

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT3174675

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHANGYAO CHEN	12/05/2014
JAMES HONE	12/05/2014
SUNWOO LEE	12/05/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK
<b>Street Address:</b>	412 LOW MEMORIAL LIBRARY
<b>Internal Address:</b>	535 WEST 116TH STREET
<b>City:</b>	NEW YORK
<b>State/Country:</b>	NEW YORK
<b>Postal Code:</b>	10027
<b>PROPERTY NUMBERS Total: 2</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14522534
Application Number:	61894800
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(212)408-2501
<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>	(212)408-2500
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<b>Correspondent Name:</b>	BAKER BOTTS L.L.P.
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<b>Address Line 4:</b>	NEW YORK, NEW YORK 10112
<b>ATTORNEY DOCKET NUMBER:</b>	070050.5331
<b>NAME OF SUBMITTER:</b>	FRANCES ENG
<b>SIGNATURE:</b>	/Frances Eng/
<b>DATE SIGNED:</b>	01/08/2015
<b>Total Attachments: 3</b>	

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source=070050 5331 unexecuted assignment\_signed#page3.tif

**ASSIGNMENT**

WHEREAS, WE, **Changyao Chen**, a citizen of China, having a residence address at 1717 Ridge Avenue, Apt. 623, Evanston, IL 60201; **James Hone**, a citizen of the United States, having a mailing address at 500 West 120<sup>th</sup> Street, Mudd 220, New York, NY 10027 and **Sunwoo Lee**, a citizen of the Republic of Korea, having a mailing address at 500 West 120<sup>th</sup> Street, Mudd 220, New York, NY 10027 (hereinafter “**ASSIGNORS**”), have made an invention entitled “**SYSTEMS AND METHODS FOR GRAPHENE MECHANICAL OSCILLATORS WITH TUNABLE FREQUENCIES**” as set forth and described in U.S. Application No. 14/522,534 filed October 23, 2013 and United States Provisional Application No. 61/894,800 filed October 23, 2013; and

WHEREAS, **THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK** (hereinafter “**ASSIGNEE**”), having its principal place of business at **412 Low Memorial Library, 535 West 116th Street, New York, NY, 10027**, is desirous of acquiring the whole right, title and interest in and to said application for Letters Patent, and any continuations, divisions, extensions, substitutions, reissues and reexaminations thereof;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that I, the said **ASSIGNORS**, for and in consideration of valuable considerations unto us moving from said **ASSIGNEE**, at or before the ensealing and delivery of these presents, the receipt and sufficiency of which is hereby acknowledged, have sold, assigned, transferred and conveyed and by these presents do sell, assign, transfer and convey, unto said **ASSIGNEE**, its successors and assigns, the entire right, title and interest in and to the said invention entitled “**SYSTEMS AND METHODS FOR GRAPHENE MECHANICAL OSCILLATORS WITH TUNABLE FREQUENCIES**” and any and all improvements thereto, and in and to said application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, and in and to any other applications based in whole or in part on any of the foregoing, TO HAVE AND TO HOLD THE SAME to the full end of the term or terms for which any and all said Letters Patent may be granted;

AND WE, the said **ASSIGNORS**, do hereby authorize and request the Commissioner of Patents and Trademarks to issue the said Letters Patent of the United States to said **ASSIGNEE**, as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said **ASSIGNEE**, its successors and assigns;

AND WE, the said **ASSIGNORS**, for the considerations aforesaid, do hereby covenant and agree to and with said **ASSIGNEE**, its successors and assigns, that we have the full power to make this assignment, and that the rights assigned are not encumbered by any grant, license or right heretofore given, and that we, our executors or administrators, shall and will do all lawful acts and things and make, execute and deliver without further compensation, any and all other instruments in writing, further applications, papers, affidavits, powers of attorney, assignments, and other documents which, in the opinion of counsel for said **ASSIGNEE**, its successors and

assigns, may be required or necessary more effectively to secure to and vest in said **ASSIGNEE**, its successors and assigns, the entire right, title and interest in and to said invention and improvements, applications, Letters Patent, rights, titles, benefits, privileges, and advantages hereby sold, assigned, transferred and conveyed, and that we will sign any applications for reissue which may be desired by the owner of the patent or patents which may be issued for the said invention or improvements.

IN WITNESS WHEREOF, I, the said **ASSIGNOR** have executed this Assignment this  
5th day of December, 2014.



**Changyao Chen**

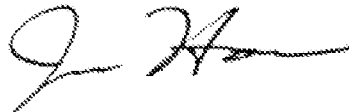


Witness Signature


Sunwoo Lee

Witness Name

IN WITNESS WHEREOF, I, the said **ASSIGNOR** have executed this Assignment this  
5th day of December, 2014.



**James Hone**

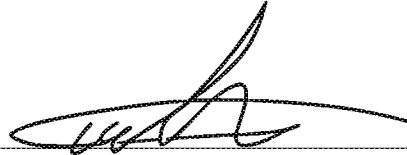


Witness Signature

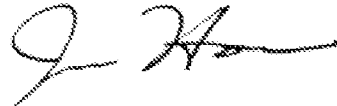
Sunwoo Lee

Witness Name

IN WITNESS WHEREOF, I, the said **ASSIGNOR** have executed this Assignment this  
\_\_\_\_ 5th \_\_\_\_ day of \_\_\_\_ December \_\_\_\_, 2014 \_\_\_\_.



\_\_\_\_\_  
Sunwoo Lee



\_\_\_\_\_  
Witness Signature

James Hone

\_\_\_\_\_  
Witness Name