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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YING-CHIEH MENG	03/11/2020
CHUI-YA PENG	03/20/2020
SHIH-HAO LIN	03/19/2020

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:	16837724

CORRESPONDENCE DATA

Fax Number: (206)682-6031

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: 206-622-4900

Email: CircleR@seedip.com

SEED IP LAW GROUP LLP - MICHELLE LIU **Correspondent Name:**

Address Line 1: 701 FIFTH AVENUE

Address Line 2: **SUITE 5400**

Address Line 4: SEATTLE, WASHINGTON 98104

ATTORNEY DOCKET NUMBER:	890102.512
NAME OF SUBMITTER:	SHI LIU
SIGNATURE:	/Shi Liu/
DATE SIGNED:	04/03/2020

Total Attachments: 4

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TSMC: P20191658US00

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119-26738-0-05-84

ASSIGNMENT

Application Number: 16/837,724

Filing Date: April 1, 2020

Application Country/Region: United States of America

Application Title: ION IMPLANTER TOXIC GAS DELIVERY SYSTEM

Assignee: Taiwan Semiconductor Manufacturing Co., Ltd.

Assignee being a company, corporation, or juristic entity of: Republic of China (R.O.C.)

Assignee's principal place of business: 8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu, Taiwan

300-78 R.O.C.

I, the below identified and undersigned inventor or co-inventor, as the case may be, for and in consideration of good and valuable consideration, the receipt, sufficiency, and adequacy of which are hereby acknowledged, hereby transfer and assign to Assignee, its legal representatives, successors, and assigns, my entire right, title, and interest in and to the inventions for which the above identified patent application is made and describes (hereinafter referred to as "the Patent Rights"), together with any and all patents or patent applications anywhere worldwide to which any of the Patent Rights directly or indirectly claims priority, including but not limited to provisional applications thereof, or for which any of the Patent Rights directly or indirectly forms a basis for priority, together with all existing and/or future continuations, continuations-in-part, continuing prosecution applications, requests for continuing examinations, divisions, reissues, reexaminations, extensions, registrations, and foreign counterparts of any item in any of the foregoing, together with the right to sue for and be entitled to any damages, injunctive relief, and any other remedies of any kind for past, current, and future infringement thereof, together with all rights worldwide in the Patent Rights; said entire right, title, and interest, to be held and enjoyed by the Assignce for its own use and enjoyment and for the use and enjoyment of their legal representatives, successors, and assigns to the full end of the term for which the aforementioned rights may be granted anywhere in the world,

I hereby further agree to assist in and execute all documents needed now or in the future to perfect, obtain, and secure the aforementioned rights to Assignee, its legal representatives, successors, and assigns, for any jurisdiction in the world. At the expense of Assignee, or its legal representatives, successors, or assigns, I agree to assist in any legal proceedings, sign all lawful papers, make all lawful oaths, and generally do everything possible to aid Assignee, its legal representatives, successors, and assigns, to enforce the aforementioned rights in any and all countries and regions worldwide.

I hereby grant Assignee, along with the following Assignee representatives, the power to insert in this Assignment any further identification that may be necessary or desirable in order to comply with the rules for recordation of this document any place in the world: All practitioners at Customer Number 00500.

Docket Number: 890102.512

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If there are co-inventors listed below, the signatures of all the inventors need not appear on the same page, and each inventor may sign this Assignment in multiple counterparts, such that each separately signed counterpart of this Assignment constitutes an original Assignment for the inventor(s) that signed such counterpart.

Inventor Name	Inventor Signature	Date Signed mm/dd/year
Ying-Chieh MENG	Ging-Chah Mang	83/11/803 ₀
Chui-Ya PENG	√	
Shih-Hao LIN		

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Docket Number: 890102.512

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TSMC: P20191658US00

If there are co-inventors listed below, the signatures of all the inventors need not appear on the same page, and each inventor may sign this Assignment in multiple counterparts, such that each separately signed counterpart of this Assignment constitutes an original Assignment for the inventor(s) that signed such counterpart.

Investor Name	Inventor Signature	Date Signed mm/dd/year
Ying-Chieh MENG		
Chui-Ya PENG	Chui-Ya PENG	03/20/2020
Shih-Hao LIN		

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Docket Number: 890102,512

TSMC: P20191658US00

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Inventor Name	Inventor Signature	Date Signed mm/dd/year
Ying-Chieh MENG		
Chui-Ya PENG		
Shih-Hao LIN	THE FILE	0311015050

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Docket Number: 890102,512

RECORDED: 04/03/2020