

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5613348

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JOHN T. VAUGHEY	04/08/2019
BINGHONG HAN	04/08/2019
BARIS KEY	04/08/2019
FULYA DOGAN KEY	04/08/2019
CHEN LIAO	04/08/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	UCHICAGO ARGONNE, LLC
<b>Street Address:</b>	5801 SOUTH ELLIS AVENUE
<b>City:</b>	CHICAGO
<b>State/Country:</b>	ILLINOIS
<b>Postal Code:</b>	60637
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16375431
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(312)580-1189
<i>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.</i>	
<b>Phone:</b>	312-580-1180
<b>Email:</b>	rross@olsonip.com
<b>Correspondent Name:</b>	ROBERT J. ROSS, OLSON & CEPURITIS, LTD.
<b>Address Line 1:</b>	20 NORTH WACKER DRIVE
<b>Address Line 2:</b>	36TH FLOOR
<b>Address Line 4:</b>	CHICAGO, ILLINOIS 60606
<b>ATTORNEY DOCKET NUMBER:</b>	300508-302-ANL 437
<b>NAME OF SUBMITTER:</b>	ROBERT J. ROSS
<b>SIGNATURE:</b>	/Robert J. Ross, Reg. No. 45058/
<b>DATE SIGNED:</b>	07/11/2019
<b>Total Attachments: 5</b>	

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ASSIGNMENT

I, John T. Vaughey of Elmhurst, IL for good and valuable considerations to me in hand paid, the receipt and sufficiency whereof is hereby acknowledged, have sold, assigned, conveyed and set over, and do hereby sell, assign, convey and set over unto UChicago Argonne, LLC, having a place of business at 5801 South Ellis Avenue, Chicago, Illinois 60637, its successors and assigns, the entire right, title and interest in and to all subject matter invented or designed by me and disclosed in the patent application for the, "ELECTROLYTE COMPOSITIONS FOR STABILIZING SILICON ELECTRODES IN LITHIUM BATTERIES (ANL-IN-18-112) filed in the U.S. Patent and Trademark Office on April 4, 2019 as Application Serial No. 16/375,431 and any divisions and continuations thereof and in and to all Letters Patent of the United States, including any reissues and extensions thereof that may be obtained therefor, and the right, where such right can be legally exercised, in its own name to apply for and obtain Letters Patent, Inventor's Certificates, Utility Models and Designs, in countries foreign to the United States, including the full right to claim for any such application the benefits of the International Convention as fully and entirely as I could have done if the application had been in my name, and the entire interest in any Letters Patent, Inventor's Certificate, Utility Model or Design which may be granted on any such application in such foreign country; and we hereby authorize and request the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States whose duty it is to issue Letters Patent, Inventor's Certificates, Utility Models or Designs, on applications as aforesaid, to issue any and all Letters Patent, Inventor's Certificates, Utility Models and Designs that may be granted for said invention to said UChicago Argonne, LLC, its successors and assigns.

And for the above-named considerations, I hereby agree that I will without additional compensation but without cost to myself, promptly communicate to said UChicago Argonne, LLC, its successors and assigns, any facts known to us respecting said invention whenever requested, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuing and reissue applications for Letters Patent, Inventor's Certificates, Utility Models and Designs and assignments thereof, make all rightful oaths and generally do everything possible to aid said assignee, its successors and assigns, as and when requested by them, in obtaining and enforcing proper Letters Patents, Inventor's Certificate, Utility Model and Design protection for said invention or inventions and improvements, in the United States and in all other countries.

JOHN T. VAUGHEY  
Printed Name

4-8-19  
Printed Date

John Vaughey  
Signature

4-8-19  
Dated

Brittany Hudson  
Witness Printed Name

4-8-19  
Printed Date

B. Hudson  
Witness Signature

4-8-19  
Date

ASSIGNMENT

I, Binghong Han of Westmont, IL for good and valuable considerations to me in hand paid, the receipt and sufficiency whereof is hereby acknowledged, have sold, assigned, conveyed and set over, and do hereby sell, assign, convey and set over unto UChicago Argonne, LLC, having a place of business at 5801 South Ellis Avenue, Chicago, Illinois 60637, its successors and assigns, the entire right, title and interest in and to all subject matter invented or designed by me and disclosed in the patent application for the, "ELECTROLYTE COMPOSITIONS FOR STABILIZING SILICON ELECTRODES IN LITHIUM BATTERIES (ANL-IN-18-112) filed in the U.S. Patent and Trademark Office on April 4, 2019 as Application Serial No. 16/375,431 and any divisions and continuations thereof and in and to all Letters Patent of the United States, including any reissues and extensions thereof that may be obtained therefor, and the right, where such right can be legally exercised, in its own name to apply for and obtain Letters Patent, Inventor's Certificates, Utility Models and Designs, in countries foreign to the United States, including the full right to claim for any such application the benefits of the International Convention as fully and entirely as I could have done if the application had been in my name, and the entire interest in any Letters Patent, Inventor's Certificate, Utility Model or Design which may be granted on any such application in such foreign country; and we hereby authorize and request the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States whose duty it is to issue Letters Patent, Inventors Certificates, Utility Models or Designs, on applications as aforesaid, to issue any and all Letters Patent, Inventor's Certificates, Utility Models and Designs that may be granted for said invention to said UChicago Argonne, LLC, its successors and assigns.

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BINGHONG HAN  
Printed Name

04/08/2019  
Printed Date

Binghong Han  
Signature

04/08/2019  
Dated

Yingjie Li  
Witness Printed Name

April 8th, 2019  
Printed Date

Yingjie Li  
Witness Signature

April 8, 2019  
Date

ASSIGNMENT

I, Baris Key of Lisle, IL, for good and valuable considerations to me in hand paid, the receipt and sufficiency whereof is hereby acknowledged, have sold, assigned, conveyed and set over, and do hereby sell, assign, convey and set over unto UChicago Argonne, LLC, having a place of business at 5801 South Ellis Avenue, Chicago, Illinois 60637, its successors and assigns, the entire right, title and interest in and to all subject matter invented or designed by me and disclosed in the patent application for the, "ELECTROLYTE COMPOSITIONS FOR STABILIZING SILICON ELECTRODES IN LITHIUM BATTERIES (ANL-IN-18-112) filed in the U.S. Patent and Trademark Office on April 4, 2019 as Application Serial No. 16/375,431 and any divisions and continuations thereof and in and to all Letters Patent of the United States, including any reissues and extensions thereof that may be obtained therefor, and the right, where such right can be legally exercised, in its own name to apply for and obtain Letters Patent, Inventor's Certificates, Utility Models and Designs, in countries foreign to the United States, including the full right to claim for any such application the benefits of the International Convention as fully and entirely as I could have done if the application had been in my name, and the entire interest in any Letters Patent, Inventor's Certificate, Utility Model or Design which may be granted on any such application in such foreign country; and we hereby authorize and request the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States whose duty it is to issue Letters Patent, Inventors Certificates, Utility Models or Designs, on applications as aforesaid, to issue any and all Letters Patent, Inventor's Certificates, Utility Models and Designs that may be granted for said invention to said UChicago Argonne, LLC, its successors and assigns.

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BARIS KEY  
Printed Name

4/8/2019

Printed Date

  
Signature

4/8/2019

Dated

Andrew N. Jansen

Witness Printed Name

April 8, 2019

Printed Date

Andrew N. Jansen

Witness Signature

4/8/2019

Date

ASSIGNMENT

I, Fulya Dogan Key of Lisle, IL for good and valuable considerations to me in hand paid, the receipt and sufficiency whereof is hereby acknowledged, have sold, assigned, conveyed and set over, and do hereby sell, assign, convey and set over unto UChicago Argonne, LLC, having a place of business at 5801 South Ellis Avenue, Chicago, Illinois 60637, its successors and assigns, the entire right, title and interest in and to all subject matter invented or designed by me and disclosed in the patent application for the, "ELECTROLYTE COMPOSITIONS FOR STABILIZING SILICON ELECTRODES IN LITHIUM BATTERIES (ANL-IN-18-112) filed in the U.S. Patent and Trademark Office on April 4, 2019 as Application Serial No. 16/375,431 and any divisions and continuations thereof and in and to all Letters Patent of the United States, including any reissues and extensions thereof that may be obtained therefor, and the right, where such right can be legally exercised, in its own name to apply for and obtain Letters Patent, Inventor's Certificates, Utility Models and Designs, in countries foreign to the United States, including the full right to claim for any such application the benefits of the International Convention as fully and entirely as I could have done if the application had been in my name, and the entire interest in any Letters Patent, Inventor's Certificate, Utility Model or Design which may be granted on any such application in such foreign country; and we hereby authorize and request the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States whose duty it is to issue Letters Patent, Inventors Certificates, Utility Models or Designs, on applications as aforesaid, to issue any and all Letters Patent, Inventor's Certificates, Utility Models and Designs that may be granted for said invention to said UChicago Argonne, LLC, its successors and assigns.

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FULYA DOGAN KEY  
Printed Name

4/8/19  
Printed Date

  
Signature

4/8/19  
Dated

Andrew N. Jansen  
Witness Printed Name

April 8, 2019  
Printed Date

  
Witness Signature

4/8/2019  
Date

ASSIGNMENT

I, Chen Liao of Westmont, IL for good and valuable considerations to me in hand paid, the receipt and sufficiency whereof is hereby acknowledged, have sold, assigned, conveyed and set over, and do hereby sell, assign, convey and set over unto UChicago Argonne, LLC, having a place of business at 5801 South Ellis Avenue, Chicago, Illinois 60637, its successors and assigns, the entire right, title and interest in and to all subject matter invented or designed by me and disclosed in the patent application for the, "ELECTROLYTE COMPOSITIONS FOR STABILIZING SILICON ELECTRODES IN LITHIUM BATTERIES (ANL-IN-18-112) filed in the U.S. Patent and Trademark Office on April 4, 2019 as Application Serial No. 16/375,431 and any divisions and continuations thereof and in and to all Letters Patent of the United States, including any reissues and extensions thereof that may be obtained therefor, and the right, where such right can be legally exercised, in its own name to apply for and obtain Letters Patent, Inventor's Certificates, Utility Models and Designs, in countries foreign to the United States, including the full right to claim for any such application the benefits of the International Convention as fully and entirely as I could have done if the application had been in my name, and the entire interest in any Letters Patent, Inventor's Certificate, Utility Model or Design which may be granted on any such application in such foreign country; and we hereby authorize and request the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States whose duty it is to issue Letters Patent, Inventors Certificates, Utility Models or Designs, on applications as aforesaid, to issue any and all Letters Patent, Inventor's Certificates, Utility Models and Designs that may be granted for said invention to said UChicago Argonne, LLC, its successors and assigns.

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CHEN LIAO  
Printed Name

4-8-2019

Printed Date

Signature

4-8-2019

Dated

Sanghyeon Kim  
Witness Printed Name

4-8-2019

Printed Date

Witness Signature

4-8-2019

Date