

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT7018288

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the ASSIGNEES previously recorded on Reel 052323 Frame 0430. Assignor(s) hereby confirms the ASSIGNEES ARE TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD. AND TSMC NANJING COMPANY, LIMITED.

## CONVEYING PARTY DATA

Name	Execution Date
MIN HAN HSU	03/25/2020
CHUN-CHANG CHEN	03/25/2020
JUNG-CHIH TSAO	03/25/2020

## RECEIVING PARTY DATA

<b>Name:</b>	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
<b>Street Address:</b>	8, LI-HSING RD. 6, HSINCHU SCIENCE PARK
<b>City:</b>	HSINCHU
<b>State/Country:</b>	TAIWAN
<b>Postal Code:</b>	300-78
<b>Name:</b>	TSMC NANJING COMPANY, LIMITED
<b>Street Address:</b>	16, ZIFENG ROAD, PUKOU ECONOMIC DEVELOPMENT ZONE, JIANGSU PROVINCE
<b>City:</b>	NANJING
<b>State/Country:</b>	CHINA

## PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16801706

## CORRESPONDENCE DATA

Fax Number: (703)518-5499

*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: 7036841111

Email: tsmc@ipfirm.com

Correspondent Name: HAUPTMAN HAM LLP (TSMC)

Address Line 1: 2318 MILL ROAD

Address Line 4: ALEXANDRIA, VIRGINIA 22314

<b>ATTORNEY DOCKET NUMBER:</b>	T5057-1408
<b>NAME OF SUBMITTER:</b>	RANDY A. NORANBROCK

PATENT

<b>SIGNATURE:</b>	/Randy A. Noranbrock/
<b>DATE SIGNED:</b>	11/10/2021
<b>Total Attachments: 5</b> source=EfiledCorrectedAssgn2021-11-10#page1.tif source=EfiledCorrectedAssgn2021-11-10#page2.tif source=EfiledCorrectedAssgn2021-11-10#page3.tif source=EfiledCorrectedAssgn2021-11-10#page4.tif source=EfiledCorrectedAssgn2021-11-10#page5.tif	

76 (3)

Docket No. T5057-1408  
P20182130US00

NP-25814-0-US-83

### ASSIGNMENT

In consideration of the premises and other good and valuable consideration in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned,

- 1) Min Han HSU
- 2) Chun-Chang CHEN
- 3) Jung-Chih TSAO

who has made a certain new and useful invention, hereby sells, assigns and transfers unto **TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.**, having a place of business at No. 8, Li-Hsin Rd. VI, Hsinchu Science Park, Hsinchu 300, Taiwan R.O.C. and **TSMC NANJING COMPANY, LIMITED**, having a place of business at 16, Zifeng Road, Pukou Economic Development Zone, Nanjing, Jiangsu Province, China its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled

**POISONED METAL LAYER WITH SLOPED SIDEWALL FOR MAKING DUAL DAMASCENE INTERCONNECT**

(a) for which an application for United States Letters Patent was filed on 2020-02-26, and identified by United States Patent Application No. 16/801,706, or

(b) for which an application for United States Letters Patent was executed on \_\_\_\_\_,

and the undersigned hereby authorizes and requests the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefore and any and all extensions, divisions, reissues, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

AND the undersigned hereby agrees to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

SIGNED on the date indicated aside my signature:

1) <u>Min Han Hsu</u> Name: Min Han HSU	<u>2020. 3. 25</u> Date:
2) <u>Chun-Chang Chen</u> Name: Chun-Chang CHEN	<u>2020. 3. 25</u> Date:
3) <u>Jung-Chih Tsao</u> Name: Jung-Chih TSAO	<u>2020. 3. 25</u> Date:

**United States Patent and Trademark Office**

Home | Site Index | Search | Guides | Contacts | eBusiness | eBiz alerts | News | Help

*Electronic Patent Assignment System***Confirmation Receipt**

Your assignment has been received by the USPTO.  
The coversheet of the assignment is displayed below:

**PATENT ASSIGNMENT COVER SHEET**

Electronic Version v1.1  
Stylesheet Version v1.2

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	MIN HAN HSU	03/25/2020
	CHUN-CHANG CHEN	03/25/2020
	JUNG-CHIH TSAO	03/25/2020
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.	TSMC NANJING COMPANY, LIMITED
<b>Street Address:</b>	NO. 8, LI-HSIN RD. VI, HSINCHU SCIENCE PARK	16 Zifeng Road, Pokou
<b>City:</b>	HSINCHU	Economic Development Zone
<b>State/Country:</b>	TAIWAN	Nanjing, Jiangsu Province
<b>Postal Code:</b>	300	CHINA
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	<b>Application Number:</b>	16801706
<b>CORRESPONDENCE DATA</b>		

**PATENT**  
**REEL: 058099 FRAME: 0613**

**Fax Number:** (703)518-5499  
**Phone:** 7036841111  
**Email:** tsmc@ipfirm.com  
*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.*  
**Correspondent Name:** HAUPTMAN HAM, LLP (TSMC)  
**Address Line 1:** 2318 MILL ROAD  
**Address Line 2:** SUITE 1400  
**Address Line 4:** ALEXANDRIA, VIRGINIA 22314

**ATTORNEY DOCKET NUMBER:**

T5057-1408

**NAME OF SUBMITTER:**

RANDY A. NORANBROCK

**Signature:**

/Randy A. Noranbrock/

**Date:**

04/06/2020

**Total Attachments: 1**

source=EfiledAssgn2020-04-06#page1.tif

**RECEIPT INFORMATION**
**EPAS ID:**

PAT6048653

**Receipt Date:**

04/06/2020

[Return to home page](#)

| [HOME](#) | [INDEX](#) | [SEARCH](#) | [eBUSINESS](#) | [CONTACT US](#) | [PRIVACY STATEMENT](#)



**UNITED STATES PATENT AND TRADEMARK OFFICE**

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

APRIL 7, 2020

PTAS

HAUPTMAN HAM, LLP (TSMC)  
2318 MILL ROAD  
SUITE 1400  
ALEXANDRIA, VA 22314

**506001943**

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT RECORDATION BRANCH OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE ASSIGNMENT RECORDATION BRANCH AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT RECORDATION BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 04/06/2020

REEL/FRAME: 052323/0430  
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: T5057-1408

ASSIGNOR:

HSU, MIN HAN

DOC DATE: 03/25/2020

ASSIGNOR:

CHEN, CHUN-CHANG

DOC DATE: 03/25/2020

ASSIGNOR:

TSAO, JUNG-CHIH

DOC DATE: 03/25/2020

ASSIGNEE:

TAIWAN SEMICONDUCTOR MANUFACTURING  
COMPANY, LTD.  
NO. 8, LI-HSIN RD. VI, HSINCHU  
SCIENCE PARK  
HSINCHU, TAIWAN 300

TSMC NANJING COMPANY, LIMITED

16 Zifeng Road, Pukou Economic Development Zone

Nanjing, Jiangsu Province, CHINA

APPLICATION NUMBER: 16801706

FILING DATE: 02/26/2020

PATENT NUMBER:

ISSUE DATE:

TITLE: POISONED METAL LAYER WITH SLOPED SIDEWALL FOR MAKING DUAL  
DAMASCENE INTERCONNECT

ASSIGNMENT RECORDATION BRANCH  
PUBLIC RECORDS DIVISION