PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BOR Z JANG	05/27/2016

RECEIVING PARTY DATA

Name:	NANOTEK INSTRUMENTS, INC.
Street Address:	1240 MCCOOK AVENUE
City:	DAYTON
State/Country:	OHIO
Postal Code:	45404

PROPERTY NUMBERS Total: 3

Property Type	Number
Application Number:	09318779
Application Number:	09358871
Application Number:	09780598

CORRESPONDENCE DATA

Fax Number:

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.

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NAME OF SUBMITTER:	CAROL J. WEATHERBY
SIGNATURE:	/Carol J Weatherby/
DATE SIGNED:	07/31/2017

Total Attachments: 12
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ASSIGNMENT

This Assignment Agreement is made and entered by and between Dr. Bor Z. Jang a citizen of The United States of America, residing at 2301 E Social Row Rd. Centerville OH 45458 (the "Assignor") and Nanotek Instruments, Inc., an Ohio corporation whose address is 1240 McCook Avenue, Dayton, OH 45404 (the "Assignee").

WHEREAS, Assignor is an inventor or co-inventor of certain new and useful inventions related to new materials, including nano-scaled graphene plates, processes, energy technologies, and other technologies as more fully described herein (the "Inventions") and

WHEREAS, Assignee desires to acquire the entire right, title and interest in and to the Inventions.

NOW, THEREFORE, the parties agree as follows:

1. The term "Inventions" shall mean (1) the issued United States patents listed in Exhibit "A" attached hereto and incorporated herein by reference and all corresponding rights to claim priority, (2) the patent applications listed in Exhibit "A" and any and all improvements which are disclosed in any of the aforesaid patent applications, (3) all Letters Patent to be obtained for said Inventions by the above applications or any continuation, divisional, renewal, or substitute thereof and, as to Letters Patent, any reissue or re-examination thereof, (4) all know-how, trade secrets, discoveries, concepts, ideas, and technologies related to the same, (5) any and all copyrights, copyright registrations and copyrightable subject matter related to the same; and (6) any trademarks related to such patents and patent applications.

2. In consideration of the sum of one dollar ($1.00) and other good and valuable consideration, the receipt of which is acknowledged, the Assignor hereby assigns, transfers and conveys to Assignee all of Assignor's right, title and interest in and to (a) the Inventions, (b) any U.S. or foreign Letters Patent which may issue from the Inventions, and (c) all divisions, continuations, reissues, re-examinations and extensions of the patents and applications listed on Exhibit A.

3. Assignor further covenants that said Assignee will, upon its request, be provided promptly with all pertinent facts and documents relating to said Inventions and said Letters Patent and legal equivalents, as may be known and accessible to Assignor and he or she will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to said Assignee or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said Inventions and said Letters

Patent and said equivalents thereof which may be necessary or desirable to carry out the purpose thereof.

In Witness Whereof, the undersigned has executed this document as of the 27 day of May, 2016.

INVENTOR

(Signature)

Dr. Bor Z. Jang (Print Name)

State of Ohio)

County of Lorain)

Before me personally appeared said Dr. Bor Z. Jang and acknowledged the foregoing instrument to be his free act and deed, this 27th day of May, 2016

NOTARY PUBLIC STATE OF OHIO

PEGGY EVERS
Notary Public, State of Ohio
My Commission Expires
January 8, 2021

Notary Public

Exhibit A - Assigned Patents and Patent Applications

Inventors	Patent	Patent Number	Application Number	Submission date
B. Z. Jang, J. Duan, K. Chen, Xin Lu, and E. J. Ma	Rapid Prototyping and Tooling System	6405095	09/318,779	5/25/1999
B. Z. Jang, J. S. Yang, J. H. Liu and L. J. Pan	Layer Manufacturing Using Deposition of Fused Droplets	6401001	09/358,871	7/22/1999
J. H. Liu and B. Z. Jang	Process and Apparatus for the Production of Nano-Scaled Powders	6398125	09/780,598	2/10/2001
J. H. Liu and B. Z. Jang	Layer Manufacturing of a Multi-Material, Multi-Color Object Using Electrostatic Imaging and Lamination	6780368	09/829,548	4/10/2001
B. Z. Jang and W. C. Huang	Nano-scaled Graphene Plates	7071258	10/274,473	10/21/2002
Bor Z. Jang	Nanocomposite compositions for hydrogen storage and methods for supplying hydrogen to fuel cells	7186474	10/910,521	8/3/2004
Jiusheng Guo, A. Zhamu, and B. Z. Jang	Nano-scaled Graphene Plate-Reinforced Composite Materials and Method of Producing Same	7662321	11/257,508	10/26/2005
Jiusheng Guo, A. Zhamu, and B. Z. Jang	Organic Vapor Fuel Cell	9203098	11/257,528	10/26/2005
A. Zhamu, Jiusheng Guo, and B. Z. Jang	Self-humidifying Membrane, Catalyst-Coated Membrane, Membrane Electrode Assembly, and Fuel Cell and Membrane-Electrode Assembly	7993791	11/257,601	10/26/2005
Bor Z. Jang	Sheet Molding Compound Flow Field Plate, Bipolar Plate and Fuel Cell	8518603	11/293,540	12/5/2005
Bor Z. Jang, A. Zhamu, Lulu Song	Method for Producing Highly Conductive Sheet Molding Compound, Fuel cell Flow Field Plate, and Bipolar Plate	8597453	11/293,541	12/5/2005
Lulu Song, Jiusheng Guo, A. Zhamu, and Bor Z. Jang	Highly Conductive Nano-scaled Graphene Plate Nanocomposites and Products	7566410	11/328,880	7/28/2009
Lulu Song, Jiusheng Guo, A. Zhamu, and Bor Z. Jang	Controlled Release Vapor Fuel Cell	8153324	11/353,463	2/15/2006
B. Z. Jang, A. Zhamu, and Jiusheng Guo	Electro-spinning of Nano-scaled Graphene Plate Composite		11/487,761	7/17/2006
Bor Z. Jang, Aruna Zhamu, and Jiusheng Guo	Electro-catalyst Composition, Fuel Cell Electrode, and Membrane-Electrode Assembly	7722981	11/518,565	9/11/2006
Bor Z. Jang, Aruna Zhamu, and Jiusheng Guo	Process for Producing Fuel Cell Electrode, Catalyst-Coated Electrode, and Membrane-Electrode Assembly	8318385	11/522,580	9/19/2006
Bor Z. Jang, Aruna Zhamu, and Jiusheng Guo	Mass Production of Nano-scaled Platelets and Products	7785492	11/526,489	9/26/2006
Bor Z. Jang, Aruna Zhamu, and Jiusheng Guo	Electro-catalyst Compositions for Fuel Cells	8202669	11/582,912	10/19/2006
Bor Z. Jang, Aruna Zhamu, and Jiusheng Guo	Carbon-Cladded Composite Flow Field Plate, Bipolar Plate, and Fuel Cell		11/644,122	12/26/2006

Bor Z. Jang and Aruna Zhamu	Conducting Polymer-Transition Metal Electro-catalyst Compositions for Fuel Cells	9318762	11/704,873	2/12/2007
Bor Z. Jang, Aruna Zhamu, and Jiusheng Guo	Method of Producing Nano-scaled Graphene and Inorganic Platelets and Their Nanocomposites	7892514	11/709274	2/22/2007
Bor Z. Jang, Aruna Zhamu, and Jiusheng Guo	Highly Conductive, Multi-layer Precursor Composite Composition to Fuel Cell Flow Field Plate or Bipolar Plate	7887927	11/715,786	3/9/2007
Bor Z. Jang, Aruna Zhamu, and Jiusheng Guo	Nano-scaled Graphene Plate Films and Articles	9233850	11/784,606	4/9/2007
Aruna Zhamu, JinJun Shi, Jiusheng Guo, and Bor Z. Jang	Low-Temperature Method of Producing Nano-scaled Graphene Platelets and Their Nanocomposites	8132746	11/787,442	4/17/2007
Aruna Zhamu, Jinjun Shi, Jiusheng Guo and Bor Z. Jang	Method of Producing Exfoliated Graphite, Flexible Graphite, and Nano-Scaled Graphene Plates	7824651	11/800,728	5/8/2007
Aruna Zhamu, Jinjun Shi, Jiusheng Guo and Bor Z. Jang	Method of Producing Exfoliated Graphite Composite Compositions for Fuel Cell Flow Field Plates	8691129	11/800,730	5/8/2007
Aruna Zhamu, Jinjun Shi, Jiusheng Guo and Bor Z. Jang	Laminated Exfoliated Graphite Composite-Metal Compositions for Fuel Cell Flow Field Plate or Bipolar Plate Applications	8728679	11/807,379	5/29/2007
Bor Z. Jang and Aruna Zhamu	Method of Producing Conducting Polymer-Transition Metal Electro-catalyst Compositions for Fuel Cells	7785498	11/879,679	7/19/2007
Aruna Zhamu, Joan Jang, and Bor Z. Jang	Electrochemical Method of Producing Ultra-thin Nano-Scaled Graphene Platelets	8524067	11/881,388	7/27/2007
Aruna Zham and Bor Z. Jang	Environmentally Benign Graphite Intercalation Compound Composition for Exfoliated Graphite, Flexible Graphite, and Nano-Scaled Graphene Platelets	8753539	11/881,390	7/27/2007
Bor Z. Jang, Aruna Zhamu, Jinjun Shi, and Jiusheng Guo	Carbon Anode Compositions for Lithium Ion Batteries	9029019	11/893,398	8/17/2007
Aruna Zhamu and Bor Z. Jang	Method of Producing Graphite-Carbon Composite Electrodes for Supercapacitors	8497225	11/895,588	8/27/2007
Aruna Zhamu, Jinjun Shi, Jiusheng Guo and Bor Z. Jang	Recompressed Exfoliated Graphite Articles	8501307	11/899,009	9/2/2007
Jinjun Shi, Aruna Zhamu, Jiusheng Guo and Bor Z. Jang	Continuous Production of Exfoliated Graphite Composite Compositions and Flow Field Plates	7758783	11/901,227	9/17/2007
Bor Z. Jang and Aruna Zhamu	Process for Producing Carbon Anode Compositions for Lithium Ion Batteries	7993780	11/906,984	10/5/2007
Aruna Zhamu and Bor Z. Jang	Anode Protective Layer Compositions for Lithium Metal Batteries		12/001,981	12/14/2007
Aruna Zhamu, Jiusheng Guo, and Bor Z. Jang	Method of Producing Nano-Scaled Graphene Platelets with a High Length-to-Width Ratio	7790285	12/002,278	12/17/2007
Aruna Zhamu, Jiusheng Guo, and Bor Z. Jang	Production of Ultra-thin Nano-Scaled Graphene Platelets from Meso-Carbon Micro-Beads	8883114	12/005,015	12/26/2007
Aruna Zhamu and Bor Z. Jang	Hybrid Nano Filament Anode Compositions for Lithium Ion Batteries		12/006,209	1/2/2008

Aruna Zhamu and Bor Z. Jang	Mixed Nano Filament Electrode Materials for Lithium Ion Batteries	8435676	12/008,118	2/9/2008
Aruna Zhamu and Bor Z. Jang	Hybrid Nano Filament Cathode Compositions for Lithium Ion and Lithium Metal Batteries		12/009,259	1/18/2008
Aruna Zhamu and Bor Z. Jang	Method of Producing Hybrid Nano Filament Electrodes for Lithium Metal or Lithium Ion Batteries	8906447	12/077,520	1/2/2008
Aruna Zhamu and Bor Z. Jang	Process for Producing Hybrid Nano Filament Electrodes for Lithium Batteries	8968820	12/150,096	4/25/2008
Jinjun Shi, Aruna Zhamu and Bor Z. Jang	Conductive Nanocomposite-based Electrodes for Lithium Batteries	8936874	12/156,644	6/4/2008
Aruna Zhamu and Bor Z. Jang	Graphene Nanocomposites for Electrochemical cell Electrodes	9190667	12/220,651	7/28/2008
Aruna Zhamu and Bor Z. Jang	Supercritical Fluid Process for Producing Nano Graphene Platelets	8696938	12/229,493	8/25/2008
Bor Z. Jang and A. Zhamu	Process for Producing Dispersible Nano Graphene Platelets from Non-oxidized Graphitic Materials	8216541	12/231,411	9/3/2008
Bor Z. Jang and A. Zhamu	Process for Producing Dispersible Nano Graphene Platelets from Oxidized Graphite	8114375	12/231,413	9/3/2008
Bor Z. Jang and A. Zhamu	Dispersible Nano Graphene Platelets	8501318	12/231,417	9/3/2008
Aruna Zhamu and Bor Z. Jang	Method of Producing A Prelithiated Anode for Secondary Lithium Ion Battery	8158282	12/291,689	11/13/2008
Aruna Zhamu and Bor Z. Jang	Secondary Lithium Ion Battery Containing A Prelithiated Anode	8241793	12/319,114	1/2/2009
A. Zhamu and Bor Z. Jang	Nano Graphene-Modified Curing Agents for Thermoset Resins	8652362	12/460,663	7/23/2009
A. Zhamu and Bor Z. Jang	Production of Chemically Functionalized Nano Graphene Materials	8287699	12/460,860	7/27/2009
A. Zhamu and Bor Z. Jang	Mass Production of Pristine Nano Graphene Materials	8226801	12/460,863	7/27/2009
A. Zhamu and Bor Z. Jang	Nano Graphene Modified Lubricant	8222190	12/583,320	8/19/2009
A. Zhamu and Bor Z. Jang	Pristine Nano Graphene Modified Tires	7999027	12/583,375	8/20/2009
Aruna Zhamu and Bor Z. Jang	Nano-structured Anode Compositions for Lithium Metal and Lithium-Air Secondary Batteries	8236452	12/589,999	11/2/2009
A. Zhamu and Bor Z. Jang	Submicron-scale Graphitic Fibrils, Methods for Producing Same, and Compositions Containing Same	8753740	12/592,970	12/7/2009
Jiusheng Guo, A. Zhamu, and B. Z. Jang	Nano-scaled Graphene Plate-Reinforced Composite Materials and Method of Producing Same		12/639,443	12/16/2009
A. Zhamu and Bor Z. Jang	Conductive Graphene Polymer Binder for Electrochemical Cell Electrodes	8652687	12/655,172	12/24/2009
Aruna Zhamu, Zhenning Yu, C, G. Liu, and Bor Z. Jang	Spacer-Modified Nano Graphene Electrodes for Supercapacitors	8315039	12/655,247	12/28/2009
Aruna Zhamu, Zhenning Yu, and Bor Z. Jang	Lithium Metal-Sulfur and Lithium Ion-Sulfur Secondary Batteries Containing a Nano-structured Cathode and Processes for Producing Same	9112240	12/655,597	1/4/2010

Aruna Zhamu, Zhenning Yu, C, G. Liu, and Bor Z. Jang	Continuous Process for Producing Spacer-Modified Nano Graphene Electrodes for Supercapacitors	9017756	12/655,744	1/20/2010
Aruna Zhamu and Bor Z. Jang	Anode Compositions for Lithium Secondary Batteries	8962188	12/655,746	1/7/2010
Zhenning Yu, Jinjun Shi, C. G. Liu, Bor Z. Jang, and Aruna Zhamu	Flexible Asymmetric Electrochemical Cells Using Nano Graphene Platelet as an Electrode Material		12/657,579	1/25/2010
A. Zhamu and Bor Z. Jang	Submicron-scale and Lower-Micron Graphitic Fibrils As an Anode Active Material for a Lithium Ion Battery	8501348	12/803,750	12/7/2009
A. Zhamu and Bor Z. Jang	Chemically Functionalized Submicron Graphitic Fibrils, Methods for Producing Same, and Compositions Containing Same	8753543	12/804,190	7/16/2010
A. Zhamu, Jinjun Shi, Guorong Chen, Qing Fang, M. C. Wang, and B. Z. Jang	Graphite and Carbon Particulates for the Lithium Ion Battery		12/804,413	7/22/2010
Zhenning Yu, Chen-guang Liu, David Neff, A. Zhamu, and B. Z. Jang	Supercapacitor with a Meso-porous Nano Graphene Electrode	9053870	12/804,911	8/2/2010
C. G. Liu, David Neff, Zhenning Yu, Aruna Zhamu, and Bor Z. Jang	Lithium Super-battery with a Functionalized Nano Graphene Cathode	8795899	12/806,679	8/19/2010
Aruna Zhamu, Jinjun Shi, Guorong Chen, M. C. Wang, and Bor Z. Jang	Graphene-Enhanced Cathode Particulates for Lithium Batteries	8691441	12/807,471	9/7/2010
C. G. Liu, David Neff, Aruna Zhamu, and Bor Z. Jang	Lithium Super-battery with a Functionalized Disordered Carbon Cathode	8900755	12/924,211	9/23/2010
Aruna Zhamu, C. G. Liu, David Neff, and Bor Z. Jang	Surface-Controlled Lithium Ion-Exchanging Energy Storage Device	9166252	12/928,927	12/23/2010
Aruna Zhamu, C. G. Liu, David Neff, Z. Yu, and Bor Z. Jang	Partially and Fully Surface-Enabled Metal Ion-Exchanging Battery Device	8859143	12/930,294	1/3/2011
Bor Z. Jang, Aruna Zhamu, and Jiusheng Guo	Method of Producing Nano-scaled Graphene and Inorganic Platelets and Their Nanocomposites	8114373	12/983,947	2/22/2007
Bor Z. Jang, A. Zhamu, and Lulu Song	Highly Conductive Composites for Fuel Cell Flow Field Plates and Bipolar Plates	8865040	13/021,041	1/4/2006
Guorong Chen, Aruna Zhamu, Zhenning Yu, and B. Z. Jang	Graphene-Enabled Vanadium Oxide Cathode and Lithium Cells Containing Same	8765302	13/134,782	6/17/2011
Bor Z. Jang and Aruna Zhamu	Nano Graphene Platelet-Based Conductive Inks and Printing Process		13/184,787	7/1/2008
Aruna Zhamu, Yanbo Wang, and Bor Z. Jang	Prelithiated Current Collector and Secondary Lithium Cells Containing Same		13/199,058	8/19/2011
Aruna Zhamu, Chen-guang Liu, X. Q. Wang, and Bor Z. Jang	Surface-Mediated Lithium Ion-Exchanging Energy Storage Device	8889298	13/199,450	8/30/2011
Aruna Zhamu, Chen-guang Liu, and Bor Z. Jang	Partially Surface-Mediated Lithium Ion-Exchanging Cells and Method of Operating Same		13/199713	9/7/2011

A. Zhamu and Bor Z. Jang	Method of Producing Nano-scaled Inorganic Platelets	8308984	13/200,307	5/8/2007
A. Zhamu and Bor Z. Jang	One-Step Production of Graphene Materials	8747623	13/317,100	10/11/2011
Aruna Zhamu, Guorong Chen, X. Q. Wang, Yanbo Wang, and B. Z. Jang	Stacks of Internally Connected Surface-Mediated Cells and Methods of Operating Same		13/374,321	12/21/2011
Guorong Chen, Yanbo Wang, Xiqing Wang, Aruna Zhamu, and Bor Z. Jang	Hybrid Electrode and Surface-Mediated Cell-based Super-Hybrid Energy Storage Device Containing Same		13/374,408	12/29/2011
Aruna Zhamu, Guorong Chen, Qing Fang, Xiqing Wang, Yanbo Wang, and Bor Z. Jang	Surface-Mediated Cell-Powered Vehicles and Methods of Operating Same	8914176	13/374,894	1/23/2012
Aruna Zhamu, Guorong Chen, Qing Fang, Xiqing Wang, Yanbo Wang, and Bor Z. Jang	Surface-Mediated Cells with High Power Density and High energy Density	8895189	13/385,105	2/3/2012
Aruna Zhamu, Guorong Chen, Qing Fang, Xiqing Wang, Yanbo Wang, and Bor Z. Jang	Surface-Mediated Cell-Powered Portable Computing Devices and Methods of Operating Same		13/385,245	2/10/2012
Aruna Zhamu, Guorong Chen, Qing Fang, Xiqing Wang, Yanbo Wang, and Bor Z. Jang	Surface-Mediated Cell-Driven Power Tools and Methods of Operating Same	9085076	13/385,350	2/16/2012
Yanbo Wang, Zhenning Yu, Aruna Zhamu, Guorong Chen, and Bor Z. Jang	Inorganic Nano Sheet-Enabled Lithium-Exchanging Surface-Mediated Cells	8790814	13/385,366	2/16/2012
Guorong Chen, Yanbo Wang, Qing Fang, Xiqing Wang, Aruna Zhamu, and Bor Z. Jang	Lithium-ion Cell Having a High-Capacity Anode and a High-Capacity Cathode		13/385,561	2/27/2012
Aruna Zhamu, Mingchao Wang, Wei Xiong, and Bor Z. Jang	Graphene Oxide Gel Bonded Graphene Composite Films and Processes for Producing Same		13/385,813	3/8/2012
Guorong Chen, Yanbo Wang, Qing Fang, Xiqing Wang, Aruna Zhamu, and Bor Z. Jang	Lithium-ion Cell Having a High Energy Density and High Power Density	8765303	13/506,168	4/2/2012
Aruna Zhamu, Mingchao Wang, Wei Xiong, and Bor Z. Jang	Thermal Management System Containing an Integrated Graphene Film for Electronic Devices		13/506,265	4/9/2012
Guorong Chen, Yanbo Wang, Qing Fang, Xiqing Wang, Aruna Zhamu, and Bor Z. Jang	Method of Operating a Lithium-ion Cell Having a High-Capacity Cathode		13/506,324	4/12/2012
Yanbo Wang, Aruna Zhamu, and Bor Z. Jang	Rechargeable Magnesium-Ion Cell Having a High-Capacity Cathode		13/506,736	5/14/2012
Guorong Chen, Yanbo Wang, Aruna Zhamu, and Bor Z. Jang	Rechargeable Lithium Cell Having a Phthalocyanine-Based High-Capacity Cathode	9112210	13/506,778	5/17/2012

Guorong Chen, Yanbo Wang, Qing Fang, Aruna Zhamu, and Bor Z. Jang	Rechargeable dual electroplating cell		13/507,057	6/1/2012
Mingchao Wang, Wei Xiong, Aruna Zhamu, and Bor Z. Jang	Integrated Graphene Film Heat Spreader for Display Devices		13/507,167	6/11/2012
Guorong Chen, Yanbo Wang, Aruna Zhamu, and Bor Z. Jang	Rechargeable Lithium Cell Having a Meso-Porous Conductive Material Structure-Supported Phthalocyanine Compound Cathode	9147874	13/507,168	6/11/2012
Mingchao Wang, Guorong Chen, Aruna Zhamu, and Bor Z. Jang	Solvent-Free Process Based Graphene Electrode for Energy Storage Devices		13/507,739	7/25/2012
A. Zhamu and Bor Z. Jang	Production Process for Chemically Functionalized Nano Graphene Materials	8986515	13/573,259	7/27/2009
A. Zhamu and Bor Z. Jang	Process for Producing Chemically Functionalized Nano Graphene Materials	8986512	13/573,260	7/27/2009
Guorong Chen, Zhenning Yu, Chen-guang Liu, Aruna Zhamu, and Bor Z. Jang	Rechargeable Lithium Cell Having a Chemically Bonded Phthalocyanine Compound Cathode		13/573,275	9/7/2012
Guorong Chen, Aruna Zhamu, and Bor Z. Jang	Encapsulated Phthalocyanine Particles, High-Capacity Cathode Containing These Particles, and Rechargeable Lithium Cell Containing Such a Cathode		13/573,298	9/10/2012
Aruna Zhamu, Zhenning Yu, C. G. Liu, and Bor Z. Jang	Spacer-Modified Nano Graphene Electrodes for Supercapacitors	8947854	13/573,844	10/9/2012
Aruna Zhamu, Mingchao Wang, Wei Xiong, and Bor Z. Jang	Graphene Oxide-Coated Graphitic Foil and Processes for Producing Same		13/694,161	11/2/2012
Aruna Zhamu, Mingchao Wang, Wei Xiong, and Bor Z. Jang	Thermal Management System Containing a Graphene Oxide-Coated Graphitic Foil Laminate for Electronic Device Application		13/694,162	11/2/2012
Aruna Zhamu, Mingchao Wang, Wei Xiong, and Bor Z. Jang	Unitary Graphene Layer or Graphene Single Crystal		13/694,356	11/26/2012
Aruna Zhamu, Mingchao Wang, Wei Xiong, and Bor Z. Jang	Unitary Graphene Matrix Composites Containing Carbon or Graphite Fillers	9208920	13/694,468	12/5/2012
Aruna Zhamu and Bor Z. Jang	Graphene Composite Handheld and Hand-heated Thawing Tool		13/694,722	12/28/2012
Aruna Zhamu, Yi-jun Lin, Mingchao Wang, Wei Xiong, and Bor Z. Jang	Unitary Graphene Material-Based Integrated Finned Heat Sink		13/694,791	1/7/2013
Aruna Zhamu, Yi-jun Lin, Mingchao Wang, Wei Xiong, and Bor Z. Jang	Inorganic Coating-Protected Unitary Graphene Materials for Concentrated Photovoltaic Applications		13/815,100	1/31/2013
Yi-jun Lin, Aruna Zhamu, and Bor Z. Jang	Nano Graphene Platelet-Reinforced Composite Heat Sinks and Process for Producing Same		13/815,246	2/14/2013
Yi-jun Lin, Aruna Zhamu, and Bor Z. Jang	Highly Conducting and Transparent Film and Process for Producing Same		13/815,316	2/21/2013
Yi-jun Lin, Aruna Zhamu, and Bor Z. Jang	Process for Producing Highly Conducting and Transparent Films from Graphene Oxide-Metal Nanowire Hybrid Materials		13/815,317	2/21/2013

Aruna Zhamu, Mingchao Wang, Lucy Fu, and Bor Z. Jang	Process for Producing Unitary Graphene Materials	9156700	13/815,349	2/25/2013
Yi-jun Lin, Shaio-yen Lee, Jui-Chi Lin, Aruna Zhamu, and Bor Z. Jang	Ultrasonic Spray Coating of Conducting and Transparent Films from Combined Graphene and Conductive Nano Filaments		13/815,729	3/14/2013
Aruna Zhamu, Yi-jun Lin, and Bor Z. Jang	Method for Producing Conducting and Transparent Films from Combined Graphene and Conductive Nano Filaments	8871296	13/815,730	3/14/2013
Aruna Zhamu and Bor Z. Jang	Process for Producing Continuous Graphitic Fibers from Living Graphene Molecules	8927065	13/986,208	4/15/2013
Aruna Zhamu and Bor Z. Jang	Continuous Graphitic Fibers from Living Graphene Molecules		13/986,223	4/15/2013
Yanbo Wang, Hui He, Aruna Zhamu, Yi-jun Lin, and Bor Z. Jang	Rechargeable Lithium-Sulfur Battery Having a High Capacity and Long Cycle Life		13/986,319	4/22/2013
Hui He, Yanbo Wang, Wei Xiong, Aruna Zhamu, and Bor Z. Jang	Lithium-Sulfur Secondary Battery Containing Gradient Electrolyte		13/986,575	8/8/2013
Hui He, Yanbo Wang, Aruna Zhamu, and Bor Z. Jang	Lithium Secondary Batteries Containing Lithium Salt-Ionic Liquid Solvent Electrolyte	9190696	13/986,576	8/8/2013
Hui He, Yanbo Wang, Aruna Zhamu, and Bor Z. Jang	Lithium Secondary Batteries Containing a Non-flammable Quasi-solid Electrolyte		13/986,814	6/10/2013
Aruna Zhamu and Bor Z. Jang	Electrochemical Method of Producing Nano Graphene Platelets		13/987,362	7/17/2013
Hui He, Yanbo Wang, Aruna Zhamu, and Bor Z. Jang	Non-flammable Quasi-Solid Electrolyte-Separator Layer Product for Lithium Battery Applications		13/987,394	7/22/2013
Hui He, Yanbo Wang, Aruna Zhamu, and Bor Z. Jang	Process for Producing Non-flammable Quasi-Solid Electrolyte and Electrolyte-Separator for Lithium Battery Applications		13/987,396	7/22/2013
Yanbo Wang, Aruna Zhamu, and Bor Z. Jang	Method for Mass-Producing Silicon Nano Powder and Graphene-doped Silicon Nano Powder		13/987,450	7/26/2013
Aruna Zhamu and Bor Z. Jang	Impregnated Continuous Graphitic Fiber Tows and Composites Containing Same		13/987,528	8/5/2013
Aruna Zhamu and Bor Z. Jang	Fabric of Continuous Graphitic Fiber Yarns from Living Graphene Molecules		13/987,529	8/5/2013
Yanbo Wang, Hui He, Aruna Zhamu, and Bor Z. Jang	Anode Containing Active Material-Coated Graphene Sheets and Lithium-ion Batteries Containing Same		13/987,565	8/8/2013
Yanbo Wang, Hui He, Aruna Zhamu, and Bor Z. Jang	Anode Active Material-Coated Graphene Sheets for Lithium Batteries and Process for Producing Same		13/987,566	8/8/2013
Yanbo Wang, Hui He, Aruna Zhamu, and Bor Z. Jang	Cathode Active Material-Coated Discrete Graphene Sheets for Lithium Batteries and Process for Producing Same	9203084	13/987,567	8/8/2013
Hui He, Yanbo Wang, Aruna Zhamu, and Bor Z. Jang	Non-flammable Quasi-Solid Electrolyte and Non-lithium Alkali Metal or Alkali-Ion Secondary Batteries Containing Same	9059481	13/987,764	8/30/2013

Hui He, Yanbo Wang, Aruna Zhamu, and Bor Z. Jang	Lithium-Selenium Secondary Batteries Having Non-flammable Electrolyte		13/987,785	9/3/2013
Aruna Zhamu, Guorong Chen, and Bor Z. Jang	Large-Grain Graphene Thin Film Current Collector and Secondary Batteries Containing Same		13/987,994	9/23/2013
Aruna Zhamu, Yanbo Wang, Lucy Fu, and Bor Z. Jang	Process for Producing Highly Oriented Graphene Films		13/999,282	2/6/2014
Aruna Zhamu, Yanbo Wang, Lucy Fu, and Bor Z. Jang	Highly Oriented Graphene Structures and Process for Producing Same	9193132	13/999,283	2/6/2014
David J. Burton, Aruna Zhamu, and Bor Z. Jang	Production of Graphene Materials in a Cavitating Fluid	9315388	13/999,397	2/21/2014
Aruna Zhamu and Bor Z. Jang	Production Process for Highly Conductive Graphitic Films		13/999,761	3/20/2014
Aruna Zhamu and Bor Z. Jang	Process for Producing Highly Conducting Graphitic Films from Graphene Liquid Crystals		13/999,912	4/3/2014
Aruna Zhamu and Bor Z. Jang	Highly Conductive Graphene Foams and Process for Producing Same		14/120,959	7/17/2014
Yi-jun Lin, Shaio-Yen Lee, Aruna Zhamu, and Bor Z. Jang	Flexible Fingerprint Sensor Materials and Processes		14/121,023	7/22/2014
Aruna Zhamu and Bor Z. Jang	Partially and Fully Surface-Enabled Alkali Metal Ion-Exchanging Battery Device		14/121,050	8/7/2014
Aruna Zhamu and Bor Z. Jang	Graphene Foam-Protected Anode Active Materials for Lithium Batteries		14/121,151	8/7/2014
Yanbo Wang, Lucy Fu, Aruna Zhamu, David Burton, and Bor Z. Jang	Production of Highly Conductive Graphitic Films from Polymer Films		14/121,387	8/29/2014
Yi-jun Lin, Shaio-Yen Lee, Aruna Zhamu, and Bor Z. Jang	Graphene Electrode Based Ceramic Capacitor		14/121,487	9/12/2014
Hui He, Aruna Zhamu, and Bor Z. Jang	Alkali Metal-Sulfur Secondary Battery Containing a Pre-sulfurized Cathode and Production Process		14/544,760	2/18/2015
Hui He, Aruna Zhamu, and Bor Z. Jang	Pre-sulfurized Cathode for Alkali Metal-Sulfur Secondary Battery and Production Process		14/544,765	2/18/2015
Aruna Zhamu and Bor Z. Jang	Environmentally Benign Production of Graphene Materials		14/544,821	2/24/2015
Aruna Zhamu and Bor Z. Jang	Process for Producing Silicon Nanowires Directly from Silicon Particles		14/545,106	3/27/2015
Qing Fang, Aruna Zhamu, and Bor Z. Jang	Process for Mass-producing Silicon Nanowires and Silicon Nanowire-Graphene Hybrid Particulates		14/545,108	3/27/2015
Aruna Zhamu and Bor Z. Jang	Partially and Fully Surface-Enabled Transition Metal Ion-Exchanging Battery Device		14/545,126	3/30/2015
Hui He, Aruna Zhamu, and Bor Z. Jang	Active Cathode Layer for Metal-Sulfur Secondary Battery and Production Process		14/545,128	3/30/2015
Aruna Zhamu, and Bor Z. Jang	Dendrite-Intercepting Layer for Alkali Metal Secondary Battery		14/545,203	4/8/2015
Aruna Zhamu, and Bor Z. Jang	Alkali Metal Secondary Battery Containing a Dendrite-Intercepting Layer		14/545,204	4/8/2015

Aruna Zhamu and Bor Z. Jang	Partially and Fully Surface-Enabled Metal Ion-Exchanging Battery Device		14/545,239	4/13/2015
Aruna Zhamu, and Bor Z. Jang	Zinc Ion-exchanging Energy Storage Device		14/545,240	4/13/2015
Hui He, Aruna Zhamu, and Bor Z. Jang	Magnesium-Sulfur Secondary Battery Containing a Metal Polysulfide-Preloaded Active Cathode Layer		14/545,279	4/17/2015
Aruna Zhamu, and Bor Z. Jang	Carbon Matrix- or Carbon Matrix Composite-based Dendrite-Intercepting Layer for Alkali Metal Secondary Battery		14/545,552	5/21/2015
Aruna Zhamu, and Bor Z. Jang	Alkali Metal Secondary Battery Containing a Carbon Matrix- or Carbon Matrix Composite-based Dendrite-Intercepting Layer		14/545,553	5/21/2015
Yi-jun Lin, Shaio-yen Lee, Aruna Zhamu, and Bor Z. Jang	Production of Highly Oriented Graphene Oxide Films and Graphitic Films Derived Therefrom		14/756,006	7/20/2015
Aruna Zhamu and Bor Z. Jang	Production Process for a Supercapacitor Having a High Volumetric Energy Density		14/756,292	8/24/2015
Aruna Zhamu and Bor Z. Jang	Rechargeable Lithium Batteries Having an Ultra-High Volumetric Energy Density and Required Production Process		14/756,293	8/24/2015
Aruna Zhamu and Bor Z. Jang	Porous Particles of Interconnected 3D Graphene as a Supercapacitor Electrode Active Material and Production Process		14/756,315	8/26/2015
Aruna Zhamu and Bor Z. Jang	Process for Producing Alkali Metal or Alkali-Ion Batteries Having High Volumetric and Gravimetric Energy Densities		14/756,509	9/14/2015
Aruna Zhamu and Bor Z. Jang	Alkali Metal or Alkali-Ion Batteries Having High Volumetric and Gravimetric Energy Densities		14/756,510	9/14/2015
Aruna Zhamu and Bor Z. Jang	Process for Producing Monolithic Film of Integrated Highly Oriented Halogenated Graphene Sheets or Molecules		14/756,591	9/23/2015
Aruna Zhamu and Bor Z. Jang	Monolithic Film of Integrated Highly Oriented Halogenated Graphene		14/756,592	9/23/2015
Aruna Zhamu and Bor Z. Jang	Process for Producing Lithium Batteries Having an Ultrahigh Energy Density		14/756,698	10/2/2015
Aruna Zhamu and Bor Z. Jang	Continuous Process for Producing Electrodes and Alkali Metal Batteries Having Ultra-High Energy Densities		14/756,754	10/8/2015
Aruna Zhamu and Bor Z. Jang	Continuous Process for Producing Electrodes for Supercapacitors Having High Energy Densities		14/756,777	10/13/2015
Aruna Zhamu and Bor Z. Jang	Process for Producing Unitary Graphene Matrix Composites Containing Carbon or Graphite Fillers		14/756,852	10/22/2015
Aruna Zhamu and Bor Z. Jang	Method of Producing Supercapacitor Electrodes and Cells Having High Active Mass Loading		14/757,124	11/23/2015
Aruna Zhamu and Bor Z. Jang	Chemical-Free Production of Graphene Materials		14/757,193	12/3/2015
Aruna Zhamu and Bor Z. Jang	Highly Conducting and Oriented Graphene Film and Production Process (metal bonded)		14/757,194	12/3/2015

Aruna Zhamu and Bor Z. Jang	Chemical-Free Production of Graphene-Reinforced Polymer Matrix Composite		14/757,236	12/10/2015
Aruna Zhamu and Bor Z. Jang	Integral 3D Graphene-Carbon Hybrid Foam and Devices Containing Same		14/998,356	12/28/2015
Aruna Zhamu and Bor Z. Jang	Chemical-Free Production of 3D Graphene-Carbon Foam		14/998,357	12/28/2015
Aruna Zhamu and Bor Z. Jang	Solid State Electrolyte for Lithium Secondary Battery (SEI)		14/998,411	1/4/2016
Aruna Zhamu and Bor Z. Jang	Supercapacitor Having an Integral 3D Graphene-Carbon Hybrid Foam-Based Electrode		14/998,412	1/4/2016
Aruna Zhamu and Bor Z. Jang	Process for Producing Graphene Foam Supercapacitor Electrode		14/998,474	1/11/2016
Aruna Zhamu and Bor Z. Jang	Supercapacitor Having a Highly Conductive Graphene Foam Electrode		14/998,475	1/11/2016
Aruna Zhamu and Bor Z. Jang	Production Process for Alkali Metal-Sulfur Batteries Having High Volumetric and Gravimetric Energy Densities		14/998,513	1/15/2016
Aruna Zhamu and Bor Z. Jang	Method of Producing Alkali Metal or Alkali-Ion Batteries Having High Volumetric and Gravimetric Energy Densities		14/998,514	1/15/2016
Aruna Zhamu and Bor Z. Jang	Alkali Metal-Sulfur Batteries Having High Volumetric and Gravimetric Energy Densities		14/998,523	1/15/2016
Aruna Zhamu and Bor Z. Jang	Supercapacitor Electrode Having Highly Oriented and Closely Packed Graphene Sheets and Production Process		14/998,672	2/1/2016
Aruna Zhamu and Bor Z. Jang	Chemical-Free Production of Graphene-Reinforced Inorganic Matrix Composite		14/998,729	2/9/2016
Aruna Zhamu and Bor Z. Jang	Electrochemical Method of Producing Single-layer or Few-layer Graphene Sheets		14/998,784	2/17/2016
Aruna Zhamu and Bor Z. Jang	Electrochemical Production of Graphene Sheets Directly from Graphite Mineral		14/998,944	3/11/2016
Aruna Zhamu and Bor Z. Jang	Chemical-Free Production of Graphene-Encapsulated Electrode Active Material Particles for Battery Application		15/156,504	5/17/2016