505461247 05/06/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5508050

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JEONG-HYUN CHO	04/30/2019
CHAO LIU	04/30/2019

RECEIVING PARTY DATA

Name:	REGENTS OF THE UNIVERSITY OF MINNESOTA
Street Address:	600 MCNAMARA ALUMNI CENTER
Internal Address:	200 OAK STREET SE
City:	MINNEAPOLIS
State/Country:	MINNESOTA
Postal Code:	55455-2020

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15482409

CORRESPONDENCE DATA

Fax Number: (612)573-2005

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.

Phone: 6125732000

Email: USPTO.PATENTS@dbclaw.com

Correspondent Name: DICKE, BILLIG & CZAJA Address Line 1: 100 SOUTH FIFTH STREET

Address Line 2: **SUITE 2250**

Address Line 4: MINNEAPOLIS, MINNESOTA 55402

ATTORNEY DOCKET NUMBER:	U639.119.102/20160144	
NAME OF SUBMITTER:	TIMOTHY A. CZAJA	
SIGNATURE:	/Timothy A. Czaja/	
DATE SIGNED:	05/06/2019	

Total Attachments: 6

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PATENT REEL: 049088 FRAME: 0630 505461247

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> PATENT REEL: 049088 FRAME: 0631



University of Minnesota ASSIGNMENT

WHEREAS, I, Jeong-Hyun Cho, have invented certain new and useful improvements in NANOPILLAR-BASED ARTICLES AND METHODS OF MANUFACTURE, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 62/319,652 on April 7, 2016; Provisional application no. 62/320,107 on April 8, 2016; and Utility application no. 15/482,409 on April 7, 2017 (the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignee"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

WHEREAS, I hereby acknowledge an obligation of assignment of the inventions disclosed in the Application(s) to Assignee at the time the invention(s) was made;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including rights of priority under the Paris Convention for the Protection of Industrial Property and the European Patent Convention, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Application(s) and/or otherwise take advantage of the provisions of the Paris Convention.

Attorney Docket Number U639.119.102 UM Case No. 20160144

PATENT

REEL: 049088 FRAME: 0632

Upon said consideration I do hereby covenant and agree with said Assignee, its successors and assigns, that I will not execute in writing or do any act whatsoever conflicting with these presents, and that I or my executors or administrators will at any time upon request, without further or additional consideration, but at the expense of said Assignee, its successors and assigns, execute such additional writings and do such additional acts as said Assignee, its successors and assigns, may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, reissues or extended Letters Patent of the United States, or of any and all foreign countries on said invention, and in enforcing any rights occurring as a result of such application or patents, by giving testimony in any proceedings or transactions involving such applications or patents.

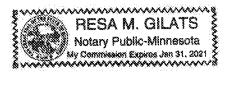
I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto se April , 2019.	et my hand on this day of
	Ca lac
	Jeong-Hyun Cho
COUNTY OF /	
COUNTY OF /	
On this 30 day of 407.	, 2019, before me personally appeared
Jeong-Hyun Cho, to me known to be the person dinstrument and acknowledged that s/he executed the	rescribed in and who executed the foregoing
IN WITNESS WHEREOF, I have hereunto my office, the day and year above written.	affixed my official signature with the seal of
	MM
	Notary Public

ANDREW M. MIKROT
Notary Public-Minnesota
My Commission Expires Jan 31, 2023

Attorney Docket Number U639.119.102 UM Case No. 20160144

N WITNESS WHEREOF, I 2019, on be accepting this assignment.	have hereunto set my hand on this day of half of Assignee Regents of the University of Minnesota
P	Paul B. Savereide Senior Associate General Counsel per Presidential Delegation DA_028016
STATE OF MINNESOTA)
COUNTY OF HENNEPIN)
	be the person described in and who executed the foregoing he executed the same as his/her free act and deed.
IN WITNESS WHEREOF, my office, the day and year above wi	I have hereunto affixed my official signature with the seal of ritten.
	Bengu giles
	Notary Public



Attorney Docket Number U639.119.102 UM Case No. 20160144

REEL: 049088 FRAME: 0634



University of Minnesota ASSIGNMENT

WHEREAS, I, Chao Liu, have invented certain new and useful improvements in NANOPILLAR-BASED ARTICLES AND METHODS OF MANUFACTURE, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 62/319,652 on April 7, 2016; Provisional application no. 62/320,107 on April 8, 2016; and Utility application no. 15/482,409 on April 7, 2017 (the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignee"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

WHEREAS, I hereby acknowledge an obligation of assignment of the inventions disclosed in the Application(s) to Assignee at the time the invention(s) was made;

NOW. THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including rights of priority under the Paris Convention for the Protection of Industrial Property and the European Patent Convention, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Application(s) and/or otherwise take advantage of the provisions of the Paris Convention.

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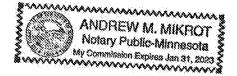
PATENT

REEL: 049088 FRAME: 0635

Upon said consideration I do hereby covenant and agree with said Assignee, its successors and assigns, that I will not execute in writing or do any act whatsoever conflicting with these presents, and that I or my executors or administrators will at any time upon request, without further or additional consideration, but at the expense of said Assignee, its successors and assigns, execute such additional writings and do such additional acts as said Assignee, its successors and assigns, may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, reissues or extended Letters Patent of the United States, or of any and all foreign countries on said invention, and in enforcing any rights occurring as a result of such application or patents, by giving testimony in any proceedings or transactions involving such applications or patents.

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto	set my hand on this day of
u e e e e e e e e e e e e e e e e e e e	Chao Liu
COUNTY OF Harrison)	
On this day of	, 2019, before me personally appeared
Chao Liu, to me known to be the person described and acknowledged that s/he executed the same as hi	in and who executed the foregoing instrument
IN WITNESS WHEREOF, I have hereuntomy office, the day and year above written.	affixed my official signature with the seal of
	UN.
	Notary Public



Attorney Docket Number U639.119.102 UM Case No. 20160144

WITNESS WHEREOF, 2019, on be accepting this assignment.	I have hereunto set my hand on this day of ehalf of Assignee Regents of the University of Minnesota
	Paul B. Savereide Senior Associate General Counsel per Presidential Delegation DA_028016
STATE OF MINNESOTA)
COUNTY OF HENNEPIN	Ś
	2019, before me personally appeared be the person described in and who executed the foregoing he executed the same as his/her free act and deed.
IN WITNESS WHEREOF, my office, the day and year above w	I have hereunto affixed my official signature with the seal of ritten.
	Russ La. Oslate Notary Public
	RESA M. GILATS Notary Public-Minnesota My Commission Expires Jan 31, 2021

Attorney Docket Number U639.119.102 UM Case No. 20160144

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