504163829 01/04/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4210506

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)

CONVEYING PARTY DATA

Name	Execution Date
A123 SYSTEMS, INC.	01/29/2013

RECEIVING PARTY DATA

Name:	WANXIANG CLEAN ENERGY USA ACQUISITION LLC
Street Address:	39000 SEVEN MILE RD.
City:	LIVONIA
State/Country:	MICHIGAN
Postal Code:	48152

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13877244

CORRESPONDENCE DATA

Fax Number: (503)459-4142

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 503-459-4141

Email: cooney@ahmrt.com

Correspondent Name: ALLEMAN HALL MCCOY RUSSELL & TUTTLE LLP

Address Line 1: 806 SW BROADWAY

Address Line 2: SUITE 600

Address Line 4: PORTLAND, OREGON 97205

ATTORNEY DOCKET NUMBER:	A12310317PCTUS
NAME OF SUBMITTER:	HANNAH COONEY
SIGNATURE:	/Hannah Cooney/
DATE SIGNED:	01/04/2017

Total Attachments: 21

source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page1.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page2.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page3.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page4.tif

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source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page5.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page6.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page7.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page8.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page9.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page10.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page11.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page12.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page13.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page14.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page15.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page16.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page17.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page18.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page19.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page20.tif source=(3) Fully Executed Assignment of Patents (US) A123 Systems Inc to Wanxiang LLC 1-29-13#page21.tif

PATENT ASSIGNMENT

This PATENT ASSIGNMENT ("<u>Assignment</u>") dated as of January 29, 2013 (the "<u>Effective Date</u>") by and between A123 Systems, Inc., a Delaware corporation ("<u>Assignor</u>"), and Wanxiang Clean Energy USA Acquisition LLC, a Delaware limited liability company ("Assignee").

WITNESSETH:

WHEREAS Assignor and Assignee and certain other parties have entered into an Asset Purchase Agreement, dated December 11, 2012 (hereinafter the "APA"), pursuant to which Assignor has agreed to sell, and Assignee has agreed to purchase, certain Assets of Assignor, including, without limitation, the patents, patent applications and provisional patent applications identified and set forth on Schedule A attached hereto (such patents, patent applications and provisional patent applications, the "Assigned Patents"); and

WHEREAS, pursuant to the APA, Assignor wishes to assign to Assignee, and Assignee wishes to acquire from Assignor, all of its worldwide right, title and interest in and to the Assigned Patents. Terms capitalized but not defined herein shall have the definitions given to them in the APA.

NOW, THEREFORE, for the foregoing recited consideration and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor does hereby assign, sell and transfer to Assignee all of its right, title and interest throughout the world (free and clear of any and all Encumbrances other than Permitted Encumbrances) in and to the Assigned Patents, including any continuations, continuations-in-part, divisions, renewals, reissues and extensions thereof, together with all claims for damages by reason of past infringement thereof, with the right to sue for, and collect the same for Assignee's own use and benefit. Assignor does further consent to the recordation of this Assignment by Assignee with the Commissioner of Patents and Trademarks or other comparable Governmental Authority.

IN WITNESS WHEREOF, Assignor and Assignee have caused this instrument to be executed by their respective duly authorized representative as of the Effective Date.

Signature Pages Follow.

BN\894299.2

ASSIGNOR:

A123 SYSTEMS, INC.

By:

Name: David P

Title: Chief Financial Officer

STATE OF MI COUNTY OF Wayne

SS.:

On this 15 th day of 10 nua 2013, before me, the undersigned, a notary public in and for said state and county, personally appeared David Presents, personally known to me (or proved to me on the basis of satisfactory evidence), to be the individual who executed the foregoing instrument on behalf of HO3 Systems, as the Chief Financial Offorsuch company and acknowledged to me that the execution and delivery of said instrument was duly authorized by said company.

Notary Public

(Affix Seal Below)

DANYLE SWEETING Notary Public, State of Michigan County of Wayne
My Commission Expires Mar. 17, 2017 Acting in the County of M

[Signature Page to Assignment of Patents]

ASSIGNEE:

WANXIANG CLEAN ENERGY USA ACQUISITION LLC

By: Jow Name: Daniel (Gang) Li

Jerry Public KDegy

Title: Vice President and Assistant Secretary

STATE OF Illinous

COUNTY OF COOK

\$5.:

On this 17th day of lanuary 2013, before me, the undersigned, a notary public in and for said state and county, personally appeared lane (Gang) Li, personally known to me (or proved to me on the basis of satisfactory evidence), to be the individual who executed the foregoing instrument on behalf of warming Clean as the VP Assis Secretary of such company and acknowledged to me that the execution and delivery of said instrument was duly authorized by said company.

(Affix Scal Below)

OFFICIAL SEAL
JENNIFER L DEERING
NOTARY PUBLIC - STATE OF ILLINOIS
NY COMMISSION EXPIRES OANDAS

[Signature Page to Assignment of Patents]

Schedule A

Assigned Patents

BN\894299.2

1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1003	1003	1002	1001	1000	1000	1000	1000	1000	A123 Case Number
2	1	N	1																A123 SubCase
United States	United States	Korea	Korea	Japan	India	Europe	China	Canada	United States	United States	Japan	United States	United States	United States	United Kingdom	Japan	Germany	Europe	Country
Jointly Owned (MIT)	(ALIW)	Jointly Owned (MIT)	Jointly Owned	Jointly Owned (MIT)	T/J Tech	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner				
Granted	Granted	Pending	Pending	Pending	Granted	Pending	Granted	Pending	Granted	Granted	Granted	Granted	Granted	Granted	Granted	Granted	Granted	Granted	Status
CON	CIP	DIV	AIG	РСТ	PCT	PCT	PCT	PCT	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	CaseType
12/512421	10/206662	10-2012-7008431	10-2009-7016254	2003-517975	118/KOLNP/2004	02768358.0	02818181.6	2455819	09/454,571	09/315,169	2000-551449	09/253,965	08/818,337	08/354,289	95943721.1	8-519,174	95943721.1	095943721.1	App No
7/30/2009	7/26/2002	7/26/2002	7/26/2002	7/26/2002	7/26/2002	7/26/2002	7/26/2002	7/26/2002	12/7/1999	5/20/1999	5/21/1999	2/22/1999	3/14/1997	12/12/1994	12/11/1995	12/11/1995	12/11/1995	12/11/1995	Filing Date
8168326	7579112			4619000	222130		ZL02818181.6		6524744	6190802	4712970	6297185	5888669	5680292	808507	3900303	69532172.2	0808507-B	Pat No.
5/1/2012	8/25/2009			11/5/2010	7/23/2008		3/24/2010		2/25/2003	2/20/2001	4/1/2011	10/2/2001	3/30/1999	10/21/1997	12/11/2005	1/12/2007		11/19/2003	Pat Date
BATTERY STRUCTURES, SELF-ORGANIZING STRUCTURES AND RELATED METHODS	BATTERY STRUCTURES, SELF-ORGANIZING STRUCTURES AND RELATED METHODS	BATTERY STRUCTURES, SELF-ORGANIZING STRUCTURES AND RELATED METHODS	BATTERY STRUCTURES, SELF-ORGANIZING STRUCTURES AND RELATED METHODS	BATTERY STRUCTURES, SELF-ORGANIZING STRUCTURES AND RELATED METHODS	ELECTROCHEMICAL DEVICE AND METHOD FOR PRODUCING THE SAME	BATTERY STRUCTURES, SELF-ORGANIZNG STRUCTURES AND RELATED METHODS		BATTERY STRUCTURES, SELF-ORGANIZING STRUCTURES AND RELATED METHODS		Transition Metal Based Ceramic Material And Electrodes Fabricated Therefrom	Transition Metal Based Ceramic Material And Electrodes Fabricated Therefrom	Catalyst	Transition Metal-Based Ceramic Material And Articles Fabrication Therefrom	High Surface Area Nitride, Carbide And Boride Electrodes And Methods Of Fabrication Thereof	High Surface Area Nitride, Carbide, And Boride Electrodes And Methods Of Fabrication Thereof	High Surface Area Nitride, Carbide, And Boride Electrodes And Methods Of Fabrication Thereof	High Surface Area Nitride, Carbide, And Boride Electrodes And Methods Of Fabrication Thereof	High Surface Area Nitride, Carbide And Boride Electrodes And Methods Of Fabrication Thereof	AppTite
Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Antoni S. Gozdz, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Antoni S. Gozdz, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Antoni S. Gozdź, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Antoni S. Gozdz, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Antoni S. Gozdz, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Antoni S. Gozdz, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Antoni S. Gozdz, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Antoni S. Gozdz, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Antoni S. Gozdz, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	Daryl Clerc, Matthew Fay, Jennifer Groff, Michael Wixom	Daryl Clerc, Matthew Fay, Levi Thompson, Michael Wixom	Daryl Clerc, Matthew Fay, Levi Thompson, Michael Wixom	Levi T. Thompson, Michael Wixom, David Tarnowski, Cong Pu	Levi T. Thompson, Jr., Michael R. Wixom	Levi T. Thompson, Jr., Michael R. Wixom, Jeffery M. Parker	Levi T. Thompson, Jr., Michael R. Wixom, Jeffery M. Parker	Levi T. Thompson, Jr., Michael R. Wixom, Jeffery M. Parker	Levi T. Thompson, Jr., Michael R. Wixom, Jeffery M. Parker	Levi T. Thompson, Jr., Michael R. Wixom, Jeffery M. Parker	Inventor

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1017	1016	1015	1015	1015	1014	1014	1014	1013	1013	1012	1011	1010	1010	1008	1007	1006	1005	1005	1005	1005	1005	1005	A123 Case Number
-1			22					1				2	1	1			9	8	7	51	4	3	A123 SubCase
United States	Korea	United States	United States	United States	United States	Korea	China	United States	Japan	Korea	United States	United States	United States	United States	Korea	Korea	United States	United States	Country				
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Jointly Owned (MIT)	Jointly Owned (MIT)	Owner				
Granted	Granted	Granted	Pending	Granted	Granted	Granted	Granted	Granted	Pending	Granted	Granted	Pending	Granted	Granted	Granted	Granted	Pending	Pending	Pending	Granted	Granted	Granted	Status
ORD	ORD	CIP	DIV	DIV	PCT	ORD	PCT	CON	PCT	ORD	ORD	ORD	ORD	ORD	ORD	ORD	CIP	CIP	CIP	CIP	DIV	CON	CaseType
10/876179	10-2003-0026294	10/354673	13/299562	12/140058	10/543352	10-2003-0005350	200480002940.9	11/159989	2004-562580	10-2002-0075768	10/719,582	12/816644	10/628681	10/354405	10-2002-0028784	10-2001-0063761	13/549064	13/472351	12/692,460	12/891637	13/169423	550988	App. No
6/23/2004	4/25/2003	1/30/2003	18-Nov-2011	6/16/2008	7/26/2005	1/27/2003	1/27/2004	6/23/2005	12/23/2003	12/2/2002	11/21/2003	6/16/2010	7/28/2003	1/30/2003	5/23/2002	10/16/2001	6/13/2012	5/15/2012	1/22/2010	9/27/2010	6/27/2011	9/20/2010	Filing Date
7318982	0555848	7387851		8088512	8067112	0509437	CN100359746	8003250		0509435	6878475		7763382	7087348	0459871	0413608				7662265	8206469	7988746	Pat No.
1/15/2008	2/21/2006	6/17/2008		1/3/2012	11/29/2011	8/12/2005	1/2/2008	8/23/2011		8/12/2005	4/12/2005		7/27/2010	8/8/2006	11/24/2004	12/18/2003				2/24/2011	6/26/2012	8/2/2011	Pat Date
POLYMER COMPOSITION FOR ENCAPSULATION OF ELECTRODE PARTICLES	METHOD FOR MANUFACTURING STACKED TYPE LITHIUM SECONDARY BATTERY BY ATTACHING ELECTRODE PLATES IN ONE DIRECTION	BATTERY STRUCTURES AND RELATED METHODS	BATTERY STRUCTURES AND RELATED METHODS	BATTERY STRUCTURES AND RELATED METHODS	STACKED LITHIUM SECONDARY BATTER AND ITS FABRICATION	STACKED LITHIUM SECONDARY BATTER AND PREPARATION METHOD THEREOF	STACKED LITHIUM SECONDARY BATTER AND ITS FABRICATION	HIGH ENERGY AND POWER DENSITY ELECTROCHEMICAL CELLS	HIGH ENERGY AND POWER DENSITY ELECTROCHEMICAL CELLS	LITHIUM SECONDARY BATTER AND PREPARATION METHOD THEREOF	Membrane For Fuel Cell, And Fuel Cell Incorporating That Membrane	BIPOLAR ARTICLES AND RELATED METHODS	BIPOLAR ARTICLES AND RELATED METHODS	COATED ELECTRODE PARTICLES FOR COMPOSITE ELECTRODES AND ELECTROCHEMICAL CELLS	NONAQUEOUS ELECTROLYTE COMPOSITION FOR BATTER OR CONDENSER	SEPARATOR FOR LITHLIM ION SECONDARY BATTER, METHOD FOR PRODUCING THE SAME, AND LITHLIM ION SECONDARY BATTERY COMPRISING THE SAME	BATTERY STRUCTURES, SELF-ORGANIZING STRUCTURES AND RELATED METHODS	BATTERY STRUCTURES, SELF-ORGANIZING STRUCTURES AND RELATED METHODS	BATTERY STRUCTURES, SELF-ORGANIZING STRUCTURES AND RELATED METHODS	АррТійе			
Anthony E Pullen, Andrew Loxley, Antoni S Gozdz	Hwan-Jin Noh	Antoni S. Gozdz, Andrew Loxley, Richard K Holman, Ronny Wilkins	Antoni S. Gozdz, Andrew Loxley, Richard K Holman, Ronny Wilkins	Antoni S. Gozdz, Andrew Loxley, Richard K Holman, Ronny Wilkins	Whan Jin Roh	Hwan-Jin Noh	Whan Jin Roh	Yet-Ming Chiang, Antoni S. Gozdz, Gilbert N Riley, Jr.	Yet-Ming Chiang, Antoni S. Gozdz, Gilbert N Riley, Jr.	Whan Jin Roh	Michael Wixom, Hanwei Lei, Pu Zhang, Junqing Ma	Gilbert N. Riley, Yet-Ming Chiang, Antoni S. Gozdz, Ric Fulop, Michael S. Viola	Gilbert N. Riley, Yet-Ming Chiang, Antoni S. Gozdz, Ric Fulop, Michael S. Viola	Yet-Ming Chiang, Antoni S. Gozdz, Andrew Loxley, Richard K. Holman, Gilbert N. Riley, Jr., Michael S. Viola, Benjamin Nunes, Michele Ostraat	Hwan-Jin Noh	Hwan-Jin Noh	William Moorehead, Yet-Ming Chiang	Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Anton S. Gozdz, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	Michael S Viola, William Moorehead, Gilbert N. Riley, Jr., Antoni S. Gozdz, Richard K Holman, Andrew Loxley, Yet-Ming Chiang	invector			

1025	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1021	1021	1021	1020	1019	A123 Case Number
of .	3	ů.								2	22	2	2	2	2	2	2	25	2				0	9	
							3	3	22	1															A123 SubCase
Canada	United States	Taiwan	Japan	India	China	Australia	United States	United States	United States	United States	Taiwan	Korea	Japan	Hong Kong	Germany	Europe	China	Canada	Australia	United States	Japan	Europe	United States	United States	Country
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner
Pending	Granted	Pending	Pending	Pending	Granted	Pending	Granted	Granted	Granted	Granted	Pending	Pending	Pending	Pending	Granted	Granted	Pending	Pending	Granted	Granted	Granted	Pending	Granted	Granted	Status
PCT	ORD	ORD	PCT	PCT	PCT	PCT	CON	CON	CON	ORD	ORD	PCT	PCT	ORD	EPO	PCT	PCT	PCT	РСТ	ORD	ORD	ORD	ORD	ORD	CaseType
2586237	11/117157	94113816	2007-510999	3222/KOLNP/2006	200580018485.6	2005241927	12/880558	11/839947	11/076556	11/052971	94104241	10-2006-7017938	2006-552287	07100708.6	05722761.3	05722761.3	200580000019.5	2555521	2005213420	10/766,385	2006-503129	04706469.6	10/759,348	11/035,172	App. No
11/2/2005	4/28/2005	4/29/2005	4/28/2005	4/28/2005	4/28/2005	4/28/2005	13-Sep-2010	8/16/2007	3/9/2005	2/7/2005	2/14/2005	2/7/2005	2/7/2005	1/19/2007	2/7/2005	2/7/2005	2/7/2005	2/7/2005	2/7/2005	1/28/2004	1/29/2004	8/25/2005	1/16/2004	1/13/2005	Filing Date
	7867651				ZL200580018485.6	2005241927	8080338	7799461	7261979	7348101					1 716 610	EP 1 716 610			2005213420	7326494	4786527		7169328	7208437	Pat No.
	1/11/2011				9/16/2009	2/10/2011	12/20/2011	9/21/2010	8/28/2007	3/25/2008					8/24/2011	8/24/2011			2/7/2011	2/5/2008	7/22/2011		1/30/2007	4/24/2007	Pat Date
METHOD FOR MAKING A COMPOSITE ELECTRODE MATERIAL	LOW IMPEDANCE LAYERED BATTERY APPARATUS AND METHOD FOR MAKING THE SAME	LOW IMPEDANCE LAYERED BATTERY APPARATUS AND METHOD FOR MAKING THE SAME	LOW IMPEDANCE LAYERED BATTERY APPARATUS AND METHOD FOR MAKING THE SAME	LOW IMPEDANCE LAYERED BATTERY APPARATUS AND METHOD FOR MAKING THE SAME	LOW IMPEDANCE LAYERED BATTERY APPARATUS AND METHOD FOR MAKING THE SAME	LOW IMPEDANCE LAYERED BATTERY APPARATUS AND METHOD FOR MAKING THE SAME	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY	Composite Material And Electrodes Made Therefrom	Composite Material And Electrodes Made Therefrom	Composite Material And Electrodes Made Therefrom	Multiphase Nanocomposite Material And Method For Its Manufacture	Catalyst And Method For Its Manufacture	AppTitle
Michael Wixom, Chuanjing Xu	Gilbert N Riley, James Ribordy	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Gillbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Yet-Ming Chiang	Liya Wang, Chuanjing Xu, John M. Miller	Liya Wang, Chuanjing Xu, John M. Miller	Liya Wang, Chuanjing Xu, John M. Miller	John Miller, Liya Wang	Devon Renock, Intae Bae, Pu Zhang, Timothy K. Sendek, Elizabeth Mueller, Hanwei Lei	Inventor					

1034	1034	1033	1033	1033	1033	1033	1033	1033	1031	1028	1027	1027	1027	1027	1027	1027	1027	1027	1027	1025	1025	1025	1025	1025	1025	A123 Case Number
		2	_								ω	2	1							_						A123 SubCase
Europe	China	United States	United States	Taiwan	Korea	Japan	Europe	China	Korea	Korea	United States	United States	United States	Korea	Japan	India	Germany	China	Canada	United States	Korea	Japan	India	Germany	China	Country
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner
Pending	Granted	Granted	Granted	Pending	Pending	Pending	Pending	Pending	Granted	Granted	Pending	Granted	Granted	Pending	Pending	Pending	Pending	Pending	Pending	Granted	Pending	Pending	Pending	Pending	Granted	Status
PCT	PCT	ORD	ORD	ORD	PCT	PCT	PCT	PCT	MTU	ORD	ORD	ORD	ORD	PCT	PCT	PCT	PCT	PCT	PCT	ORD	PCT	PCT	РСТ	PCT	PCT	CaseType
06814143.1	200680039326.9	13/087645	11/396515	95129015	10-2008-7005568	2008-536570	06851633.5	200680035978.5	20-2005-0016825	10-2005-0031294	13/449938	12/955091	11/345962	10-2007-7020020	2007-554308	6808/DELNP/2007	112006000326.7	200680010541.6	2596809	11/261349	10-2007-7010945	2007-540397	3770/DELNP/2007	112005002725.2	200580041436.4	App No
9/1/2006	9/1/2006	4/15/2011	4/3/2006	8/8/2006	8/3/2006	8/3/2006	8/3/2006	8/3/2006	6/13/2005	4/15/2005	4/18/2012	11/29/2010	2/2/2006	2/3/2006	2/3/2006	2/3/2006	2/3/2006	2/3/2006	2/3/2006	10/28/2005	11/2/2005	11/2/2005	11/2/2005	11/2/2005	11/2/2005	Filing Date
	ZL200680039326.9	8057936	7939201						0394701	0700711		8187753	7842420							7282301					ZL200580041436.4	Pat No.
		11/15/2011	5/10/2011						8/29/2005	3/21/2007		5/29/2012	11/30/2010							10/16/2007					11/11/2009	Pat Date
BATTERY CELL DESIGN AND METHOD OF ITS CONSTRUCTION	BATTERY CELL DESIGN AND METHOD OF ITS CONSTRUCTION	NANOSCALE ION STORAGE MATERIALS	LITHIUM SECONDARY BATTERY HAVING ANODE LEAD AND CATHODE LEAD OPPOSITIVELY PROJECTED FROM POUCH	HYBRID ELECTRICAL ENERGY STORAGE SYSTEM WITH 4V GRADE OF OPERATION VOLTAGE	ELECTRODE MATERIAL WITH ENHANCED IONIC TRANSPORT PROPERTIES	METHOD FOR MAKING A COMPOSITE ELECTRODE MATERIAL	AppTitle AppTitle																			
Jonah S Myerberg, Donald G Dafoe, Hung- Chieh Shiao, Grace S Chang, Andrew C Chu	Jonah S Myerberg, Donald G Dafoe, Hung- Chieh Shiao, Grace S Chang, Andrew C Chu	Yet-Ming Chiang, Antoni S. Gozdz, Martin W Payne	Hwan-Jin No, Byeong-Su Jeong, Seong-U Park	Myoung-Shin Hong, Whan Jin Roh, Seong- Woo Park, Dong Hwan Jang, Yeon Bok Jeong, Sung Cheul Park	Michael Wixom, Chuanjing Xu	Michael Wixom, Chuanjing Xu	Michael Wixom, Chuanjing Xu	Michael Wixom, Chuanjing Xu	Michael Wixom, Chuanjing Xu	Michael Wixom, Chuanjing Xu	Michael Wixom, Chuanjing Xu	Inventor														

1037	1036	1036	1036	1036	1036	1036	1036	1035	1035	1035	1035	1035	1035	1035	1034	1034	1034	1034	1034	1034	A123 Case Number
	_														ю	_					A123 SubCase
Korea	United States	Taiwan	Korea	Japan	India	Europe	China	United States	Taiwan	Korea	Japan	India	Europe	China	United States	United States	Taiwan	Korea	Japan	India	Country
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner
Granted	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Granted	Pending	Pending	Pending	Pending	Status						
ORD	CIP	ORD	PCT	PCT	РСТ	PCT	PCT	ORD	ORD	PCT	PCT	PCT	PCT	PCT	DIV	ORD	ORD	PCT	PCT	PCT	CaseType
10-2005-0087631	11/518974	95133413	10-2008-7008200	2008-530015	1060/KOLNP/2008	06814452.6	200680040767.0	11/515633	95132534	10-2008-7007581	2009-505349	1196/KOLNP/2008	06851818.2	200680039329.2	13/087645	11/515597	95132535	10-2008-7007596	2008-529369	976/KOLNP/2008	App No
9/21/2005	9/11/2006	9/11/2006	9/11/2006	9/11/2006	9/11/2006	9/11/2006	9/11/2006	9/5/2006	9/4/2006	9/5/2006	9/5/2006	9/5/2006	9/5/2006	9/5/2006	4/15/2011	9/5/2006	9/4/2006	9/1/2006	9/1/2006	9/1/2006	Filing Date
10-0639431																7927732					Pat. No.
10/20/2006																4/19/2011					Pat: Date
HYBRID ELECTRIC ENERGY STOPAGE SYSTEM EMPLYING ACTIVE CARBON ELECTRODE, CARBON ELECTRODE AND LITHIUM BATTERY, AND ITS METHOD	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY AND LOW IMPEDANCE GROWTH	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY AND LOW IMPEDANCE GROWTH	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY AND LOW IMPEDANCE GROWTH	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY AND LOW IMPEDANCE GROWTH	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY AND LOW IMPEDANCE GROWTH	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY AND LOW IMPEDANCE GROWTH	LITHIUM SECONDARY CELL WITH HIGH CHARGE AND DISCHARGE RATE CAPABILITY AND LOW IMPEDANCE GROWTH	NANOCOMPOSITE ELECTRODES AND RELATED DEVICES	BATTERY CELL DESIGN AND METHOD OF ITS CONSTRUCTION	BATTERY CELL DESIGN AND METHOD OF ITS CONSTRUCTION	ΑρρTitle										
Hwan⊸lin Noh, Yeon Bok Jeong	Ricardo Fulop, Roger Lin, Andrew C. Chu, Gilbert N Riley, Jr., Yet-Ming Chiang, Antoni S Gozdz	Ricardo Fulop, Roger Lin, Andrew G. Chu, Gilbert N Riley, Jr., Yet-Ming Chiang, Antoni S Gozdz	Ricardo Fulop, Roger Lin, Andrew G. Chu, Gilbert N Riley, Jr., Yet-Ming Chiang, Antoni S Gozdz	Ricardo Fulop, Roger Lin, Andrew G. Chu, Gilbert N Riley, Jr., Yet-Ming Chiang, Antoni S Gozdz	Ricardo Fulop, Roger Lin, Andrew C. Chu, Gilbert N Riley, Jr., Yet-Ming Chiang, Antoni S Gozdz	Ricardo Fulop, Roger Lin, Andrew G. Chu, Gilbert N Riley, Jr., Yet-Ming Chiang, Antoni S Gozdz	Ricardo Fulop, Roger Lin, Andrew C. Chu, Gilbert N Riley, Jr., Yet-Ming Chiang, Antoni S Gozdz	Ronnie D Wilkins, Gung-Chieh Shiao, Antoni S Gozdz	Jonah S Myerberg, Donald G Dafoe, Hung- Chieh Shiao, Grace S Chang, Andrew C Chu	Jonah S Myerberg, Donald G Dafoe, Hung- Chieh Shiao, Grace S Chang, Andrew C Chu	Jonah S Myerberg, Donald G Dafoe, Hung- Chieh Shiao, Grace S Chang, Andrew C Chu	Jonah S Myerberg, Donald G Dafoe, Hung- Chieh Shiao, Grace S Chang, Andrew C Chu	Jonah S Myerberg, Donald G Dafoe, Hung- Chieh Shiao, Grace S Chang, Andrew C Chu	Jonah S Myerberg, Donald G Dafoe, Hung- Chieh Shiao, Grace S Chang, Andrew C Chu	Inventor						

1046	1046	1046	1046	1041	1040	1040	1040	1040	1040	1040	1039	1039	1039	1039	1039	1039	1039	1038	1038	1038	1038	1038	1038	1038	A123 Case Number
				1	1						1							2	1						A123 SubCase
Korea	Japan	Europe	China	United States	United States	Taiwan	Korea	Japan	Europe	China	United States	Taiwan	Korea	Japan	Hong Kong	Europe	China	United States	United States	Taiwan	Korea	Japan	Europe	China	Country
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner
Pending	Pending	Pending	Pending	Granted	Granted	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Granted	Pending	Pending	Pending	Pending	Pending	Status
PCT	PCT	PCT	РСТ	CIP	ORD	ORD	РСТ	РСТ	РСТ	РСТ	ORD	ORD	PCT	PCT	ORD	PCT	PCT	CON	CIP	ORD	PCT	PCT	РСТ	PCT	CaseType
10-2009-7002588	2009-520835	07796941.8	200780032386.2	11/748286	11/803424	96117301	10-2008-7030134	2009-511206	07783786.2	200780023208.3	11/803308	96116856	10-2008-7029055	2009-510194	09111096.1	07797450.9	200780023218.7	13/446694	11/607525	95144934	10-2008-7016190	2008-543508	06844738.2	200680051496.9	App. No
7/19/2007	7/19/2007	7/19/2007	7/19/2007	5/14/2007	5/15/2007	5/15/2007	5/15/2007	5/15/2007	5/15/2007	5/15/2007	5/14/2007	5/11/2007	5/14/2007	5/14/2007	5/14/2007	5/14/2007	5/14/2007	4/13/2012	12/1/2006	12/4/2006	12/1/2006	12/1/2006	12/1/2006	12/1/2006	Filing Date
				8084158	7,990,101														8158090						Pat. No.
				12/27/2011	8/2/2011														4/17/2012						Pat Date
METHOD AND SYSTEM FOR MONITORING AND BALANCING CELLS IN BATTERY PACKS	METHOD AND SYSTEM FOR MONITORING AND BALANCING CELLS IN BATTERY PACKS	METHOD AND SYSTEM FOR MONITORING AND BALANCING CELLS IN BATTERY PACKS	METHOD AND SYSTEM FOR MONITORING AND BALANCING CELLS IN BATTERY PACKS	BATTERY CELL DESIGN AND METHOD OF ITS CONSTRUCTION	MULTI CONFIGURABLE SCALABLE, REDUNDANT BATTERY MODULE WITH MULTIPLE FAULT TOLERANCE	MULTI CONFIGURABLE SCALABLE, REDUNDANT BATTERY MODULE WITH MULTIPLE FAULT TOLERANCE	MULTI CONFIGURABLE SCALABLE, REDUNDANT BATTERY MODULE WITH MULTIPLE FAULT TOLERANCE	MULTI CONFIGURABLE SCALABLE, REDUNDANT BATTERY MODULE WITH MULTIPLE FAULT TOLERANCE	MULTI CONFIGURABLE SCALABLE, REDUNDANT BATTERY MODULE WITH MULTIPLE FAULT TOLERANCE	MULTI CONFIGURABLE SCALABLE, REDUNDANT BATTERY MODULE WITH MULTIPLE FAULT TOLERANCE	APPARATUS AND METHOD FOR PROCESSING A COATED SHEET	USE OF A HEATED BASE TO ACCELERATE REMOVAL OF COATED ELECTRODE IN THE PRESENCE OF A SOLVENT	APPARATUS AND METHOD FOR PROCESSING A COATED SHEET	APPARATUS AND METHOD FOR PROCESSING A COATED SHEET	APPARATUS AND METHOD FOR PROCESSING A COATED SHEET	APPARATUS AND METHOD FOR PROCESSING A COATED SHEET	APPARATUS AND METHOD FOR PROCESSING A COATED SHEET	AMORPHOUS AND PARTIALLY AMORPHOUS NANOSCALE ION STORAGE MATERIALS	AMORPHOUS AND PARTIALLY AMORPHOUS NANOSCALE ION STORAGE MATERIALS	AMORPHOUS AND PARTIALLY AMORPHOUS NANOSCALE ION STORAGE MATERIALS	AMORPHOUS AND PARTIALLY AMORPHOUS NANOSCALE ION STORAGE MATERIALS	AMORPHOUS AND PARTIALLY AMORPHOUS NANOSCALE ION STORAGE MATERIALS	AMORPHOUS AND PARTIALLY AMORPHOUS NANOSCALE ION STORAGE MATERIALS	AMORPHOUS AND PARTIALLY AMORPHOUS NANOSCALE ION STORAGE MATERIALS	AppTitle
Akos Toth, Nader Zaag	Gilbert N Riley, Jr., Andrew C Chu, Antoni S Gozdz, Michael C Hoffman	Andrew C Chu, Ricardo Fulop, Jonah S Myerberg, Michael C Hoffman, Greg Tremelling, Benjamin C Shaffer	Andrew C Chu, Ricardo Fulop, Jonah S Myerberg, Michael C Hoffman, Greg Tremelling, Benjamin C Shaffer	Andrew C Chu, Ricardo Fulop, Jonah S Myerberg, Michael C Hoffman, Greg Tremelling, Benjamin C Shaffer	Andrew C Chu, Ricardo Fulop, Jonah S Myerberg, Michael C Hoffman, Greg Tremelling, Benjamin C Shaffer	Andrew C Chu, Ricardo Fulop, Jonah S Myerberg, Michael C Hoffman, Greg Tremelling, Benjamin C Shaffer	Andrew C Chu, Ricardo Fulop, Jonah S Myerberg, Michael C Hoffman, Greg Tremelling, Benjamin C Shaffer	Antoni S Gozdz, Charles E Martin, Gilbert N Riley, Jr.	Antoni S Gozdz, Charles E Martin, Gilbert N Riley, Jr.	Antoni S Gozdz, Charles E Martin, Gilbert N Riley, Jr.	Antoni S Gozdz, Charles E Martin, Gilbert N Riley, Jr.		Antoni S Gozdz, Charles E Martin, Gilbert N Riley, Jr.	Antoni S Gozdz, Charles E Martin, Gilbert N Riley, Jr.	Yet-Ming Chiang, Nonglak Meethong, Anthony E Pullen	Inventor									

1052	1052	1051	1051	1050	1050	1050	1050	1050	1050	1050	1049	1049	1049	1049	1049	1049	1049	1048	1048	1048	1048	1046	A123 Case Number
	1	1		1							2	1										_	9 A123 SubCase
United States	United States	United States	Europe	United States	Korea	Japan	India	Europe	China	Canada	United States	United States	Taiwan	Korea	Japan	Europe	China	United States	Korea	Japan	India	United States	Country
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner
Granted	Granted	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Granted	Status
ORD	NI	ORD	PCT	ORD	PCT	PCT	PCT	PCT	PCT	PCT	CIP	CIP	ORD	РСТ	PCT	PCT	PCT	ORD	ORD	ORD	ORD	ORD	CaseType
11/757,658	972,781	12/131892	08756638.6	12/028772	10-2009-7018759	2009-549284	2830/KOLNP/2009	08729474.0	200880009239.8	2677847	13/690,873	11/672931	97103922	10-2009-7018664	2009-549177	08782740.8	200880009462.2	11/554,051	10-2008-7013129	2008-539009	4307DELNP/2008	11/780296	App No
6/4/2007	12/20/2010	6/2/2008	6/2/2008	2/8/2008	2/8/2008	2/8/2008	2/8/2008	2/8/2008	2/8/2008	2/8/2008	11/30/2012	2/8/2007	2/1/2008	1/31/2008	1/31/2008	1/31/2008	1/31/2008	10/30/2006	5/30/2008	10/31/2006	5/21/2008	7/19/2007	Filing Date
7867651	7879493																					7723955	Pat. No.
1/11/2011	2/1/2011																					5/25/2010	Pat Date
Alkali Metal Titanates And Methods For Their Synthesis	Alkali Metal Titanates And Methods For Their Synthesis	SEPARATOR INCLUDING ELECTROACTIVE MATERIAL FOR OVERCHARGE PROTECTION	SEPARATOR INCLUDING ELECTROACTIVE MATERIAL FOR OVERCHARGE PROTECTION	CONTROL SYSTEM FOR HYBRID VEHICLES WITH RECONFIGURABLE MULTI-FUNCTION POWER CONVERTER	CONTROL SYSTEM AND HYBRID VEHICLES WITH RECONFIGURABLE MULTI-FUNCTION POWER CONVERTER	CONTROL SYSTEM AND HYBRID VEHICLES WITH RECONFIGURABLE MULTI-FUNCTION POWER CONVERTER	CONTROL SYSTEM AND HYBRID VEHICLES WITH RECONFIGURABLE MULTI-FUNCTION POWER CONVERTER	CONTROL SYSTEM AND HYBRID VEHICLES WITH RECONFIGURABLE MULTI-FUNCTION POWER CONVERTER	CONTROL SYSTEM AND HYBRID VEHICLES WITH RECONFIGURABLE MULTI-FUNCTION POWER CONVERTER	CONTROL SYSTEM AND HYBRID VEHICLES WITH RECONFIGURABLE MULTI-FUNCTION POWER CONVERTER	NANOSCALE ION STORAGE MATERIALS	High Capacity Electrode And Methods For Its Fabrication And Use	High Capacity Electrode And Methods For Its Fabrication And Use	High Capacity Electrode And Methods For Its Fabrication And Use	High Capacity Electrode And Methods For Its Fabrication And Use	METHOD AND SYSTEM FOR MONITORING AND BALANCING GELLS IN BATTERRY PACKS UTILIZING OPTICALLY COUPLED CELL VOLTAGE SELECTION SIGNAL, CELL VOLTAGE ISOLATION AMPLIFIER, AND ZENER DIODES IN BALANCING CIRCUIT	AppTitle						
Pu Zhang, Suresh Mani, Michael R. Wixom	Pu Zhang, Suresh Mani, Michael R. Wixom	Susan J Babinec, Karen E Thomas-Alyea, Richard K Holman	Susan J Babinec, Karen E Thomas-Alyea, Richard K Holman	Akos Toth	Yet-Ming Chiang, Martin W. Payne, Antoni S Gozdz	Biying Huang, Suresh Mani, Jun Q. Chin	Akos Toth, Nader Zaag																

1055	1055	1055	1055	1055	1055	1055	1054	1054	1054	1054	1054	1054	1053	1053	1053	1053	1053	1053	A123 Case Number
3							2												e A123 SubCase
United States	Taiwan	Korea	Japan	India	Europe	China	United States	Korea	Japan	India	Europe	China	United States	Korea	Japan	India	Germany	China	Country
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner
Granted	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Granted	Pending	Pending	Pending	Granted	Pending	Status
ORD	ORD	PCT	РСТ	PCT	РСТ	PCT	ORD	PCT	PCT	PCT	PCT	PCT	ORD	ORD	ORD	ORD	ORD	ORD	CaseType
12/172050	97126662	10-2010-7003179	2010-516283	179/KOLNP/2010	08796171.0	200880105630.8	12/135708	10-2010-7000354	2010-511425	4289/KOLNP/2009	08770516.6	200880024680.3	11/954,955	10-2008-7031175	2009-514491	10772/DELNP/2008	112007001382.6	200780023714.2	App. No
7/11/2008	7/14/2008	7/11/2008	7/11/2008	7/11/2008	7/11/2008	7/11/2008	6/9/2008	6/9/2008	6/9/2008	6/9/2008	6/9/2008	6/9/2008	12/12/2007	6/5/2007	6/5/2007	6/5/2007	6/5/2007	6/5/2007	Filing Date
8187735							8119280						8076030						Pat No.
5/29/2012							2/21/2012						12/13/2011						Pat Date
MULTIFUNCTIONAL MIXED METAL OLIVINES FOR LITHIUM BATTERIES	MULTIFUNCTIONAL MIXED METAL OLIVINES FOR LITHIUM BATTERIES	MULTIFUNCTIONAL MIXED METAL OLIVINES FOR LITHIUM BATTERIES	MULTIFUNCTIONAL MIXED METAL OLIVINES FOR LITHIUM BATTERIES	CAP ASSEMBLY FOR A HIGH CURRENT CAPACITY Donald G DaFoe, Lucien Fontaine, William H ENERGY DELIVERY DEVICE Gardner	CAP ASSEMBLY FOR A HIGH CURRENT CAPACITY ENERGY DELIVERY DEVICE	CAP ASSEMBLY FOR A HIGH CURRENT CAPACITY ENERGY DELIVERY DEVICE	CAP ASSEMBLY FOR A HIGH CURRENT CAPACITY Donald G DaFoe, Lucien Fontaine, William H ENERGY DELIVERY DEVICE Gardner	CAP ASSEMBLY FOR A HIGH CURRENT CAPACITY ENERGY DELIVERY DEVICE	CAP ASSEMBLY FOR A HIGH CURRENT CAPACITY Donald G DaFoe, Lucien Fontaine, William H ENERGY DELIVERY DEVICE Gardner	Alkali Metal Titanates, And Electrodes And Batteries Based On The Same	Alkalai Metal Titanates And Method For Their Synthesis	Alkalai Metal Titanates And Method For Their Synthesis	АррТійе						
Young-Il Jang, Yu-Hua Kao, Yet-Ming Chiang, Nonglak Meethong, Karen E Tnomas-Alyea, Andrew C Chu, Anthony E Pullen, Gilbert N Riley, Jr.	Andrew C Chu, Anthony E Pullen, Gilbert N Riley, Jr., Karen E Thomas-Alyea, Nonglak Meethong, Yet-Ming Chiang, Yu-Hua Kao, Young-II Jang	Andrew C Chu, Anthony E Pullen, Gilbert N Riley, Jr., Karen E Thomas-Alyea, Nonglak Meethong, Yer-Ming Chiang, Yu-Hua Kao, Young-II Jang	Andrew C Chu, Anthony E Pullen, Gilbert N Riley, Jr., Karen E Thomas-Alyea, Nonglak Meethong, Yet-Ming Chiang, Yu-Hua Kao, Young-II Jang		k Andrew C Chu, Anthony E Pullen, Gilbert N Riley, Jr., Karen E Thomas-Alyea, Nonglak Meethong, Yer-Ming Chiang, Yu-Hua Kao, Young-II Jang	Andrew C Chu, Anthony E Pullen, Gilbert N Riley, Jr., Karen E Thomas-Alyea, Nonglak Meethong, Yer-Ming Chiang, Yu-Hua Kao, Young-II Jang	/ Donald G DaFoe, Lucien Fontaine, William H Gardner	/ Donald G DaFoe, Lucien Fontaine, William H Gardner	/ Donald G DaFoe, Lucien Fontaine, William H Gardner	/ Donald G DaFoe, Lucien Fontaine, William H Gardner	/ Donald G DaFoe, Lucien Fontaine, William H Gardner	/ Donald G DaFoe, Lucien Fontaine, William H Gardner	Pu Zhang, Suresh Mani, Yet-Ming Chiang, Shih-Chieh Yin, Brian Glomski, Young Jang II, Christopher Silkowski, Michael R. Wixom	Pu Zhang, Suresh Mani, Michael R. Wixom	Pu Zhang, Suresh Mani, Michael R. Wixom	Pu Zhang, Suresh Mani, Michael R. Wixom	Pu Zhang, Suresh Mani, Michael R. Wixom	Pu Zhang, Suresh Mani, Michael R. Wixom	finventor

	Gregory B Less, Susan J Babinec, Gilbert N Riley, Jr.	BATTERIES HAVING INORGANIC/ORGANIC POROUS FILMS		2008	9/29/2008	12/240855	ORD	Pending	A123-owned	United States	1	1060
	Gregory B Less, Susan J Babinec, Gilbert N Riley, Jr.	BATTERIES HAVING INORGANIC/ORGANIC POROUS FILMS		2008		97137609	ORD	Pending	A123-owned	Taiwan		1060
	Gregory B Less, Susan J Babinec, Gilbert N Riley, Jr.	BATTERIES HAVING INORGANIC/ORGANIC POROUS FILMS		2008		10-2010-7009	PCT	Pending	A123-owned	Korea		1060
	Gregory B Less, Susan J Babinec, Gilbert N Riley, Jr.	BATTERIES HAVING INORGANIC/ORGANIC POROUS FILMS		2008		2010-52724	PCT	Pending	A123-owned	Japan		1060
	Gregory B Less, Susan J Babinec, Gilbert N Riley, Jr.	BATTERIES HAVING INORGANIC/ORGANIC POROUS FILMS		2008		08833067.5	PCT	Pending	A123-owned	Europe		1060
A Dalimby Coloraby Colora	Gregory B Less, Susan J Babinec, Gilbert N Rilev , Ir	BATTERIES HAVING INORGANIC/ORGANIC POROLIS FILMS		2008		20088010916	PCT	Pending	A123-owned	China		1060
A LOS COMPT	Yet-Ming Chiang, William E Gardner, Karen E Thomas-Alyea, Ricardo Fulop			2012		13/448999	ORD	Pending	A123-owned	United States	3	1059
A Loher States Aliza-wined Pending PCT 200860105517.X 724/2008 ANTIENY CELL DESIGN AND METHODS OFTIS CONTROL OF CO	Yet-Ming Chiang, William E Gardner, Karen E Thomas-Alyea, Ricardo Fulop					12/210812	ORD	Granted	A123-owned	United States	2	1059
A 1/23	Yet-Ming Chiang, William E Gardner, Karen E Thomas-Alyea, Ricardo Fulop			2008		10-2010-7008	PCT	Pending	A123-owned	Korea		1059
A United States Columny Columns Columny Columns Columny Columns Columny Columns Colu	Yet-Ming Chiang, William E Gardner, Karen E Thomas-Alyea, Ricardo Fulop			2008		2010-52507	PCT	Pending	A123-owned	Japan		1059
A	Yet-Ming Chiang, William E Gardner, Karen E Thomas-Alyea, Ricardo Fulop			2008		08830896.0	PCT	Pending	A123-owned	Europe		1059
A 123	Yet-Ming Chiang, William E Gardner, Karen E Thomas-Alyea, Ricardo Fulop			2008		20088011532	PCT	Pending	A123-owned	China		1059
Subclase Country Cou	Susan J Babinec, Angela Knapp, Gregory B Less	SEPARATOR FOR ELECTROCHEMICAL CELL AND METHOD FOR ITS MANUFACTURE		2008		12/196203	ORD	Pending	A123-owned	United States	1	1058
Subclasse Country Co	Susan J Babinec, Angela Knapp, Gregory B Less	SEPARATOR FOR ELECTROCHEMICAL CELL AND METHOD FOR ITS MANUFACTURE		2008		2010-700617	PCT	Pending	A123-owned	Korea		1058
A 123 Country Countr	Susan J Babinec, Angela Knapp, Gregory B Less	SEPARATOR FOR ELECTROCHEMICAL CELL AND METHOD FOR ITS MANUFACTURE		2008		2010-52204	PCT	Pending	A123-owned	Japan		1058
A 1/23 Country Count	Susan J Babinec, Angela Knapp, Gregory B Less	SEPARATOR FOR ELECTROCHEMICAL CELL AND METHOD FOR ITS MANUFACTURE		2008		08827786.8	PCT	Pending	A123-owned	Europe		1058
A 123	Susan J Babinec, Angela Knapp, Gregory B Less	SEPARATOR FOR ELECTROCHEMICAL CELL AND METHOD FOR ITS MANUFACTURE		2008		20088011205	PCT	Pending	A123-owned	China		1058
A 123 Country Countr	William H Gardner, Grace S Chang	BATTERY CELL DESIGN AND METHODS OF ITS CONSTRUCTION		2008		12/178538	ORD	Pending	A123-owned	United States		1056
A 123 Country Current Status Casertype App No Frag Date Frat. No Frat. Date App nine	William H Gardner, Grace S Chang	BATTERY CELL DESIGN AND METHODS OF ITS CONSTRUCTION		2008		10-2010-7003	PCT	Pending	A123-owned	Korea		1056
A 123-owned	William H Gardner, Grace S Chang	BATTERY CELL DESIGN AND METHODS OF ITS CONSTRUCTION		2008		2010-51838	PCT	Pending	A123-owned	Japan		1056
A 123 - Outring Charles 4 United States 4 United States A 123 - owned A 123 - owned A 123 - owned Europe A 123 - owned A 124 - Owned A 125 - owned A 125 - owned A 125 - owned A 126 - owned A 127 - owned A 128 - owned A 128 - owned A 129 - owned	William H Gardner, Grace S Chang	SELL		2008		177/KOLNP/20	PCT	Pending	A123-owned	India		1056
A 123-owned Pending ORD 13/482649 5/29/2012 MULTIFUNCTIONAL MIXED METAL OLIVINES FOR LITHUM BATTERIES China A123-owned Pending PCT 200880105517.X 7/24/2008 PATERY CELL DESIGN AND METHODS OF ITS CONSTRUCTION	William H Gardner, Grace S Chang	BATTERY CELL DESIGN AND METHODS OF ITS CONSTRUCTION		2008		08796559.6	PCT	Pending	A123-owned	Europe		1056
A 123 Country	William H Gardner, Grace S Chang			2008		20088010551	PCT	Pending	A123-owned	China		1056
Ariza country owner status case type App into Filing usite Fat No. Fat usite Applitie	Young-II Jang, Yu-Hua Kao, Yet-Ming Chiang, Nonglak Meethong, Karen E Thomas-Alyea, Andrew C Chu, Anthony E Pullen, Gilbert N Riley, Jr.			2012		13/482649	ORD	Pending	A123-owned	United States	4	1055
	inventor	App Title	o. Par Date		Filing	App No	CaseType	Status	Owner	Country	A123 SubCase	A123 Case Number

1064	1064	1064	1063	1063	1063	1063	1063	1063	1063	1062	1062	1062	1062	1062	1062	1062	1061	1061	1061	1061	1061	1061	1061	A123 Case Number
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China	Canada	Brazil	United States	Korea	Japan	India	Europe	China	Canada	United States	Taiwan	Korea	Japan	India	Europe	China	United States	Taiwan	Korea	Japan	India	Europe	China	Country
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner
Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Status
ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	PCT	PCT	PCT	PCT	PCT	ORD	ORD	РСТ	PCT	PCT	PCT	РСТ	CaseType
200980116991.7	2720231	PI0910105-5	12/411380	10-2010-7023387	2011-502033	3978/KOLNP/2010	09724612.8	200980117447.4	2719764	12/357008	98101842	10-2010-2018198	2010-543309	4912/CHENP/2010	9701906.1	200980105552.6	12/323197	97146044	10-2010-7014251	2010-536145	3203/CHENP/2010	8856364.8	20880123705.5	Άρφ Νο
			3/25/2009							1/21/2009	1/17/2009	1/21/2009	1/21/2009	1/21/2009	1/21/2009	1/21/2009	11/25/2008	11/27/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	11/25/2008	Filing Date
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METHOD FOR DETECTING CELL STATE-OF- CHARGE AND STATE-OF-DISCHARGE DIVERGENCE OF A SERIES STRING OF BATTERIES OR CAPACITORS	METHOD FOR DETIECTING CELL STATE-OF- CHARGE AND STATE-OF-DISCHARGE DIVERGENCE OF A SERIES STRING OF BATTERIES OR CAPACITORS	METHOD FOR DETECTING CELL STATE-OF- CHARGE AND STATE-OF-DISCHARGE DIVERGENCE OF A SERIES STRING OF BATTERIES OR CAPACITORS	HIGH ENERGY HIGH POWER ELECTRODES AND BATTERIES	HIGH ENERGY HIGH POWER ELECTRODES AND BATTERIES	MIXED METAL OLIVINE ELECTRODE MATERIALS FOR LITHIUM ION BATTERIES	MIXED METAL OLIVINE ELECTRODE MATERIALS FOR LITHIUM ION BATTERIES	MIXED METAL OLIVINE ELECTRODE MATERIALS FOR LITHIUM ION BATTERIES	MIXED METAL OLIVINE ELECTRODE MATERIALS FOR LITHIUM ION BATTERIES	MIXED METAL OLIVINE ELECTRODE MATERIALS FOR LITHIUM ION BATTERIES	MIXED METAL OLIVINE ELECTRODE MATERIALS FOR LITHIUM ION BATTERIES	MIXED METAL OLIVINE ELECTRODE MATERIALS FOR LITHIUM ION BATTERIES	BATTERY CELL DESIGN WITH ASYMMETRICAL TERMINALS	BATTERY CELL DESIGN WITH ASYMMETRICAL TERMINALS	BATTERY CELL DESIGN WITH ASYMMETRICAL TERMINALS		BATTERY CELL DESIGN WITH ASYMMETRICAL TERMINALS	BATTERY CELL DESIGN WITH ASYMMETRICAL TERMINALS		AppTitle					
Michael C Hoff	Michael C Hoff	Michael C Hoff	Yet-Ming Chiang, Michael Wixom, Andrew C Chu, Young-II Jang	Yet-Ming Chiang, Michael Wixom, Andrew C Chu, Young-II Jang	Yet-Ming Chiang, Michael Wixom, Andrew C Chu, Young-II Jang	Yet-Ming Chiang, Michael Wixom, Andrew C Chu, Young-II Jang	Yet-Ming Chiang, Michael Wixom, Andrew C Chu, Young-II Jang	Yet-Ming Chiang, Michael Wixom, Andrew C Chu, Young-II Jang	Yet-Ming Chiang, Michael Wixom, Andrew C Chu, Young-II Jang	Larry W Beck, Chuanjing Xu, Liya Wang, Phillip Sholtes, Anthony E Pullen	Larry W Beck, Chuanjing Xu, Liya Wang, Phillip Sholtes, Anthony E Pullen	Larry W Beck, Chuanjing Xu, Liya Wang, Phillip Sholtes, Anthony E Pullen	Larry W Beck, Chuanjing Xu, Liya Wang, Phillip Sholtes, Anthony E Pullen	Larry W Beck, Chuanjing Xu, Liya Wang, Phillip Sholtes, Anthony E Pullen	Larry W Beck, Chuanjing Xu, Liya Wang, Phillip Sholtes, Anthony E Pullen	Larry W Beck, Chuanjing Xu, Liya Wang, Phillip Sholtes, Anthony E Pullen	William H Gardner, Stephen Tillmann	William H Gardner, Stephen Tillmann	William H Gardner, Stephen Tillmann	William H Gardner, Stephen Tillmann	William H Gardner, Stephen Tillmann	William H Gardner, Stephen Tillmann	William H Gardner, Stephen Tillmann	fnyentar

1070	1070	1070	1070	1070	1069	1068	1066	1065	1065	1065	1065	1064	1064	1064	1064	1064	A123 Case Number
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Korea	Japan	Germany	China	China	United States	United States	United States	United States	Japan	Europe	Brazil	United States	Korea	Japan	India	Europe	Country
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner
Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Status
РСТ	PCT	PCT	MTU	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	Gase lype
10-2011-7014265	2011-538644	112009003624.4	200920178049.0	200910258463.7	12/558091	12/502855	12/477382	12/423799	2011-505152	09767167.1	PI0911250-2	12/416072	10-2010-7024200	2011-503118	3632/KOLNP/2010	2272148	App No
5/25/2011	5/24/2011	5/23/2011	11/25/2009	11/25/2009	9/11/2009	7/14/2009	6/3/2009	4/14/2009				3/31/2009					Hiting Date
			ZL200920178049.0														Pat No.
			3/23/2011														Pat Date
METHOD AND DESIGN FOR EXTERNALLY APPLIED LASER WELDING OF INTERNAL CONNECTIONS IN A HIGH POWER ELECTROCHEMICAL CELL	METHOD AND DESIGN FOR EXTERNALLY APPLIED LASER WELDING OF INTERNAL CONNECTIONS IN A HIGH POWER ELECTROCHEMICAL CELL	METHOD AND DESIGN FOR EXTERNALLY APPLIED LASER WELDING OF INTERNAL CONNECTIONS IN A HIGH POWER ELECTROCHEMICAL CELL	METHOD AND DESIGN FOR EXTERNALLY APPLIED LASER WELDING OF INTERNAL CONNECTIONS IN A HIGH POWER ELECTROCHEMICAL CELL	METHOD AND DESIGN FOR EXTERNALLY APPLIED LASER WELDING OF INTERNAL CONNECTIONS IN A HIGH POWER ELECTROCHEMICAL CELL	SPLIT CHARGE FORMING PROCESS FOR BATTERY	PRISMATIC CELL WITH OUTER ELECTRODE LAYERS COATED ON A SINGLE SIDE	METHOD AND SYSTEM FOR DETERMINING STATE OF CHARGE OF AN ENERGY DELIVERY DEVICE	FLEXIBLE VOLTAGE NESTED BATTERY MODULE DESIGN	METHOD FOR BETTECTING CELL STATE-OF- CHARGE AND STATE-OF-DISCHARGE DIVERGENCE OF A SERIES STRING OF BATTERIES OR CAPACITORS	METHOD FOR DETECTING CELL STATE-OF- CHARGE AND STATE-OF-DISCHARGE DIVERGENCE OF A SERIES STRING OF BATTERIES OR CAPACITORS	METHOD FOR DETECTING CELL STATE-OF- CHARGE AND STATE-OF-DISCHARGE DIVERCENCE OF A SERIES STRING OF BATTERIES OR CAPACITORS	METHOD FOR DETECTING CELL STATE-OF- CHARGE AND STATE-OF-DISCHARGE DIVERGENCE OF A SERIES STRING OF BATTERIES OR CAPACITORS	METHOD FOR DETIECTING CELL STATE-OF- CHARGE AND STATE-OF-DISCHARGE DIVERGENCE OF A SERIES STRING OF BATTERIES OR CAPACITORS				
William H Gardner, Lucien Fontaine, Charles E Martin	San-Young Yoon, Rocco locco	Seong-Woo Park, Myoung-Shin Hong, Whan Jin Roh, Sang-Young Yoon	Karen E Thomas-Alyea	Mujeeb Ijaz, Brian Moorhead, Jonathan Jostler, Brian Rutkowski, Shazad Butt	Mujeeb Ijaz, Brian Moorhead, Jonathan Jostler, Brian Rutkowski, Shazad Butt	Mujeeb Ijaz, Brian Moorhead, Jonathan Jostler, Brian Rutkowski, Shazad Butt	Mujeeb Ijaz, Brian Moorhead, Jonathan Jostler, Brian Rutkowski, Shazad Butt	Michael C Hoff	Michael C Hoff	Michael C Hoff	Michael C Hoff	Michael C Hoff	inventor				

1076	1075	1075	1075	1075	1075	1074	1073	1073	1073	1073	1073	1072	1072	1072	1072	1072	1071	1071	1071	1071	1071	1070	1070	Number
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China	United States	Taiwan	Korea	Germany	China	United States	United States	United States	Taiwan	Korea	Germany	United States	Taiwan	Germany	China	China	United States	PCT	Korea	Japan	China	United States	Taiwan	
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	
Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	
PCT	ORD	ORD	PCT	PCT	PCT	ORD	ORD	ORD	ORD	PCT	PCT	ORD	ORD	PCT	PCT	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	
201080000567.9	12/628796	99100674	10-2011-7018696	10-2011-7018696	2010080000568.3	12/628786	13/441078	12/628809	99100677	10-2011-7018694	0	12/685838	99100669	112010000853.1	201080011817.9	201080011817.9	12/350,631	US10/20769	10-2010-7017817	2010-542364	200980103123.5	12/623967	98144298	
1/11/2010	12/1/2009	1/12/2010	10/20/2011	10/20/2011	1/11/2010	12/1/2009	4/6/2012	12/1/2009	1/12/2010	7/11/2011	7/12/2011	1/12/2010	1/12/2010	1/12/2010	1/11/2010	10/27/2011	1/8/2009	1/12/2010	1/9/2009	1/9/2009	1/9/2009	11/23/2009	12/22/2009	
								8,257,855																
								9/4/2012																
SAFETY VENTING MECHANISM FOR BATTERIES	FUSE FOR BATTERY CELLS	BUSBAR SUPPORTS AND METHODS OF THEIR USE FOR BATTERY SYSTEMS	PRISMATIC BATTERY MODULE WITH SCALABLE ARCHITECTURE	LAMINATED BATTERY CELL AND METHODS FOR CREATING THE SAME	BATTERY CELL AND METHODS FOR CREATING THE SAME	PRISMATIC BATTERY MODULE WITH SCALABLE ARCHITECTURE	PRISMATIC BATTERY MODULE WITH SCALABLE ARCHITECTURE	LAMINATED BATTERY CELL AND METHODS FOR CREATING THE SAME	Silicon Based Composite Material	LAMINATED BATTERY CELL AND METHODS FOR CREATING THE SAME	Silicon Based Composite Material	Silicon Based Composite Material	Silicon Based Composite Material	METHOD AND DESIGN FOR EXTERNALLY APPLIED LASER WELDING OF INTERNAL CONNECTIONS IN A HIGH POWER ELECTROCHEMICAL CELL	METHOD AND DESIGN FOR EXTERNALLY APPUIED LASER WELDING OF INTERNAL CONNECTIONS IN A HIGH POWER ELECTROCHEMICAL CELL									
Andrew Hong, Mujeeb Ijaz, Jonathan Hostler, Shazad Butt, Whan Jin Roh	Mujeeb Ijaz, Shazad Butt, Jonathan Hostler, Brian David Rutkowski, Benjamin Jay Sinsheimer, Chad Jeremy Allison	Mujeeb Ijaz, Shazad Butt, Jonathan Hostler, Brian David Rutkowski, Benjamin Jay Sinsheimer, Chad Jeremy Allison	Mujeeb Ijaz, Shazad Butt, Jonathan Hostler, Brian David Rutkowski, Benjamin Jay Sinsheimer, Chad Jeremy Allison	Mujeeb Ijaz, Shazad Butt, Jonathan Hostler, Brian David Rutkowski, Benjamin Jay Sinsheimer, Chad Jeremy Allison	Mujeeb Ijaz, Shazad Butt, Jonathan Hostler, Brian David Rutkowski, Benjamin Jay Sinsheimer, Chad Jeremy Allison	Mujeeb Ijaz, Shazad Butt, Jonathan Hostler	Shazad Butt, Jonathan Hostler, Mujeeb ljaz	Shazad Butt, Jonathan Hostler, Mujeeb Ijaz	Shazad Butt, Jonathan Hostler, Mujeeb ljaz	Shazad Butt, Jonathan Hostler, Mujeeb Ijaz	Shazad Butt, Jonathan Hostler, Mujeeb ljaz	Susan J Babinec, Gregory B Less, Dave Vieau	Susan J Babinec, Gregory B Less, Dave Vieau	Shazad Butt, Jonathan Hostler, Mujeeb ljaz	Shazad Butt, Jonathan Hostler, Mujeeb ljaz	Susan J Babinec, Gregory B Less, Dave Vieau	Pu Zhang, Suresh Mani, Junquing Ma, Liya Wang	Pu Zhang, Suresh Mani, Junquing Ma, Liya Wang	Pu Zhang, Suresh Mani, Junquing Ma, Liya Wang	Pu Zhang, Suresh Mani, Junquing Ma, Liya Wang	Pu Zhang, Suresh Mani, Junquing Ma, Liya Wang	William H Gardner, Lucien Fontaine, Charles E Martin) William H Gardner, Lucien Fontaine, Charles E Martin	200

Chuanging Xu, Larry W Beck, Young-II Jang	MIXED METAL OLIVINE ELECTRODE MATERIALS FOR LITHIUM ION BATTERIES HAVING IMPROVED SPECIFIC CAPACITY AND ENERGY DENSITY		8/25/2010	12/868530	ORD	Pending	A123-owned	United States	1	1084
Chuanging Xu, Larry W Beck, Young-II Jang				99128478	ORD	Pending	A123-owned	TW		1084
Chuanging Xu, Larry W Beck, Young-II Jang	MIXED METAL OLIVINE ELECTRODE MATERIALS FOR LITHIUM ION BATTERIES HAVING IMPROVED SPECIFIC CAPACITY AND ENERGY DENSITY		8/25/2010	10/046646	PRO	Pending	A123-owned	PCT		1084
	Н			10-2012-7007642	ORD	Pending	A123-owned	Korea		1084
Shen J Dillon, Yet-Ming Chiang	BATTERY ELECTRODES AND METHODS OF MANUFACTURE		6/23/2010	12/821779	PRO	Pending	A123-owned	United States	1	1083
Shen J Dillon, Yet-Ming Chiang	BATTERY ELECTRODES AND METHODS OF MANUFACTURE		6/23/2010	99120445	ORD	Pending	A123-owned	Taiwan		1083
Shen J Dillon, Yet-Ming Chiang	BATTERY ELECTRODES AND METHODS OF MANUFACTURE		6/23/2010	US10/39629	ORD	Pending	A123-owned	PCT		1083
Brian Moorhead, Brian Rutkowski, Paul W Firehammer, John W Wagner	BATTERY NETWORK WITH HARDWARE WATCHDOG		6/10/2009	61/185774	PRO	Pending	A123-owned	United States		1082
Brian Moorhead, Brian Rutkowski, Paul W Firehammer, John W Wagner	BATTERY NETWORK WITH HARDWARE WATCHDOG		6/10/2010	12/796,810	ORD	Pending	A123-owned	United States	1	1082
Brian Moorhead, Brian Rutkowski, Paul W Firehammer, John W Wagner	BATTERY NETWORK WITH HARDWARE WATCHDOG		1/9/2012	10-2012-7000651	ORD	Pending	A123-owned	Korea		1082
Brian Rutkowski, Brian Moorhead	System and method for controlling output of a battery pack		12/6/2011	13/376569	ORD	Pending	A123-owned	United States		1081
Brian Rutkowski, Brian Moorhead	System and method for controlling output of a battery pack		1/9/2012	10-2012-7000688	ORD	Pending	A123-owned	Korea		1081
Brian Rutkowski, Brian Moorhead	System and method for controlling output of a battery pack		12/10/2011		ORD	Pending	A123-owned	China		1081
Brian Rutkowski, Brian Moorhead	System and method for a battery pack output contactor		12/6/2011	13/376568	ORD	Pending	A123-owned	United States		1080
Brian Rutkowski, Brian Moorhead	System and method for a battery pack output contactor		1/9/2012	10-2012-7000621	ORD	Pending	A123-owned	Korea		1080
Brian Rutkowski, Brian Moorhead	System and method for a battery pack output contactor		12/10/2011		ORD	Pending	A123-owned	Japan		1080
Brian Rutkowski, Brian Moorhead	System and method for a battery pack output contactor		12/10/2011		ORD	Pending	A123-owned	Germany		1080
Brian Rutkowski, Brian Moorhead	System and method for a battery pack output contactor		12/10/2011		ORD	Pending	A123-owned	China		1080
Brian Rutkowski, Brian Moorhead	System and method for controlling output of a battery pack		12/6/2011	13/376,572	ORD	Pending	A123-owned	United States		1079
Brian Rutkowski, Brian Moorhead	System and method for controlling output of a battery pack		1/4/2012	1200045.1	ORD	Pending	A123-owned	UK		1079
Brian Rutkowski, Brian Moorhead	System and method for controlling output of a battery pack		1/9/2012	10-2012-7000680	ORD	Pending	A123-owned	Korea		1079
Brian Rutkowski, Brian Moorhead	System and method for controlling output of a battery pack		12/10/2011		ORD	Pending	A123-owned	China		1079
Shazad Butt, Jonathan Hostler, Mujeeb Ijaz	METHODS OF WELDING BATTERY TERMINALS		12/1/2009	12/628699	ORD	Pending	A123-owned	United States	3	1076
Shazad Butt, Jonathan Hostler, Mujeeb Ijaz	STRUCTURE OF PRISMATIC BATTERY MODULES WITH SCALABLE ARCHITECTURE		12/1/2009	12/628733	ORD	Pending	A123-owned	United States	2	1076
Andrew Hong, Mujeeb Ijaz, Jonathan Hostler, Shazad Butt, Whan Jin Roh	ITING MECHANISM FOR BATTERIES	8,257,848 9/4/2012	12/1/2009	12/628713	ORD	Pending	A123-owned	United States	1	1076
Andrew Hong, Mujeeb Ijaz, Jonathan Hostler, Shazad Butt, Whan Jin Roh	SAFETY VENTING MECHANISM FOR BATTERIES		1/12/2010	99100672	ORD	Pending	A123-owned	Taiwan		1076
Andrew Hong, Mujeeb Ijaz, Jonathan Hostler, Shazad Butt, Whan Jin Roh	-		7/11/2011	112010000764	PCT	Pending	A123-owned	Germany		1076
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1098	1097	1097	1096	1095	1095	1094	1093	1093	1093	1092	1091	1087	1087	1086	1086	1085	1085	1085	1085	1084	A123 Case Number
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PCT	United States	PCT	United States	United States	PCT	United States	United States	Europe	China	United States	United States	United States	PCT	United States	PCT	United States	United States	Taiwan	PCT	United States	Country
A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner
Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Status
ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	PRO	ORD	ORD	ORD	PRO	CaseType
PCT/US11/20078	13/520,319	PCT/US10/62351	13/517903	13/514711	PCT/US10/60112	13/578,878	13/513,665			13/513,024	13/513,542	13/509,899	2011/063132	12/891,945	US10/50527	61/243846	12/885907	99131826	US10/49480	61/236862	App. No
1/4/2011	7/2/2012	12/29/2010	6/20/2012	6/8/2012	12/13/2010	8/14/2012	6/4/2012		7/4/2012	5/31/2012	6/1/2012	5/15/2012	5/26/2011	9/28/2010		9/18/2009	20-Sep-2010		9/20/2010	8/25/2009	Filing Date
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System and Method for Monitoring and Balancing Voltage of Individual Battery Cells Within a Battery Pack	Battery Module System	System and Method for Controlling Voltage of Individual Battery Cells Within a Battery Pack	METAL OXIDE ANODE MATERIAL	System and Method for Estimating a State of a Battery Pack	System and Method for Estimating a State of a Battery Pack	System and Method for Controlling Humidity in a Battery Module	AUTOMOTIVE BATTERY WITH INTEGRATED POWER MANAGEMENT SYSTEM AND SCALABLE BATTERY CUTOFF COMPONENT	AUTOMOTIVE BATTERY WITH INTEGRATED POWER MANAGEMENT SYSTEM AND SCALABLE BATTERY CUTOFF COMPONENT	AUTOMOTIVE BATTERY WITH INTEGRATED POWER MANAGEMENT SYSTEM AND SCALABLE	GRID LOAD SYNCHRONIZATION DEVICE AND METHOD	ELECTRICAL INSULATOR FOR ELECTROCHEMICAL CELL	COMPOSITE SEPARATOR FOR ELECTROCHEMICAL CELL AND METHOD FOR ITS MANUFACTURE	COMPOSITE SEPARATOR FOR ELECTROCHEMICAL CELL AND METHOD FOR ITS MANUFACTURE	BATTERY-BASED COUNTERMEASURE FOR BULK ELECTRIC SYSTEM DELAYED VOLTAGE RECOVERY	BATTERY-BASED COUNTERMEASURE FOR BULK ELECTRIC SYSTEM DELAYED VOLTAGE RECOVERY	FERRIC PHOSPHATE DIHYDRATE AS LITHIUM IRON PHOSPHATE SYNTHETIC PRECURSOR AND METHOD OF PREPARATION THEREOF	FERRIC PHOSPHATE DIHYDRATE AS LITHIUM IRON PHOSPHATE SYNTHETIC PRECURSOR AND METHOD OF PREPARATION THEREOF	FERRIC PHOSPHATE DIHYDRATE AS LITHIUM IRON PHOSPHATE SYNTHETIC PRECURSOR AND METHOD OF PREPARATION THEREOF	FERRIC PHOSPHATE DIHYDRATE AS LITHIUM IRON PHOSPHATE SYNTHETIC PRECURSOR AND METHOD OF PREPARATION THEREOF	MIXED METAL OLIVINE ELECTRODE MATERIALS FOR LITHIUM ION BATTERIES HAVING IMPROVED SPECIFIC CAPACITY AND ENERGY DENSITY	App∏ite
Paul W. Firehammer Brian C. Moorhead	Jason Davis Marius Enache	Paul W. Firehammer John H. Floros	Rocco locco, Sang-Young Park	Gary R. O'Brien Brian D. Rutkowski Shazad Mahmood Butt	Gary R. O'Brien Brian D. Rutkowski Shazad Mahmood Butt	Chad Jeromy Allison	Brian J Pevear	Brian J Pevear	Brian J Pevear	Peter Gottlieb, John M McNally	William H Gardner, Lucine Fontaine, Charles E Martin, Keith M Bibby, Dale Beaver	Patrick Hagans, William Hicks, Yet-Ming Chiang, Susan J Babinec	Patrick Hagans, William Hicks, Yet-Ming Chiang, Susan J Babinec	Charles Vartanian, David Colucci, Peter Gottlieb, Michael C Hoffman	Charles Vartanian, David Colucci, Peter Gottlieb, Michael C Hoffman	Mahrokh Soltani, Larry W Beck, Liya Wang	Chuanging Xu, Larry W Beck, Young-Il Jang	invertor			

Peter A. Finn	Method to connect a Printed Circuit Board Assembly to a battery pack to control voltage power up	1/30/2012	61/592415	PRO	Pending	A123-owned	United States		1188
Peter A. Finn	Method to connect a Printed Circuit Board Assembly to a battery pack to control voltage power up			ORD	Pending	A123-owned	PCT		1188
Sang-Young Yoon, Rocco locco, Jeong Ju Cho	Blended Cathode Materials	8/17/2011	61/524532	PRO	Pending	A123-owned	United States	1	1183
Sang Young YOON, Rocco IOCCO, Jeong Ju CHO, Chuanjing X	BLENDED CATHODE MATERIALS	7/25/2012	PCT/US12/48148		Pending	A123-owned	PCT		1183
Chee-Hyun Kim et al	SEPARATOR WITH NANO-SCALED PORES AND ENERGY STORAGE DEVICE INCLUDING THE SAME	12/28/2010	WO2010KR0009441	PCT	Pending	Jointly-owned (Lotte)	PCT		1170
Chee-Hyun Kim et al	SEPARATOR WITH NANO-SCALED PORES AND ENERGY STORAGE DEVICE INCLUDING THE SAME	12/28/2009	KR2009000132131	PCT	Pending	Jointly-owned (Lotte)	Korea		1170
Michael Wixom, Viet Vu	Hybrid Battery with Boost Energy Transfer Circuit	12/15/2011	61/570,920	PRO	Pending	A123-owned	United States		1164
Shazad Butt, John Kim	Energy distribution for welding ultrathin electrodes using sacrificial buffer material.	8/9/2012	13/344528	ORD	Pending	A123-owned	United States	1	1163
Chad Allison	Heterogeneous ohmic contact for a voltaic cell	7/2/2012	13/540387	PRO	Pending	A123-owned	United States		1160
John Floros and Paul Firehammer	System and method for balancing charge between battery cells	4/17/2012	PCT/US2012/033939	ORD	Pending	A123-owned	PCT		1158
John Floros and Paul Firehammer	Method for verify Voltage Reference for battery cell monitoring	10/6/2011	PCT/US2011/055029	PRO	Pending	A123-owned	PCT		1157
Allan Alimario, Jason Davis, Chad Allison, Jonathan Hostler, David Allen	Thermal gap pad for a prismatic battery pack	4/17/2012	PCT/US2012/033934	ORD	Pending	A123-owned	PCT		1155
Jay Murdock; Marius Enache	Extruded cold plate with integrated fluid routing	4/5/2011	PCT/US2012/032276	ORD	Pending	A123-owned	PCT		1152
Butt, Shazad M.; Hostler, Jonathan E.; Ijaz, Mujeeb	BI-METALLIC BUSBAR JUMPERS FOR BATTERY SYSTEMS	12/1/2009	12/628780	ORD	Pending	A123-owned	United States		1151
Butt, Shazad M.; Hostler, Jonathan E.; Ijaz, Mujeeb	BI-METALLIC BUSBAR JUMPERS AND ASSOCIATED WELDING METHODS FOR BATTERY SYSTEMS	1/12/2010	99100675.00	ORD	Pending	A123-owned	Taiwan		1151
Butt, Shazad M.; Hostler, Jonathan E.; Ijaz, Mujeeb	BI-METALLIC BUSBAR JUMPERS AND ASSOCIATED WELDING METHODS FOR BATTERY SYSTEMS	1/11/2010	US10/20636	ORD	Pending	A123-owned	PCT		1151
Butt, Shazad M.; Hostler, Jonathan E.; Ijaz, Mujeeb	BI-METALLIC BUSBAR JUMPERS AND ASSOCIATED WELDING METHODS FOR BATTERY SYSTEMS	10/20/2011	10-2011-7018695	ORD	Pending	A123-owned	Korea		1151
Butt, Shazad M.; Hostler, Jonathan E.; Ijaz, Mujeeb	BI-METALLIC BUSBAR JUMPERS AND ASSOCIATED WELDING METHODS FOR BATTERY SYSTEMS	7/11/2011	10-2011-7018695	PCT	Pending	A123-owned	Japan		1151
Butt, Shazad M.; Hostler, Jonathan E.; Ijaz,	BI-METALLIC BUSBAR JUMPERS AND	7/11/2011	112010000785.3	PCT	Pending	A123-owned	Germany		1151
ljaz, Mujeeb; Butt, Shazad M.; Hostler,	BI-METALLIC BUSBAR JUMPERS AND	1/11/2010	201080000569.80	PCT	Pending	A123-owned	China		1151
Nicholas Varamo, Michael Barone	INTEGRAL BATTERY TAB	10/13/2011	PCT/US11/56118		Pending	A123-owned	PCT		1145
Moorhead	method for opportunistically balancing charge between battery cells	3/7/2011	PCT/US2012/028039		Pending	A123-owned	РСТ		1141
Benjamin Sinsheimer Paul W. Firehammer	System and Method for Balancing Voltage of Individual Battery Cells Within a Battery Pack	6/22/2010	12/820,411		Pending	A123-owned	United States		1140
Benjamin Sinsheimer Paul W. Firehammer	System and Method for Balancing Voltage of Individual Battery Cells Within a Battery Pack	6/22/2011	US2011/041365		Pending	A123-owned	PCT		1140
Brian Moorhead Brian Rutkowski	Battery Management System Parasitic Power Reduction via Selective Sample Rate	8/11/2010	12/854,274	SB	Pending	A123-owned	United States		1138
Paul Firehammer Brian Moorhead	System and method for managing change within a battery pack	6/22/2010	12/820,421		Pending	A123-owned	United States		1136
								GUUGGG	NUMBER

1234	1221	1221	1220	1220	1220	1220	1220	1219	1218	1217	1207	1205	1202	1201	1199	1199	1199	1198	1197	1189	Number
																2	1				SubCase
United States	United States	Japan	United States	Korea	Korea	Japan	China	China	China	China	United States	United States	United States	United States	United States	United States	United States	United States	United States	PCT	Country
A123-owned	Jointly-owned (Toyota + T/J Tech)	Jointly-owned (Toyota + T/J Tech)	Jointly-owned (Toyota + T/J Tech)	Jointly-owned (Toyota + T/J Tech)	Jointly-owned (Toyota + T/J Tech)	Jointly-owned (Toyota + T/J Tech)	Jointly-owned (Toyota + T/J Tech)	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	A123-owned	Owner
Pending	Granted	Pending	Granted	Pending	Pending	Pending	Granted	Granted	Granted	Granted	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Slatus
ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	ORD	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	ORD	ORD	caseType
13/556,816	695975	2008258143A2	463394	2011-112358A	2009058517A	JP2010500723T2	CN101601162A	200620002613.X		sn 200510021136.1	61/596624	61/616668	61/649562	61/620736	61/594058	61658712	61658704	61/593,960	13520319	PCT/US12/58476	App No
7/24/2012	4/3/2007	2/7/2008	8/9/2006					3/1/2006		6/17/2005	2/8/2012	3/28/2012	5/21/2012	4/5/2012	2/2/2012	6/12/2012	6/12/2012	2/2/2012	7/2/2012	10/2/2012	Hing Date
	8039152		7722991				CN101601162B	CN20060002613	CN20060002612	CN20050021136											Pat No.
	10/18/2011		5/25/2010				12/9/2009														Pat Dale
Method to weld conductors to cell terminals	Tin in an Active Support Matrix	Tin in an Active Support Matrix	High Performance Anode Material For Lithium-lon Battery	High Performance Anode Material For Lithium-lon Battery	High Performance Anode Material For Lithium-Ion Battery	High Performance Anode Material For Lithium-Ion Battery	High Performance Anode Material For Lithium-Ion Battery	Lithium Ion Battery Pole Piece Protector	Jig for Cylindrical Lithium Ion Battery	Cover Plate Assembly for Lithium Ion Battery	Battery Pack Including Fluid Resistant Over-Mold	ELECTROLYTE ADDITIVE WITH IMPROVED CYCLE LFE (e.g. Sulfurtrioxide pyridine complex)	Multi-Cell Lithium-Ion Battery	Prismatic cell comprising multi jelly rolls with the cathode sheet between the jelly rolls	Ethylene Sulfonate electrolyte additive	Microhybrid Battery	Lithium Ion Cell with Non-Aqueous Electrolyte with a Solvent Including an S—O Bond	FAST-CHARGE BATTERY WITH REDUCED RATE OF CAPACITY FADE	Battery Module System	CATHODE MATERIALS INCLUDING AN OXYGEN- GETTERING COMPOUND AND AN ION-STORAGE COMPOUND	Аррипе
Michael Hoff, Louis Perry, Eric Bachtell	Richard Monique et al.	Richard Monique et al.	Pu Zhang et al.	Pu Zhang et al.	Pu Zhang et al.	Pu Zhang et al.	Pu Zhang et al.	Wang Chunguang	Wu Feichao	Zhao Junfeng	Michael Ciaccio	Jeong-Ju Cho	William Gardner	Sang-Young Yoon	Jeong-Ju Cho	Jeong-Ju Cho	Jeong-Ju Cho	Karen Thomas-Alyea	Jason R. Davis	Karen Thomas-Alyea	inventor

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