12/16/2013 502603103

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2649455

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
THOMAS P. RUSSELL	12/02/2013
SOOJIN PARK	10/08/2013
JIA-YU WANG	10/07/2013
BOKYUNG KIM	10/09/2013

RECEIVING PARTY DATA

Name:	THE UNIVERSITY OF MASSACHUSETTS
Street Address:	225 FRANKLIN STREET
City:	BOSTON
State/Country:	MASSACHUSETTS
Postal Code:	02110

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13944329

CORRESPONDENCE DATA

Fax Number: (860)286-0115 Phone: 8602862929

Email: rgneda@cantorcolburn.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: CANTOR COLBURN LLP Address Line 1: 20 CHURCH STREET

Address Line 2: 22ND FLOOR

Address Line 4: HARTFORD, CONNECTICUT 06103

ATTORNEY DOCKET NUMBER:	UMA0024USD	
NAME OF SUBMITTER:	J. MICHAEL BUCHANAN	

REEL: 031787 FRAME: 0773

PATENT

502603103

Signature:	/J. Michael Buchanan/
Date:	12/16/2013
	This document serves as an Oath/Declaration (37 CFR 1.63).
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As a below named inventor, I hereby declare that:

DECLARATION AND ASSIGNMENT

Title of Invention: METHOD OF PRODUCING NANOPATTERNED ARTICLES, AND ARTICLES PRODUCED THEREBY

This declaration is directed to:
[] the attached application (Attorney Docket Number), or
[x] United States application or PCT international application number $\underline{13/944329}$ filed on $\underline{07/17/2013}$, which is a division of $\underline{12/566705}$ filed $\underline{09/25/2009}$, which claims priority to $\underline{61/100004}$ filed $\underline{09/25/2008}$.
The above-identified application was made or authorized to be made by me, and I have reviewed and understand the contents of the application, including the claims.
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.
Whereas, each undersigned inventor has made certain inventions, improvements, and discoveries (herein referred to as the "INVENTION") disclosed in the above-identified patent application (herein referred to as the ("APPLICATION");
Whereas, THE UNIVERSITY OF MASSACHUSETTS, having a business address at 225 Franklin Street, Boston, MA 02110 (herein referred to as "ASSIGNEE"), desires to attain or has attained, and each undersigned inventor desires to grant or has granted to ASSIGNEE, the entire worldwide right, title, and interest in and to the INVENTION and in and to any and all patent applications and patents directed thereto;
Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, I, one of the undersigned inventors (herein referred to "ASSIGNOR"), hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to the ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the INVENTION, the APPLICATION, and any and all other patent applications and patents for the INVENTION which may be applied for or granted therefor in any and all countries and jurisdictions, including all divisionals, continuations, continuations-in-part, reissues, reexaminations, renewals, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents, and further including any right to sue for past infringement and to recover and retain damages and profits in respect thereof. In addition, I hereby authorize and request any official whose duty it is to issue patents, to issue any patent on said improvements or resulting therefrom to said ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and I agree for myself and my respective heirs, legal representatives, and assigns, without further compensation, to execute any and all documents, oaths and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the INVENTION, the APPLICATION, and all related patents and applications, in ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by ASSIGNEE, its successors, legal representatives, and assigns.
I also hereby grant ASSIGNEE, its successors, legal representatives, and assigns, the right to insert in this Declaration and Assignment any further identification of the APPLICATION (including, but not limited to, patent Application Number and filing date).
I hereby covenant that I have the full right to convey the entire right, title, and interest herein assigned and that I have not executed and will not execute any agreement in conflict herewith.
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. Signature: Legal Name of Inventor: Date: 12/2/13 Witness Signature Date: 12/2/13 Witness Signature
Printed Legal Name of Witness Printed Legal Name of Witness Printed Legal Name of Witness REEL: 031787 FRAME: 0775

Title of Invention: METHOD OF PRODUCING NANOPATTERNED ARTICLES, AND ARTICLES PRODUCED THEREBY

As a below named inventor,	I hereby declare that:		
This declaration is directed	to:		
[] the attached applica	tion (Attorney Docket N	umber), or	
		al application number $\underline{13/944329}$ filed on $\underline{0}$ claims priority to $\underline{61/100004}$ filed $\underline{09/25/200}$	
Signature:		Date:	
Legal Name of Inventor:	Soojin Park	-	
	Date:		Date:
Witness Signature		Witness Signature	
Printed Legal Name of Witr	ness	Printed Legal Name of Witness	

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Signature:		Date:	
Legal Name of Inventor:	Jia-Yu Wang		
	Date:		Date:
Witness Signature		Witness Signature	
Printed Legal Name of Witr		Printed Legal Name of Witness	mineral (an inspection)

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Signature:		Date:	
Legal Name of Inventor:	Bokyung Kim		
	Date:		Date:
Witness Signature		Witness Signature	
Printed Legal Name of Wit	ness	Printed Legal Name of Witness	MANAGER

As a below named inventor, I hereby declare that:

DECLARATION AND ASSIGNMENT

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I believe that I am the origina	l inventor or an original join	t inventor of a claimed invention in the application.
I am aware of the duty to disc material to patentability as de		ent and Trademark Office all information known to me to be 6.
		entions, improvements, and discoveries (herein referred to as ent application (herein referred to as the ("APPLICATION");
02110 (herein referred to as "	ASSIGNEE"), desires to atta GNEE, the entire worldwide	naving a business address at 225 Franklin Street, Boston, MA ain or has attained, and each undersigned inventor desires to right, title, and interest in and to the INVENTION and in and reto;
one of the undersigned invent and otherwise transfers or has worldwide right, title, and intapplications and patents for the jurisdictions, including all divident counterparts, substitutes, and and granting of such patents, damages and profits in respect patents, to issue any patent or representatives, and assigns, to ASSIGNEE, its successors, lead to patents may be granted, as full Assignment not been made; a further compensation, to exect related to recording this Assignand applications, in ASSIGNI its successors, legal represent.	tors (herein referred to "ASS stransferred to the ASSIGNI erest in and to the INVENTI ne INVENTION which may visionals, continuations, contextensions thereof, and all riand further including any right thereof. In addition, I here in said improvements or result he entire worldwide right, titlegal representatives, and assilly and entirely as would have not I agree for myself and my oute any and all documents, or against or perfecting title to EE, its successors, legal representatives, and assigns. EE, its successors, legal representatives, and assigns.	receipt and sufficiency thereof being hereby acknowledged, I, IGNOR"), hereby sells or has sold, assigns or has assigned, EE, its successors, legal representatives, and assigns, the entire ON, the APPLICATION, and any and all other patent be applied for or granted therefor in any and all countries and inuations-in-part, reissues, reexaminations, renewals, ghts of priority resulting from the filing of such applications that to sue for past infringement and to recover and retain by authorize and request any official whose duty it is to issue ting therefrom to said ASSIGNEE, its successors, legal tle, and interest in and to the same to be held and enjoyed by gns to the full end of the terms for which any and all such be been held and enjoyed by the undersigned had this of respective heirs, legal representatives, and assigns, without baths and instruments and perform all lawful acts reasonably the INVENTION, the APPLICATION, and all related patents esentatives, and assigns, whenever requested by ASSIGNEE, essentatives, and assigns, the right to insert in this Declaration
and Assignment any further in Number and filing date).	dentification of the APPLIC.	ATION (including, but not limited to, patent Application
not executed and will not exe	cute any agreement in confli	
I hereby acknowledge that an fine or imprisonment of not m		le in this declaration is punishable under 18 U.S.C. 1001 by oth.
Signature:		Date:
Legal Name of Inventor:	Thomas P. Russell	
	Date:	Witness Signature Date:
Witness Signature		Witness Signature
Printed Legal Name of Witne	 \$\$	Printed Legal Name of Witness PATENT

Printed Legal Name of Witness PATENT
REEL: 031787 FRAME: 0779

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Signature:		Date:	
Legal Name of Inventor:	Jia-Yu Wang		
	Date:		Date:
Witness Signature		Witness Signature	
Printed Legal Name of Witz	ness	Printed Legal Name of Witness	

Printed Legal Name of Witness

DECLARATION AND ASSIGNMENT

Printed Legal Name of Witness

Printed Legal Name of Witness

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The above-identified application was made or authorized to be a contents of the application, including the claims.	made by me, and I have reviewed and understand the
I believe that I am the original inventor or an original joint inve	ntor of a claimed invention in the application.
I am aware of the duty to disclose to the United States Patent an material to patentability as defined in 37 CFR Section 1.56.	d Trademark Office all information known to me to be
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Now, therefore, for good and valuable consideration, the receip one of the undersigned inventors (herein referred to "ASSIGNE and otherwise transfers or has transferred to the ASSIGNEE, its worldwide right, title, and interest in and to the INVENTION, the applications and patents for the INVENTION which may be applications, including all divisionals, continuations, continuations, continuations, including all divisionals, continuations, continuations, and granting of such patents, and further including any right to a damages and profits in respect thereof. In addition, I hereby autopatents, to issue any patent on said improvements or resulting the representatives, and assigns, the entire worldwide right, title, and ASSIGNEE, its successors, legal representatives, and assigns to patents may be granted, as fully and entirely as would have been Assignment not been made; and I agree for myself and my resp further compensation, to execute any and all documents, oaths a related to recording this Assignment or perfecting title to the IN and applications, in ASSIGNEE, its successors, legal representatives, and assigns.	OR"), hereby sells or has sold, assigns or has assigned, as successors, legal representatives, and assigns, the entire he APPLICATION, and any and all other patent plied for or granted therefor in any and all countries and ions-in-part, reissues, reexaminations, renewals, of priority resulting from the filing of such applications sue for past infringement and to recover and retain thorize and request any official whose duty it is to issue therefrom to said ASSIGNEE, its successors, legal and interest in and to the same to be held and enjoyed by the full end of the terms for which any and all such in held and enjoyed by the undersigned had this ective heirs, legal representatives, and assigns, without and instruments and perform all lawful acts reasonably IVENTION, the APPLICATION, and all related patents
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Signature:	Date:
Signature: Thomas P. Russell Legal Name of Inventor: Thomas P. Russell	
Date:	Date:
Witness Signature W	itness Signature Date:

Printed Legal Name of Witness PATENT
REEL: 031787 FRAME: 0783

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Signature:		Date:	
Legal Name of Inventor:	Soojin Park		
	Date:		Date:
Witness Signature		Witness Signature	-
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Signature:		Date:	
Legal Name of Inventor:	Bokyung Kim		
	Date:		Date:
Witness Signature		Witness Signature	
Printed Legal Name of Witr	ness	Printed Legal Name of Witness	and the same of th

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Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereb one of the undersigned inventors (herein referred to "ASSIGNOR"), hereby sells or has sold, assigns and otherwise transfers or has transferred to the ASSIGNEE, its successors, legal representatives, an worldwide right, title, and interest in and to the INVENTION, the APPLICATION, and any and all applications and patents for the INVENTION which may be applied for or granted therefor in any at jurisdictions, including all divisionals, continuations, continuations-in-part, reissues, reexaminations counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of and granting of such patents, and further including any right to sue for past infringement and to reco damages and profits in respect thereof. In addition, I hereby authorize and request any official whose patents, to issue any patent on said improvements or resulting therefrom to said ASSIGNEE, its succespectatives, and assigns, the entire worldwide right, title, and interest in and to the same to be he ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which a patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned Assignment not been made; and I agree for myself and my respective heirs, legal representatives, an further compensation, to execute any and all documents, oaths and instruments and perform all lawfrelated to recording this Assignment or perfecting title to the INVENTION, the APPLICATION, an and applications, in ASSIGNEE, its successors, legal representatives, and assigns.	s or has assigned, and assigns, the entire other patent and all countries and all countries and retain seed that it is to issue cessors, legal and enjoyed by any and all such ed had this d assigns, without all acts reasonably d all related patents
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Signature: Date:	
Signature: Date: Legal Name of Inventor: Thomas P. Russell	
	Date:

Printed Legal Name of Witness PATENT

REEL: 031787 FRAME: 0787

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Signature: Legal Name of Inventor: Soojin Park	Date:
Witness Signature Date:	Witness Signature Date:
Printed Legal Name of Witness	Printed Legal Name of Witness

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Signature: Legal Name of Inventor: Jia-	Yu Wang	Date:	
	Date:		_ Date:
Witness Signature		Witness Signature	
Printed Legal Name of Witness	and the same of th	Printed Legal Name of Witness	···

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Signature: Bokyung Kim	Date: 10/09/20	·73
Tryon Date: 10/09/2013	400	Date: 10/04/2013
Witness Signature	Witness Signature	
ST- Youn, seo	Woong-Pro, Hong	
Printed Legal Name of Witness	Printed Legal Name of Witness	•

PATENT REEL: 031787 FRAME: 0790

RECORDED: 12/16/2013