H01M2/16; H01M8/02	PREPARATION METHOD AND APPLICATION OF SULFONATED POLYETHER-ETHER-KETONE-CARBOXYLATED TITANIUM DIOXIDE HYBRID MEMBRANE
CN102064322 A 20110518	CN20101561749 20101125	UNIV TIANJIN	H01M4/38; H01M4/1395	SILICON/GRAPHENE LAMINAR COMPOSITE MATERIAL FOR LITHIUM ION BATTERY CATHODE AND PREPARATION METHOD THEREOF
CN102013482 A 20110413	CN20101523755 20101025	UNIV TSINGHUA [CN]	H01M4/1391; B82Y40/00	METHOD FOR PREPARING CATHODE ELECTRODE MATERIAL OF NANOBELT-TYPE LITHIUM ION BATTERY
CN102054978 A 20110511	CN20101558826 20101125	UNIV TSINGHUA [CN]	H01M4/1397; B82Y40/00	METHOD FOR PREPARING CATHODE ELECTRODE MATERIAL OF NANOMETER SHEET MICROSPHERIC LITHIUM ION CELL

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CN102021677 A 20110420	CN20101505642 20101013	UNIV TSINGHUA [CN]	D01F9/20; B82Y40/00; D01D5/00; D01F9/21; D01F9/22; D01F9/24; D01F11/10; H01M4/90	PREPARATION METHOD FOR CARBON NANOFIBER CONTAINING TRANSITION METAL AND NITROGEN ELEMENT AND APPLICATION OF CARBON NANOFIBER IN FUEL-CELL CATALYSTS
CN102087921 A 20110608	CN20111024183 20110121	UNIV TSINGHUA [CN]	H01G9/042	SELF-SUPPORTING SUPER CAPACITOR ELECTRODE MATERIAL AND PREPARATION METHOD THEREOF
CN102074371 A 20110525	CN20101623583 20101230	UNIV TSINGHUA [CN]	H01G9/04	THREE-DIMENSIONAL MINIATURE SUPER CAPACITOR ELECTRODE MANUFACTURED FROM NANO POROUS COMPOSITE MATERIAL AND MANUFACTURING METHOD THEREOF
US2011096465 A1 20110428	US20100826963 20100630; CN20091110320 20091023; CN20091110322 20091023; CN20091189146 20091218; US20100822308 20100624	UNIV TSINGHUA [CN]; HON HAI PREC IND CO LTD [TW]	H01G9/058	CARBON NANOTUBE COMPOSITE, METHOD FOR MAKING THE SAME, AND ELECTROCHEMICAL CAPACITOR USING THE SAME
CN102103935 A 20110622	CN20091189146 20091218	UNIV TSINGHUA [CN]; HONGFUJIN PREC IND SHENZHEN	H01G9/155; H01G9/058	SUPER CAPACITOR
CN101937776 A 20110105	CN20101226801 20100714	UNIV TSINGHUA [CN]; HONGFUJIN PREC IND SHENZHEN	H01G9/04; H01G9/145	SUPER CAPACITOR

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CN102034963 A 20110427	CN20091190671 20090929	UNIV TSINGHUA GRADUATE SCHOOL; SHENZHEN BAK BATTERY CO LTD	H01M4/04; H01M4/58	PREPARATION METHOD OF ANODE MATERIAL LITHIUM FERROUS PHOSPHATE OF LITHIUM ION BATTERY
US7862920 B1 20110104	US20100762133 20100416; US20040913918 20040806; US20030493313P 20030807	UNIV TULSA [US]	H01M10/46; H01M16/00	CHARGED ARRAYS OF MICRO AND NANOSCALE ELECTROCHEMICAL CELLS AND BATTERIES FOR COMPUTER AND NANODEVICE MEMORY AND POWER SUPPLY
GB2473550 A 20110316	US20090241779P 20090911; US20100345658P 20100518	UNIV WASHINGTON [US]	H01M4/90	FUEL CELL CATALYST MATERIALS AND METHODS FOR REFORMING HYDROCARBON FUELS
US2011053020 A1 20110303	US20080513524 20081107; US20080031273P 20080225; US20070986957P 20071109; WO2008US82884 20081107	UNIV WASHINGTON [US]; IDAHO RES FOUND [US]	H01M8/06; B01J21/06; B01J21/08; B01J23/00; B01J23/06; B01J23/42; B01J23/44; B01J23/50; B01J23/52; B01J23/72; B01J23/745; B01J23/75; B01J23/755; B01J27/24; C01B3/02; C01B3/16; C01B3/26; C07C5/03; F02B43/00	CATALYSTS AND RELATED METHODS

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CN101939329 A 20110105	WO2008CA01688 20080829; US20070935773P 20070830	UNIV WATERLOO	C07K7/06; A61K38/02; A61K45/08; A61K47/18; A61K47/42; B82B1/00; C07K1/00; C07K5/06; C07K5/072; C07K5/113; C11D1/88; G01N33/50; G01N33/569; G01N33/66; G01N33/68; H01M8/22	AMINO ACID PAIRING-BASED SELF ASSEMBLING PEPTIDES AND METHODS
CN102020832 A 20110420	CN20101558939 20101125	UNIV WUHAN	C08L65/00; B82Y30/00; B82Y40/00; C08G61/12; C25B3/00	CONDUCTIVE POLY 3,4-ETHYLENE DIOXY THIOPHENE FILM AND PREPARATION METHOD THEREOF
CN102088093 A 20110608	CN20111000141 20110104	UNIV WUHAN TECH	H01M4/90; B01J27/22; B01J32/00; H01M4/88	FUEL CELL CATALYST TAKING CONDUCTIVE CERAMIC BORON CARBIDE AS SUPPORTER AND PREPARATION METHOD THEREOF
CN102088094 A 20110608	CN20111000145 20110104	UNIV WUHAN TECH	H01M4/90; B01J23/42; B01J23/44; B01J23/60; B01J23/66; B01J23/89; B01J27/22; B01J27/224; B01J27/24; B01J32/00; H01M4/88	FUEL CELL CATALYST WITH CONDUCTIVE CERAMIC CONTAINING CARBON NANOMETER LAYER AS SUPPORTER AND PREPARATION METHOD THEREOF
US2011014546 A1 20110120	US20080670921 20080728; US20070962273P 20070727; WO2008US71352 20080728	UNIV WYOMING [US]	H01M8/04	NANOPOROUS SILICATE MEMBRANES FOR PORTABLE FUEL
CN201856419U U 20110608	CN20102114049U 20100210	UNIV XIANGTAN	B32B15/01; B32B33/00; C25D3/12; C25D5/12; H01M2/02	BATTERY SHELL STEEL BELT PLATED WITH NICKEL-COBALT/NICKEL/NICKEL-COB ALT MULTILAYER FILMS

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CN101958405 A 20110126	CN20101110347 20100210	UNIV XIANGTAN	H01M2/02	COBALT-CONTAINING NANOWIRE-PLATED MULTI-LAYER COMPOSITE THIN FILM STEEL BELT FOR BATTERY SHELL AND PREPARATION METHOD THEREOF
CN102104149 A 20110622	CN20111021060 20110119	UNIV XIANGTAN	H01M4/58; H01M4/1397	LITHIUM IRON PHOSPHATE COMPOSITE ANODE MATERIAL IN LITHIUM-ION BATTERY AND PREPARATION METHOD THEREOF
CN101958404 A 20110126	CN20101110129 20100210	UNIV XIANGTAN	H01M2/02	NANOWIRE-CONTAINING MULTILAYER COMPOSITE THIN FILM PLATED STEEL BELT AND PREPARATION METHOD THEREOF
CN101954763 A 20110126	CN20101110136 20100210	UNIV XIANGTAN	B32B15/01; B32B33/00; C21D1/26; C25D3/12; C25D3/16; C25D5/08; C25D5/14; C25D5/18; C25D5/26; C25D15/00; H01M2/02	NICKELIFEROUS NANOWIRE LAMINATED FILM PLATED STEEL BELT AND PRODUCTION METHOD THEREOF
CN101954762 A 20110126	CN20101110126 20100210	UNIV XIANGTAN	B32B15/01; C25D3/12; C25D5/08; C25D5/50; C25D7/06; H01M2/02	STEEL STRIP PLATED WITH COMPOSITE FILM CONTAINING COBALT NANOWIRES AND PREPARATION METHOD THEREOF
CN102009504 A 20110413	CN20101110128 20100210	UNIV XIANGTAN	B32B15/01; B32B33/00; C25D3/12; C25D3/16; C25D5/08; C25D5/14; C25D5/18; C25D5/36; H01M2/02	STEEL STRIP PLATED WITH MULTI-LAYER MICRON/NANO-CRYSTAL NICKEL FILMS AND PREPARATION METHOD THEREOF
KR20110059130 A 20110602	KR20090115766 20091127	UNIV YONSEI IACF [KR]	H01B1/04; H01M8/02	COMPOSITE COMPOSITION AND BIPOLAR PLATE FOR FUEL CELL USING THE SAME

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TW201114812 A 20110501	TW20090136203 20091026	UNIV YUAN ZE [TW]	C08J5/22; C08J5/04; H01M8/02	PERFLUOROSULFONIC ACID IONOMER/BASIC FIBER USED AS COMPOSITE PROTON EXCHANGE MEMBRANE AND METHOD FOR MANUFACTURING THE SAME
CN102013330 A 20110413	CN20101547384 20101116	UNIV ZHEJIANG	H01G9/04	FILM FOR GRAPHENE/POROUS NICKEL OXIDE COMPOSITE SUPER CAPACITOR AND PREPARATION METHOD THEREOF
CN102110811 A 20110629	CN20111007711 20110114	UNIV ZHEJIANG	H01M4/1397	METHOD FOR PREPARING NANOSCALE LITHIUM ION BATTERY LIFEPO4/C ANODAL MATERIAL
CN102013516 A 20110413	CN20101516552 20101022	UNIV ZHEJIANG	H01M10/0565; H01M10/058	POROUS FIBER GEL POLYMER ELECTROLYTE AND PREPARATION METHOD THEREOF
CN102088089 A 20110608	CN20101606384 20101227	UNIV ZHEJIANG	H01M4/88; B41M1/12; G01R31/36	PREPARATION METHOD OF COMBINED ELECTRODE OF FUEL CELL AND TEST DEVICE THEREOF
CN102064321 A 20110518	CN20101555305 20101123	UNIV ZHEJIANG	H01M4/38; B82Y30/00; B82Y40/00; H01M4/1393	PREPARATION METHOD OF COMPOSITE MATERIAL CONTAINING MULTI-WALLED CARBON NANOTUBES AND TIN-COBALT ALLOY NANOPARTICLES
US7901830 B1 20110308	US20100870003 20100827; US20060498993 20060802; US20050704651P 20050802	US ENERGY [US]	H01M2/18	ALUMINUM OXYHYDROXIDE BASED SEPARATOR/ELECTROLYTE AND BATTERY SYSTEM, AND A METHOD MAKING THE SAME
CN102074731 A 20110525	CN20101582333 20101210	WEWIN BATTERY TECHNOLOGY CO LTD	H01M10/0525; H01M4/485; H01M4/505; H01M4/525; H01M4/62; H01M10/058	MANGANESE, NICKEL AND TITANIUM LITHIUM ION BATTERY AND PREPARATION METHOD THEREOF

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CN201789030U U 20110406	CN20102287650U 20100802	WUXI CHENGXIN CARBON MATERIAL TECHNOLOGY CO LTD	H01M8/06	ZERO EMISSION HYDROGEN MANUFACTURING, POWER GENERATING AND CARBON PRODUCING DEVICE
KR20110001004 A 20110106	KR20090058377 20090629	XFC INC [KR]	H01M4/92; B01J21/10; B01J23/40; H01M4/86	CATALYST FOR FUEL CELL AND LOW-HUMIDIFIED MEA
CN101973566 A 20110216	CN20101228877 20100716	XI AN THERMAL POWER RES INST CO LTD	C01F7/04; H01M2/16; H01M8/02	METHOD FOR PREPARING SUB-MICRON GAMMA-LIALO2 POWDER FROM NANO
EP2287944 A1 20110223	WO2009CN72394 20090623; CN20091143905 20090602	XU RUISONG [CN]	H01M4/36	NANOMETER-LEVEL POSITIVE ELECTRODE MATERIAL FOR LITHIUM BATTERY AND METHOD FOR MAKING THE SAME
US2011003149 A1 20110106	US20100880791 20100913; US20060560570 20061116; US20050737186P 20051116; US20060775110P 20060221; US20060775559P 20060222	YAZAMI RACHID [US]; HAMWI ANDRE [FR]	C01B31/00; B32B9/00; C01B31/30; H01M4/58	FLUORINATION OF MULTI-LAYERED CARBON NANOMATERIALS
CN102074677 A 20110525	CN20101592417 20101216	YUQIANG PAN	H01M4/08	METHOD FOR MANUFACTURING MERCURY-FREE BATTERY THROUGH MAGNETRON SPUTTERING OF INDIUM OR TIN ON NEGATIVE POLE PIECE
WO2011079238 A1 20110630	US20090655172 20091224	ZHAMU ARUNA [US]; JANG BOR Z [US]	H01M4/62; H01M4/131; H01M4/139	CONDUCTIVE GRAPHENE POLYMER BINDER FOR ELECTROCHEMICAL CELL ELECTRODES

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US2011104571 A1 20110505	US20090589999 20091102	ZHAMU ARUNA [US]; JANG BOR Z [US]	H01M4/58; H01B1/02	NANO-STRUCTURED ANODE COMPOSITIONS FOR LITHIUM METAL AND LITHIUM METAL-AIR SECONDARY BATTERIES
US2011157772 A1 20110630	US20090655247 20091228	ZHAMU ARUNA [US]; YU ZENNING [US]; LIU CHEN-GUANG [US]; JANG BOR Z [US]	H01G9/058; B32B3/10; C01B31/02; C25B11/12	SPACER-MODIFIED NANO GRAPHENE ELECTRODES FOR SUPERCAPACITORS
CN102013491 A 20110413	CN20101534067 20101108	ZHANGJIAGANG LITIAN NEW ENERGY TECHNOLOGY CO LTD	H01M4/62; H01M4/139; H01M4/1397; H01M10/0525	NOVEL POWER BATTERY AND PREPARATION METHOD THEREOF
CN101937991 A 20110105	CN20101165306 20100507	ZHANGJIAKOU BAOSHENG NEW ENERGY TECHNOLOGY CO LTD	H01M4/14; H01M4/16; H01M4/62	HIGH-ENERGY LEAD-ACID STORAGE BATTERY CATHODE PLATE DIACHYLON AND PREPARATION METHOD THEREOF
CN101969112 A 20110209	CN20101299811 20100930	ZHANJIANG CITY JUXIN NEW ENERGY CO LTD; WANHONG ZHANG	H01M4/133; H01M4/1393	ANODE MATERIAL AND CATHODE MATERIAL FOR LITHIUM ION BATTERY AND MODIFYING METHOD THEREOF
CN101937986 A 20110105	CN20101268721 20100827	ZHEJIANG GUSHEN ENERGY TECHNOLOGY CO LTD; UNIV ZHEJIANG	H01M4/136; H01M4/1397	VANADIUM-LITHIUM PHOSPHATE COMPOSITE MATERIAL FOR POSITIVE ELECTRODE OF LITHIUM ION BATTERY AND PREPARATION METHOD THEREOF

ANEXO I - Códigos dos Principais Países

Código	País	Código	País
AR	Argentina	**IN**	Índia
AT	Áustria	**IS**	Islândia
AU	Austrália	**IT**	Itália
BE	Bélgica	**JP**	Japão
BG	Bulgária	**KR**	República Da Coréia
BR	Brasil	**LU**	Luxemburgo
BS	Bahamas	**LV**	Letônia
CA	Canadá	**MA**	Marrocos
CH	Suíça	**MD**	Republica Moldova
CN	China	**MX**	México
CZ	República Tcheca	**NL**	Holanda
DE	Alemanha	**NO**	Noruega
DK	Dinamarca	**NZ**	Nova Zelândia
DZ	Argélia	**OA**	African Intellectual Property Organization (OAPI)[1]
EA	Organização de Patentes da Eurásia (EAPO)[1]	**PH**	Filipinas
EE	Estônia	**PL**	Polônia
EG	Egito	**PT**	Portugal
EP	Organização Européia de Patentes (EPO)[1]	**RO**	Romênia
ES	Espanha	**RU**	Federação Russa
FI	Finlândia	**SE**	Suécia
FR	França	**SG**	Singapura
GB	Reino Unido	**SI**	Eslovênia
GR	Grécia	**SK**	Eslováquia
HK	Região Administrativa Especial de Hong Kong Da República Popular da China	**TR**	Turquia
HR	Croácia	**TW**	Taiwan
HU	Hungria	**UA**	Ucrânia
IB	International Bureau[2]	**US**	Estados Unidos
ID	Indonésia	**WO**	Organização Mundial de Propriedade Intelectual (WIPO)[2]
IE	Irlanda	**ZA**	África do Sul
IL	Israel		

Fonte: http://www.wipo.int/export/sites/www/scit/en/standards/pdf/030301.pdf, acesso: março 2008

[1] Organização intergovernamental encarregado de emitir títulos de proteção dos direitos de propriedade industrial e de prestar serviços relacionados com a propriedade industrial para cada um dos Estados-membros.
[2] O código "WO" é utilizado para a publicação internacional dos pedidos depositados via Tratado de Cooperação em Matéria de Patentes (PCT) em qualquer um dos escritórios nacionais dos países receptores deste Acordo. O código "IB" é utilizado para os pedidos depositados via PCT no escritório da Organização Mundial da Propriedade Intelectual (OMPI) atuando como entidade receptora do PCT.

ANEXO II - Pedidos de patente sem nome do depositante indexado

KR20110046369
JP2011505312