

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4374502

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
<b>Name</b>		<b>Execution Date</b>
ARUNA ZHAMU		04/19/2017
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	NANOTEK INSTRUMENTS, INC.	
<b>Street Address:</b>	1240 MCCOOK AVE	
<b>City:</b>	DAYTON	
<b>State/Country:</b>	OHIO	
<b>Postal Code:</b>	45404	
<b>PROPERTY NUMBERS Total: 21</b>		
<b>Property Type</b>	<b>Number</b>	
Application Number:	15440151	
Application Number:	15442278	
Application Number:	15442803	
Application Number:	15442807	
Application Number:	15449976	
Application Number:	15450447	
Application Number:	15454053	
Application Number:	15463531	
Application Number:	15463543	
Application Number:	15463555	
Application Number:	15466286	
Application Number:	15468080	
Application Number:	15470408	
Application Number:	15475451	
Application Number:	15475454	
Application Number:	15483342	
Application Number:	15483347	
Application Number:	15483348	
Application Number:	15484546	
Application Number:	15485934	

PATENT

<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15478125

**CORRESPONDENCE DATA**

**Fax Number:** (937)558-0606

*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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**Correspondent Name:** CLAIRE RUTISER

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**Address Line 2:** NANOTEK INSTRUMENTS

**Address Line 4:** DAYTON, OHIO 45404

<b>NAME OF SUBMITTER:</b>	CLAIRE A. RUTISER
<b>SIGNATURE:</b>	/Claire A. Rutiser Reg. No. 75734/
<b>DATE SIGNED:</b>	04/19/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

**Total Attachments: 5**

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## ASSIGNMENT

This Assignment Agreement is made and entered by and between Dr. Aruna Zhamu a citizen of USA, residing at 2749 Pekin Rd, Springboro, OH 45066 (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, nano-scaled graphene plates, processes, energy technologies, and/or 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 patents and patent applications listed in **Exhibit "A"** attached hereto, any application claiming priority therefrom, any non-provisionals, continuations, or divisions thereof, the inventions disclosed therein, any improvements thereon, and any patent or patents that may be issued or reissued thereon; (2) all know- how, trade secrets, discoveries, concepts, ideas, and technologies related to the same; (3) any and all copyrights, copyright registrations and copyrightable subject matter related to the same; and (4) 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 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.

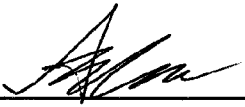
3. Assignor authorizes and requests the Commissioner of Patents and Trademarks to issue any patent which may issue from the Inventions to said Assignee, its successor and assigns; and authorizes said Assignee, its successors and assigns, to file in its own name applications for patent in foreign countries in connection with the Inventions hereby transferred, and to secure in its own name the patent or patents issued thereon.

4. Assignor further covenants and agrees that, upon request, Assignor will promptly provide Assignee with all pertinent facts and documents relating to said Inventions, as may be known and accessible to Assignor, and Assignee will testify as to the same in any interference, litigation or proceeding related thereto and will do all acts including promptly execute and deliver to said Assignee

or its legal representatives any and all papers, instruments or affidavits that Assignee, is successors or assigns may consider necessary or desirable to apply for, obtain, maintain, issue, transfer and enforce said Inventions or any United States or foreign patent or application filed in connection with said Inventions.

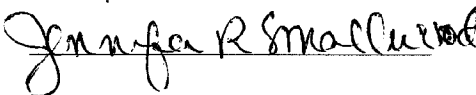
In Witness Whereof, the undersigned has executed this document as of the 19<sup>th</sup> day of April, 2017.

**INVENTOR**

 (Signature)  
Dr. Aruna Zhamu (Print Name)

State of Ohio )  
County of Montgomery )

Before me personally appeared said Dr. Aruna Zhamu and acknowledged the foregoing instrument to be his free act and deed, this 19<sup>th</sup> day of April, 2017

  
Notary Public

**Jennifer R. Smallwood**  
NOTARY PUBLIC  
STATE OF OHIO  
My commission expires  
June 29, 2019



### Exhibit A - Assigned Patents and Patent Applications

Inventors	Patent	Patent Number	Application Number	Filing Date
Aruna Zhamu and Bor Z. Jang	Flexible and Shape-Conformal Rope-Shape Supercapacitors		15/398416	1/4/2017
Aruna Zhamu and Bor Z. Jang	Process for Flexible and Shape-Conformal Rope-Shape Supercapacitors		15/398421	1/4/2017
Aruna Zhamu, Yanbo Wang, Lucy Fu, and Bor Z. Jang	Process for producing highly oriented graphene films		15/408045	1/17/2017
Aruna Zhamu and Bor Z. Jang	Graphene-Enabled Metal Fluoride and Metal Chloride Cathode Active Materials for Lithium Batteries		15/412852	1/23/2017
Aruna Zhamu and Bor Z. Jang	Graphene Foam-Protected Metal Fluoride and Metal Chloride Cathode Active Materials for Lithium Batteries		15/416850	1/26/2017
Aruna Zhamu and Bor Z. Jang	Exfoliated Graphite Worm-Protected Metal Fluoride and Metal Chloride Cathode Active Materials for Lithium Batteries		15/419454	1/30/2017
Qing Fang, Aruna Zhamu and Bor Z. Jang	Process For Silicon Nanowire-graphene Hybrid Mat		15/427863	2/8/2017
Aruna Zhamu and Bor Z. Jang	Alkali Metal-Sulfur Secondary Battery Containing a Nano Sulfur-Loaded Cathode and Manufacturing Method		15/431231	2/13/2017
Aruna Zhamu and Bor Z. Jang	Aluminum Secondary Battery Having a High-Capacity and High Energy Cathode and Manufacturing Method		15/431250	2/13/2017
Aruna Zhamu and Bor Z. Jang	Method of Manufacturing a Lithium Secondary Battery Having a Protected High-Capacity Anode Active Material		15/434632	2/16/2017

Aruna Zhamu and Bor Z. Jang	Aluminum Secondary Battery Having an Exfoliated Graphite-Based High-Capacity Cathode and Manufacturing Method		15/434913	2/16/2017
Baofei Pan, Hui He, Aruna Zhamu and Bor Z. Jang	Lithium Secondary Batteries Containing Protected Particles of Anode Active Materials and Method of Manufacturing		15/436964	2/20/2017
Baofei Pan, Hui He, Aruna Zhamu, Bor Z. Jang	Alkali Metal-Sulfur Secondary Battery Containing a Protected Sulfur Cathode and Manufacturing Method		15/440151	2/23/2017
Baofei Pan, Hui He, Aruna Zhamu, Bor Z. Jang	Polymer Binder for Lithium Battery and Method of Manufacturing		15/442278	2/24/2017
Baofei Pan, Hui He, Aruna Zhamu, Bor Z. Jang	Lithium Battery Cathode and Method of Manufacturing		15/442803	2/27/2017
Baofei Pan, Hui He, Aruna Zhamu, Bor Z. Jang	Cathode Active Material Layer for Lithium Secondary Battery and Method of Manufacturing		15/442807	2/27/2017
Yu-Sheng Su, Aruna Zhamu, Hui He, Baofei Pan, and Bor Z. Jang	Aluminum Secondary Battery Having a High-Capacity and High-Rate Capable Cathode and Manufacturing Method		15/449976	3/5/2017
Yu-Sheng Su, Aruna Zhamu, Hui He, Baofei Pan, and Bor Z. Jang	Aluminum Secondary Battery Cathode Having Oriented Graphene		15/450447	3/6/2017
Yu-Sheng Su, Aruna Zhamu, Hui He, Baofei Pan, and Bor Z. Jang	Graphitic Carbon-Based Cathode for Aluminum Secondary Battery and Manufacturing Method		15/454053	3/9/2017
Aruna Zhamu and Bor Z. Jang	Flexible Asymmetric Electrochemical Cells Using Nano Graphene Platelet as an Electrode Material		15/463531	3/20/2017
Aruna Zhamu and Bor Z. Jang	Multivalent Metal Ion Battery and Manufacturing Method		15/463543	3/20/2017
Aruna Zhamu and Bor Z. Jang	Multivalent Metal Ion Battery Having a Cathode of Recompressed Graphite Worms and Manufacturing Method		15/463555	3/20/2017

Aruna Zhamu and Bor Z. Jang	Multivalent Metal Ion Battery Having a Cathode Layer of Protected Graphitic Carbon and Manufacturing Method		15/466286	3/22/2017
Baofei Pan, Hui He, Yu-Sheng Su, Aruna Zhamu, and Bor Z. Jang	Non-flammable Quasi-Solid Electrolyte and Lithium Secondary Batteries Containing Same		15/468080	3/23/2017
Baofei Pan, Hui He, Yu-Sheng Su, Aruna Zhamu, and Bor Z. Jang	Lithium Secondary Battery Containing Non-flammable Electrolyte and Manufacturing Method		15/470408	3/27/2017
Yi-jun Lin, Aruna Zhamu, and Bor Z. Jang	Direct Microwave Production of Graphene		15/475451	3/31/2017
Aruna Zhamu, and Bor Z. Jang	Process for Fabric of Continuous Graphitic Fiber Yarns		15/475454	3/31/2017
Aruna Zhamu, and Bor Z. Jang	Encapsulated Anode Active Material Particles, Lithium Secondary Batteries Containing Same, and Method of Manufacturing		15/478125	4/3/2017
Aruna Zhamu, and Bor Z. Jang	Encapsulated Cathode Active Material Particles, Lithium Secondary Batteries Containing Same, and Method of Manufacturing		15/483342	4/10/2017
Aruna Zhamu, and Bor Z. Jang	Alkali Metal-Sulfur Secondary Battery Containing a Polymer-Encapsulated Sulfur Cathode and Manufacturing Method		15/483347	4/10/2017
Aruna Zhamu, and Bor Z. Jang	Lithium Metal Secondary Battery Containing an Anode-Protecting Polymer Layer and Manufacturing Method		15/483348	4/10/2017
Aruna Zhamu, and Bor Z. Jang	Eco-friendly Production of Graphene		15/484546	4/11/2017
Baofei Pan, Hui He, Aruna Zhamu, and Bor Z. Jang	Lithium Anode-Protecting Polymer Layer for a Lithium Metal Secondary Battery and Manufacturing Method		15/485934	4/12/2017