PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT6320919

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RU-GUN LIU	10/12/2019
CHIH-MING LAI	01/02/2020
WEI-LIANG LIN	06/01/2020
YUNG-SUNG YEN	06/17/2020
KEN-HSIEN HSIEH	01/03/2020
CHIN-HSIANG LIN	01/06/2020

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
Street Address:	NO.8, LI-HSIN RD. 6, SCIENCE BASED INDUSTRIAL PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17034043

CORRESPONDENCE DATA

Fax Number: (202)756-8087

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: 2027568000
Email: lcruz@mwe.com, ipdocketmwe@mwe.com, WDCIPPTSClerks@mwe.com
Correspondent Name: MCDERMOTT WILL & EMERY LLP
Address Line 1: THE MCDERMOTT BUILDING
Address Line 2: 500 NORTH CAPITOL STREET, N.W.
Address Line 4: WASHINGTON, D.C. 20001

ATTORNEY DOCKET NUMBER:	095714-1296
NAME OF SUBMITTER:	LYNN CRUZ
SIGNATURE:	/Lynn Cruz/
DATE SIGNED:	09/28/2020

Total Attachments: 7

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Attorney Docket No. 095714-0560 (P20180156US00)

NP-23230-0-US-B6.

COMBINED DECLARATION AND ASSIGNMENT FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

I believe I am the original or an original joint inventor of a claimed invention in the application for which a patent is sought on the invention entitled:

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICES

which application is:

☒ attached, or

☐ United States application number or PCT international application number ________________ filed on ________________

The above-identified application was made or authorized to be made by me.

In the event that the filing date and/or application number are not entered above at the time I execute this document, and if such information is deemed necessary, I hereby authorize and request the registered practitioners of **McDermott Will & Emery LLP**, associated with the Customer Number **20277**, to insert above the filing date and/or application number of the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I hereby assign to

TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
No. 8, Li-Hsin Rd. 6, Science Based Industrial Park, Hsinchu, Taiwan 300

(hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention described in the application identified in this document.

I hereby confirm any prior assignment to Assignee, and to the extent that I have not already done so, agree to assign, and hereby do, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by the undersigned had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

I hereby covenant and agree to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

I hereby covenant that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment.

Legal name of inventor **Ru-Gun Liu**	
Inventor's signature	Date

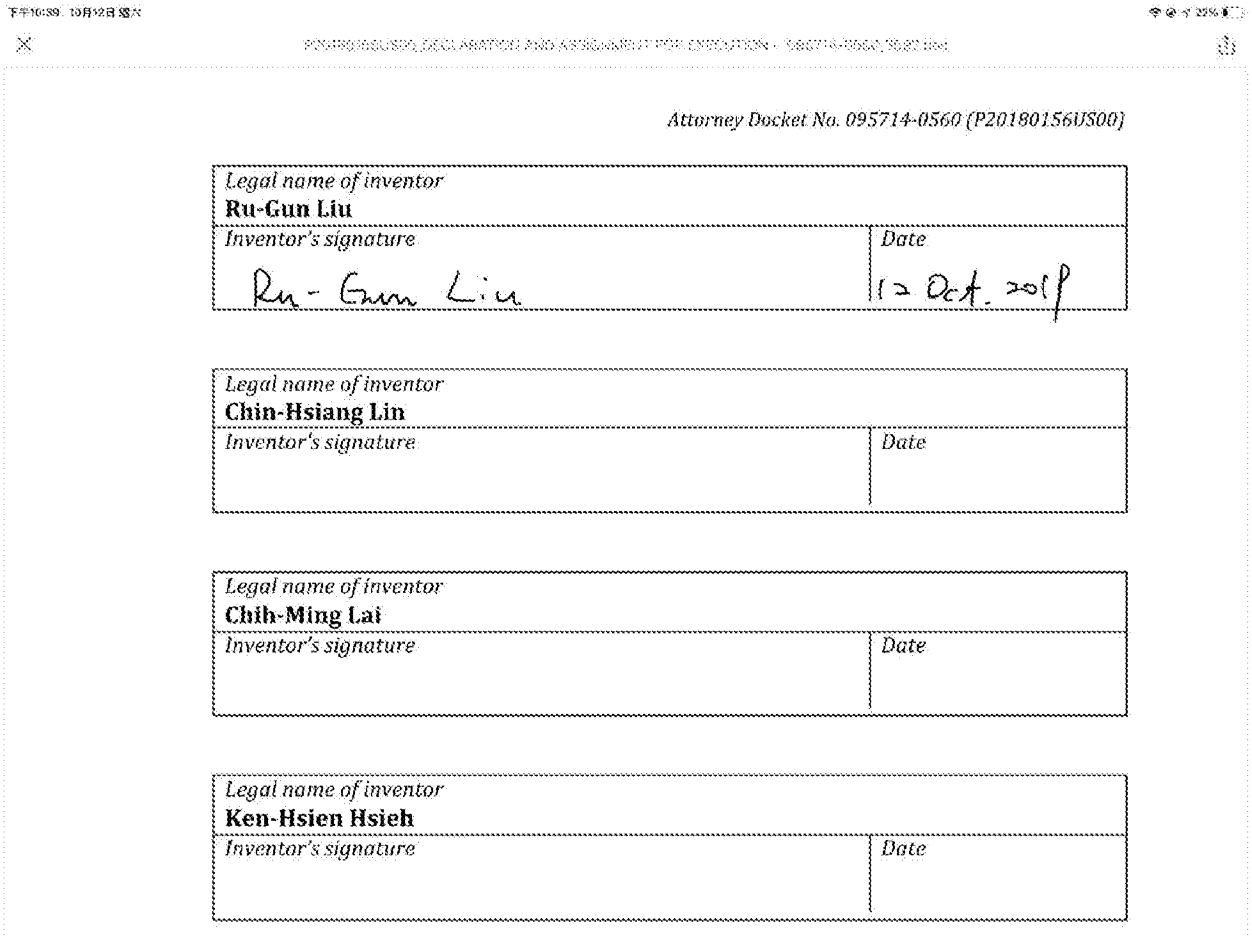
Legal name of inventor **Chin-Hsiang Lin**	
Inventor's signature	Date 2020/1/6.

Legal name of inventor **Chih-Ming Lai**	
Inventor's signature	Date

Legal name of inventor **Ken-Hsien Hsieh**	
Inventor's signature Ken-Hsien Hsieh	Date 2020-01-03

Legal name of inventor **Wei-Liang Lin**	
Inventor's signature	Date

Legal name of inventor **Yung-Sung Yen**	
Inventor's signature	Date



Attorney Docket No. 095714-0560 (P20180156US00)

Legal name of inventor **Ru-Gun Liu**	
Inventor's signature Ru-Gun Liu	*Date* 12 Oct. 2019

Legal name of inventor **Chin-Hsiang Lin**	
Inventor's signature	*Date*

Legal name of inventor **Chih-Ming Lai**	
Inventor's signature	*Date*

Legal name of inventor **Ken-Hsien Hsieh**	
Inventor's signature	*Date*

Legal name of inventor **Ru-Gun Liu**	
Inventor's signature	Date

Legal name of inventor **Chin-Hsiang Lin**	
Inventor's signature	Date

Legal name of inventor **Chih-Ming Lai**	
Inventor's signature Chih-Ming Lai	Date 2020. 01. 02

Legal name of inventor **Ken-Hsien Hsieh**	
Inventor's signature	Date

Legal name of inventor **Wei-Liang Lin**	
Inventor's signature	Date

Legal name of inventor **Yung-Sung Yen**	
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Inventor's signature	Date

Legal name of inventor **Wei-Liang Lin**	
Inventor's signature 林 [illegible] Weiliang. Lin	Date 20'0601.

Legal name of inventor **Yung-Sung Yen**	
Inventor's signature	Date

Legal name of inventor
Ru-Gun Liu

Inventor's signature

Date

Legal name of inventor
Chin-Hsiang Lin

Inventor's signature

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Inventor's signature

Date

Legal name of inventor
Wei-Liang Lin

Inventor's signature

Date

Legal name of inventor
Yung-Sung Yen

Inventor's signature
Yung-Sung Yen

Date
2020.06.19