

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
CHE-WEI YANG	06/14/2016
CHI-WEN LIU	06/14/2016
HAO-HSIUNG LIN	06/14/2016
LING-YEN YEH	06/16/2016
RECEIVING PARTY DATA	
Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
Street Address:	NO. 8, LI-HSIN RD. 6
Internal Address:	SCIENCE-BASED INDUSTRIAL PARK
City:	HSIN-CHU
State/Country:	TAIWAN
Postal Code:	300-77
Name:	NATIONAL TAIWAN UNIVERSITY
Street Address:	NO. 1, SEC. 4, ROOSEVELT ROAD
City:	TAIPEI
State/Country:	TAIWAN
Postal Code:	10617
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15652001
CORRESPONDENCE DATA	
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<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>	
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ATTORNEY DOCKET NUMBER:	20160035/24061.3352US02
NAME OF SUBMITTER:	JANIE MARTINEZ-HOLM
SIGNATURE:	/Janie Martinez-Holm/
DATE SIGNED:	07/18/2017
Total Attachments: 2 source=24061-3352US02_Assignment#page1.tif source=24061-3352US02_Assignment#page2.tif	

ASSIGNMENT

WHEREAS, we,

- (1) Che-Wei Yang of New Taipei City, Taiwan (R.O.C.)
- (2) Chi-Wen Liu of Hsinchu, Taiwan (R.O.C.)
- (3) Hao-Hsiung Lin of Taipei City, Taiwan (R.O.C.)
- (4) Ling-Yen Yeh of Hsinchu City, Taiwan (R.O.C.)

have invented certain improvements in

**ONE-DIMENSIONAL NANOSTRUCTURE GROWTH ON
GRAPHENE AND DEVICES THEREOF**

for which we have executed an application for Letters Patent of the United States of America,

 X of even date filed herewith; and

_____ filed on _____ and assigned application number _____; and

WHEREAS, we authorize the attorney of record to update this document to include Patent Office information as deemed necessary (i.e., filing date, serial number, etc.);

WHEREAS, TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD., ("TSMC"), No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China and NATIONAL TAIWAN UNIVERSITY ("NTU"), No. 1, Sec. 4, Roosevelt Road, Taipei, 10617 Taiwan, Republic of China are desirous of obtaining the entire right, title, and interest in, to and under the said invention and the said application in the United States of America and in any and all countries foreign thereto;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and other good and valuable consideration, we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto said TSMC and NTU, its successors, legal representatives, and assigns to NTU, sixty percent (60%) and TSMC forty percent (40%) the right, title, and interest in, to and under the said invention, and the said application, and all divisional, renewal, substitutional, and continuing applications thereof, and all Letters Patent of the United States of America which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may be filed for said invention in any country or countries foreign to the United States of America, and all extensions, renewals, and reissues thereof, and all prior patents and patent applications from which a filing priority of the above-described patent application may be obtained, including the right to collect past damages; and we hereby authorize and request the Commissioner of Patents of the United States of America, and any official of any country or countries foreign to the United States of America, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said invention to the said TSMC and NTU, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

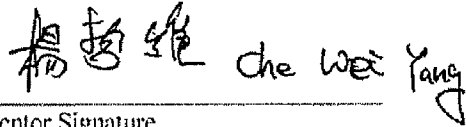
AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to said TSMC and NTU, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, renewal, substitutional, continuing, and reissue applications, make all rightful declarations and/or oaths and generally do everything possible to aid the said TSMC and NTU, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

Inventor Name: Che-Wei Yang

Residence Address: 6F., No.85, Ln. 136, Sec. 3, Zhongshan Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)

Dated: 2016/6/14


Inventor Signature

Inventor Name: Chi-Wen Liu

Residence Address: 3F, No. 561, Nan-Da Rd., Hsinchu, Taiwan (R.O.C.)

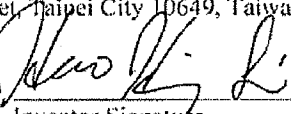
Dated: Chi-Wen 2016/6/14


Inventor Signature

Inventor Name: Hao-Hsiung Lin

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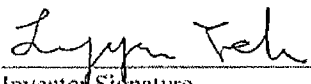
Dated: 2016/6/14


Inventor Signature

Inventor Name: Ling-Yen Yeh

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Dated: 2016/6/16


Inventor Signature