PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2709924

ATTORNEY DOCKE	T NUMBER:	G	FRC5645		
	ATTORNEY DOCKET NUMBER:				
CORRESPONDENCI Fax Number: Phone: Email: <i>Correspondence will</i> Correspondent Name Address Line 1: Address Line 2: Address Line 4:	(404 404 sara <i>be sent via US</i> s: TRC 600 SUI	<i>Mail when</i> OUTMAN S PEACHTR FE 5200	outmansanders.com <i>the email attempt is unsuccessful.</i> ANDERS LLP EE STREET ORGIA 30308		
Application Number: 14117		14117965			
Property Type			Number		
Postal Code: PROPERTY NUMBE					
State/Country:	GEORGIA 30332-0415				
City:	ATLANTA				
Street Address:	505 TENTH STREET, NW				
RECEIVING PARTY		ECH RESE	ARCH CORPORATION		
SETH R. MARDER				11/19/2013	
YINHUA ZHOU JAE WON SHIM				11/19/2013	
CANEK FUENTES-HERNANDEZ				11/25/2013	
BERNARD KIPPELE				11/22/2013	
		Name	9	Execution Date	
CONVEYING PARTY	′ DATA				
NATURE OF CONVEYANCE:			ASSIGNMENT		
				NEW ASSIGNMENT	

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REEL: 032117 FRAME: 0504

Signature:	/ryan a. schneider/
Date:	02/03/2014
Total Attachments: 7 source=GTRC5645ASSIGNMENT#page1.t source=GTRC5645ASSIGNMENT#page2.t source=GTRC5645ASSIGNMENT#page3.t source=GTRC5645ASSIGNMENT#page4.t source=GTRC5645ASSIGNMENT#page5.t source=GTRC5645ASSIGNMENT#page7.t	if if if if

ASSIGNMENT

WHEREAS, We, Bernard Kippelen, Canek Fuentes-Hernandez, Yinhua Zhou, Jae Won Shim, and Seth R. Marder (collectively referred to as "Assignor"), have invented certain improvements in Systems and Methods for Producing Low Work Function Electrodes, along with co-inventors from Princeton University: Antoine Kahn and Jens Meyer, who are separately assigning rights to The Trustees of Princeton University, and for which a U.S. National Stage Patent Application, No. 14/117,965 was filed 15 November 2013, for which PCT Patent Application No. PCT/US2012/038125 was filed 12 May 2012, for which U.S. Provisional Application Serial No. 61/486,368 was filed 16 May 2011, for which U.S. Provisional Application Serial No. 61/591370 was filed 27 January 2012, and for which U.S. Provisional Application Serial No. 61/608,408 was filed 8 March 2012, and for which future applications will be filed, (all collectively referred to as the "Application"), and whereas

GEORGIA TECH RESEARCH CORPORATION 505 Tenth Street, N.W. Atlanta, Georgia 30332-0415 United States

("Assignee") desires to purchase all of Assignor's rights in same;

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable considerations paid by the said Assignee, the receipt and sufficiency of which are hereby acknowledged, Assignor has and by these presents does hereby sell, assign, transfer and convey unto said Assignee all of Assignor's rights, title, and interest in and to said Application, including in and to any conventional, division, continuation, continuation-in-part, substitution, reissue, renewal, reexam, continued prosecution application ("CPA"), or request for continued examination ("RCE") thereof, and in and to all inventions and improvements thereon (herein collectively referred to as "Related US Applications"), preparatory to obtaining Letters Patent of the United States therefore; and Assignor hereby requests the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States resulting from said Application and Related US Applications, to Assignee, for its interest and for the sole use and benefit of Assignee and its assigns and legal representatives.

For the same consideration, Assignor, by these presents does sell, assign, and transfer to Assignee all of Assignor's rights, title and interest in and to any foreign and international applications related to and/or seeking benefit of said Application and Related US Applications, and in and to all inventions and improvements thereon (herein collectively referred to as "Related Foreign Applications"), in and to any Letters Patent and similar protective rights granted on said Related Foreign Applications, and in and to the right to claim any applicable priority rights arising from or required for said Related Foreign Applications under the terms of any applicable conventions, treaties, statutes, or regulations, said Related Foreign Applications to be filed and issued in the name of Assignee or its designee, insofar as permitted by applicable law.

For the same consideration, Assignor agrees, without charge to Assignee, but at Assignee's expense, to sign all lawful papers, execute said Application, Related US Applications and Related Foreign Applications, make all assignments and rightful oaths, assist in prosecution of said Application, Related US Applications and Related Foreign Applications, assist in prosecution of legal proceedings, and generally do everything reasonably possible to aid Assignee its successors, assigns, and nominees, to obtain and enforce proper protection for all said inventions and improvements in all countries throughout the world.

TROUTMAN SANDERS

PATENT REEL: 032117 FRAME: 0506 AND, for the same consideration, Assignor also hereby sells, assigns and transfers unto Assignce all of Assignor's rights and claims to sue for damages and other remedies with respect to any and all past infringement of all said Application, Related US Applications, and Related Foreign Applications, including said inventions and improvements which may have occurred before the date of this Assignment.

IN WITNESS WHEREOF November 2013.	. I have hereunto set my hand and seal this <u>Z</u> . Bernard Kippelen	2day.of (SEAL)
Witnessed by: <u>Keeth</u> Signature <u>Keeth</u> Printed Name of	2	13
Witnessed by:	<u>GAJ</u>	13
SECTION BELOW IS FOR USE	ONLY IF SIGNING IN PRESENCE OF A N	OTARY
IN WITNESS WHEREO	F, I have hereunto set my hand and scal this	day of
State of	Bernard Kippelen	(SEAL)
County of		
On this day of and known to be the individual d duly acknowledged the same to b	, 2013, before me, a notary public, ca tescribed in and who executed the foregoing as his free act and deed.	me to me known signment, and he
	NOTARY PUBLIC	
(SEAL)	My Commission Expires:	
21537619	2/7	TROUTMA SANDERS
	DI	TENT

REEL: 032117 FRAME: 0507

<u>No Vember</u> , 2013.	(Jel-155) (SI	EAL)
0	Canek Fuentes-Hernandez	
Witnessed by: Ander	Date: <u>11-25-2013</u>	~
Signature		
<u>Amir Dindar</u> Printed Name of Witness		
Witnessed by: <u>Zaffun</u> Signature	Date: <u>11/25/2013</u>	r
TALHA KHAN Printed Name of Witness		

IN WITNESS WHEREOF, I have hereunto set my hand and seal this <u>25</u> day of

SECTION BELOW IS FOR USE ONLY IF SIGNING IN PRESENCE OF A NOTARY

IN WITNESS WHEREOF, I have hereunto set my hand and seal this _____ day of _____, 2013.

___(SEAL)

Canek Fuentes-Hernandez

State of _____

County of _____

On this _____ day of ______, 2013, before me, a notary public, came to me known and known to be the individual described in and who executed the foregoing assignment, and he duly acknowledged the same to be his free act and deed.

NOTARY PUBLIC

My Commission Expires:

(SEAL)

Yinhua Zhao Date Date Date
Date Date SIGNING IN PRÉSENCE OF A NOTARS Presence set my hand and send thisd
SIGNING IN PRÉSENCE OF A NOTARY
erenno net my hand and soul this d
erenno net my hand and soul this d
Yinhuz Ibau
, 2013, before me, a notary public, came to o a and who executed the functioning antigrates art and deed.
NOTARY PLULK
My Commission Expires
47

PATENT REEL: 032117 FRAME: 0509

IN WITNESS WHEREOF, I have hereunto set my hand and seal this $19^{+1/2}$ day of
November, 2013.
(SEAL)
Jae Won Shim
Witnessed by: Date: Date:
Minteering Yum Printed Name of Witness
Witnessed by: $Date: 11/19/2013$ Signature Date: 11/19/2013
TALHA KHAN Printed Name of Witness
AND AND AND AND AND AND AND PROPENSOR OF A NOTARY
SECTION BELOW IS FOR USE ONLY IF SIGNING IN PRESENCE OF A NOTARY
IN WITNESS WHEREOF, I have hereunto set my hand and seal this day of, 2013.
(SEAL)
Jae Won Shim
State of
County of
On this day of, 2013, before me, a notary public, came to me known and known to be the individual described in and who executed the foregoing assignment, and he duly acknowledged the same to be his free act and deed.
NOTARY PUBLIC

(SEAL)

My Commission Expires:

TROUTMAN SANDERS

PATENT REEL: 032117 FRAME: 0510

November , 2013.	An R ninder (SEAL)
\sim	
Witnessed by: Turiot C Dark- Signature	Date: $11/19/20/3$
TIMOTTLY PARKEP Printed Name of Witness	
Witnessed by:	Date: $\frac{1}{17\sqrt{2\sigma/3}}$
Dense H. Cale Printed Name of Witness	
SECTION BELOW IS FOR USE ONLY IF	SIGNING IN PRESENCE OF A NOTARY

IN WITNESS WHEREOF, I have hereunto set my hand and seal this _____ day of _____ 2013.

(SEAL)

State of _____

County of

On this ______ day of ______, 2013, before me, a notary public, came to me known and known to be the individual described in and who executed the foregoing assignment, and he duly acknowledged the same to be his free act and deed.

NOTARY PUBLIC

(SEAL)

My Commission Expires:

TROUTMAN SANDERS In Witness Whereof, Assignee hereby accepts from Assignor the sale, assignment, transfer and conveyance unto said Assignee of the full, exclusive and entire right, title, and interest in and to said Application, Related US Applications and Related Foreign Applications, by its duly authorized officer this 15th day of TRAVEL 9, 2014.

Georgia Tech Research Corporation (Assignce) By:

Name: Kimberly Dunn

Title: Authorized Signatory

Witnessed by: Curture Gachar

Date: _____ January 15, 2014

Cynthia Jackson Printed Name of Witness

Witnessed by: Nuth rad Kid

Deborah Reid Printed Name of Witness Date: January 15, 2014

21537619

PATENT REEL: 032117 FRAME: 0512

TROUTMAN SANDERS