506176234 07/28/2020

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JUI-CHIEN HUANG	05/25/2020
KUO-CHENG CHIANG	05/25/2020
CHIH-HAO WANG	05/26/2020
SHI NING JU	05/25/2020
GUAN-LIN CHEN	05/25/2020

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
Street Address:	8, LI-HSIN RD. 6
Internal Address:	HSINCHU SCIENCE PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300-78

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16941504

CORRESPONDENCE DATA

Fax Number: (214)200-0853

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: 214-651-5000

Email: ipdocketing@haynesboone.com

HAYNES AND BOONE, LLP (24061) IP SECTION **Correspondent Name:**

2323 VICTORY AVENUE Address Line 1:

Address Line 2: SUITE 700

DALLAS, TEXAS 75219 Address Line 4:

ATTORNEY DOCKET NUMBER: 2019-0230/24061.4096US01	
NAME OF SUBMITTER:	LINDA INGRAM
SIGNATURE:	/Linda Ingram/
DATE SIGNED:	07/28/2020

PATENT REEL: 053334 FRAME: 0460 506176234

Total Attachments: 3

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PATENT REEL: 053334 FRAME: 0461

Docket No.: P20190230US00 /24061.4096US01

Customer No.: 000042717

ASSIGNMENT

WHEREAS, we.

(1)	Jui-Chien Huang	of	Hsinchu City 300, Taiwan (R.O.C.)
(2)	Kuo-Cheng Chiang	of	Hsinchu County 302, Taiwan (R.O.C.)
(3)	Chih-Hao Wang	of	Hsinchu County 308, Taiwan (R.O.C.)
(4)	Shi Ning Ju	of	Hsinchu City 300, Taiwan (R.O.C.)
(5)	Guan-Lin Chen	of	Hsinchu County 308, Taiwan (R.O.C.)

have invented certain improvements in

IMPROVED SPACER STRUCTURE FOR NANO-SHEET-BASED DEVICES

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

X	of even date filed herewith; and
X	filed on July 28, 2020 and assigned application number 16/941,504; 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"), 8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu, Taiwan 300-78, Republic of China. is 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 the said TSMC, its successors, legal representatives, and assigns, the entire 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, 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.

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AND WE HEREBY further covenant and agree that we will communicate to said TSMC, 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, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

Inventor Name:	Jui-Chien Huang	
Residence Address:	6F5, No. 518, Puding Rd., Eas Hsinchu City 300, Taiwan (R.O	
Dated: 2020, S.	25	Jw- Gren Huang. Inventor Signature
Inventor Name:	Kuo-Cheng Chiang	
Residence Address:	5F., No.8-3, Guangming 9th Rd Hsinchu County 302, Taiwan (F	
Dated: 0770.	5.7	Invertor Signature
***************************************		Inventor Signature
Inventor Name:	Chih-Hao Wang	
Residence Address:	No.9, Aly. 22, Ln. 80, Songcui Hsinchu County 308, Taiwan, (
Dated: 5/26/20	: 2/0	Chih-Hao Wang Inventor Signature
		invenor signature
Inventor Name:	Shi Ning Ju	
Residence Address:	10F., No.306, Ln. 1050, Mingh Hsinchu City 300, Taiwan (R.O	
Dated: ンジジ、\	. 26	Shalling Ju
		Inventor Signature

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Customer No.: 000042717

Inventor Name: Guan-Lin Chen

Residence Address: No. 168, Yuangu 2nd Rd., Baoshan Township

Hsinchu County 308, Taiwan (R.O.C.)

Dated: 5/29/2020 Granton Chen

Inventor Signature

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RECORDED: 07/28/2020

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