504539018 09/08/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

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EPAS ID: PAT4585725

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MARK C. HERSAM	07/14/2017
ETHAN B. SECOR	07/19/2017
THEODORE Z. GAO	07/18/2017

RECEIVING PARTY DATA

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State/Country:	ILLINOIS	
Postal Code:	60208	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15644326

CORRESPONDENCE DATA

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NAME OF SUBMITTER:	TRAVIS MCDONNELL
SIGNATURE:	/Travis McDonnell/
DATE SIGNED:	09/08/2017

Total Attachments: 5

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PATENT 504539018 REEL: 043532 FRAME: 0881

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PATENT REEL: 043532 FRAME: 0882 Attorney Docket Nos. **RB 13707 and RB13707-PCT**NU Reference Nos. **2016-075-02 & -03**

ASSIGNMENT

U.S. Serial No: **15/644,326** Filing Date: July 7, 2017

PCT Application Serial No. PCT/US2017/041192 Filing and Submission Date: July 7, 2017

Inventors: Mark C. Hersam; Ethan B. Secor; Theodore Z Gao

States to issue said patents to and in the name of the Assignee.

Title of Patent Applications: Enhanced Conductivity, Adhesion and Environmental Stability

of Printed Graphene Inks with Nitrocellulose

For good and valuable consideration, the receipt and sufficiency of which are hereby agreed, each of the undersigned hereby assigns to Northwestern University, an Illinois not-for-profit corporation, having a place of business at 633 Clark Street, Evanston, Illinois 60208 and its successors and assigns ("Assignee") the entire right, title and interest in and to the inventions of such undersigned disclosed in the applications listed above, and in any and all other applications anywhere in the world which the undersigned may file and/or be named as an inventor of, solely or jointly, on said inventions, in any and all patents which may be obtained on any of said applications and in any and all reissues, reexaminations, supplemental examinations, inter partes reviews, oppositions, post-grant reviews, supplementary protection certificates and/or extensions thereof, including without limitation, the right to bring suit and to claim and retain all damages and/or seek other remedies for the past, present and future infringement of any of the foregoing, the right of priority, including without limitation to claim priority benefit of or to said patent applications, and request the Commissioner for Patents in the United States and similar authorities outside the United

Each of the undersigned states that the applications listed above were made or authorized to be made by him or her. Each of the undersigned believes himself or herself to be the original inventor or a joint inventor with another undersigned of a claimed invention in the applications listed above. Each of the undersigned acknowledges that any willful false statement made by him or her in this paragraph is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five years, or both.

Except in favor of Assignee, each of the undersigned warrants that: (i) he or she is the owner of all its rights, titles and interests herein assigned and has the right to make this unconditional and irrevocable assignment to Assignee without obtaining any approval or permission of a third party; and (ii) there are no outstanding encumbrances, liens, prior assignments, licenses, or other obligations or restrictions on the rights, titles and interests herein assigned.

Page 1 of 5

PATENT REEL: 043532 FRAME: 0883

Upon the request of Assignce and at no expense to the undersigned, each of the undersigned hereby agrees to execute any and all applications on said inventions, including without limitation for the reissue, reexamination, supplementary protection certificate or extension thereof and any oath, declaration or affidavit relating thereto that said Assignee may deem necessary or expedient, and to cooperate to the best of the ability of the undersigned with and perform any and all affirmative acts requested by Assignee to prepare, file, prosecute, maintain, defend, enforce and vest in Assignee the rights, titles and interests assigned herein, including without limitation, preparing and executing statements and giving and producing evidence in support thereof, whereby said rights, titles and interests will be held and enjoyed by said Assignce to the full end of the term for which said patents may be granted as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

Undersigned (ASSIGNORS):	
1/1/2-	7/14/17
Inventor Name: Mark C. Hersam	DATE
State of Illinois	
County of Cook ss.	
subscribed to the foregoing instrument, and a her free and voluntary act and for the uses as	before me, a Notary Public in and for the ne personally known to be the same person whose name is acknowledged that he or she executed said instrument as his or and purposes therein expressed. NOTARY PUBLIC
[NOTARY SEAL]	My Commission Expires: 10/きシンロム
[NOTARY SEAL] OFFICIAL SEAL MOLLY E SCANLON NOTARY PUBLIC, STATE OF ILLINOIS My Commission Expires Oct 23, 2020	(continued on next page)

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(continued on next page)

U.S. Serial No: 15/644,326

Filing Date: July 7, 2017

PCT Application Serial No. PCT/US2017/041192 Filing and Submission Date: July 7, 2017

inventors: Mark C. Hersam; Ethan B. Secor; Theodore Z Gao

Title of Patent Applications: Enhanced Conductivity, Adhesion and Environmental Stability

of Printed Graphene Inks with Nitrocellulose

<u>Undersigned (ASSIGNORS) continued:</u>

Inventor Name: Ethan B. Secor DATE

State of Jiline;5
County of Cook ss.

On this 19 day of July , 2617, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.

[NOTARY SEALT

My Commission Expires: 10/23/2020

OFFICIAL SEAL **MOLLY E SCANLON** NOTARY PUBLIC, STATE OF ILLINOIS My Commission Expires Oct 23, 2020 Filing Date: July 7, 2017

My Commission Expires: 3-29-19

PCT Application Serial No. PCT/US2017/041192 Filing and Submission Date: July 7, 2017 Inventors: Mark C. Hersam; Ethan B. Secor; Theodore Z Gao Title of Patent Applications: Enhanced Conductivity, Adhesion and Environmental Stability of Printed Graphene Inks with Nitrocellulose Undersigned (ASSIGNORS) continued: Inventor Name: Theodore Z. Gao State of CALIFORNIA County of SANTA CLARA On this 18 day of July . 20 before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and any act angular graphing and purposes therein expressed Commission # 2101923 Notary Public - California Santa Clara County My Comm. Expires Mar 29, 2019 NOTARY PILE

U.S. Serial No: 15/644.326

[NOTARY SEAL]

Attorney Docket Nos. RB 13707 and RB13707-PCT NU Reference Nos. 2016-075-02 & -03

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ASSIGNEE ACCEPTANCE: Northwestern University

On behalf of Northwestern University, Assignee, the authorized signatory below, hereby confirms Assignee's acceptance of all rights, privileges, titles and interests conveyed by this Assignment.

Authorized Signature:

Date:

Printed Name

Beverly R. Milligan, Invention Specialist or

Nicole A. Janovick, Ph.D., J.D., Invention Manager

Department: Innovation and New Ventures Office (INVO)

RECORDED: 09/08/2017