505113173 09/26/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WEI-CHAO CHIU	02/02/2016
CHIH-CHIEN WANG	02/02/2016
FENG-JIA SHIU	02/02/2016
CHING-SEN KUO	02/04/2016
CHUN-WEI CHANG	02/02/2016
KAI TZENG	02/02/2016

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
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Internal Address:	HSINCHU SCIENCE PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300-78

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16142681

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ATTORNEY DOCKET NUMBER:	2015-1321/24061.3328US02
NAME OF SUBMITTER: JANINE OLINARES	
SIGNATURE:	/Janine Olinares/
DATE SIGNED: 09/26/2018	

505113173 PATENT REEL: 046981 FRAME: 0277

Total Attachments: 3

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PATENT REEL: 046981 FRAME: 0278

Docket No.: 20151321US1/24061.3328US1

Customer No.: 42717

ASSIGNMENT

WHE	REAS, we,		
(1)	Wei-Chao Chiu	of	No. 168, Park Ave. II, Hsinchu Science Park Hsinchu 300-75, Taiwan, R.O.C.
(2)	Chih-Chien Wang	of	No. 6-5, Lane 518, Sec. 3, Jhongshan Rd., Changhua County Changhua City 500, Taiwan, R.O.C.
(3)	Feng-Jia Shiu	of	No. 3, Alley 22, Lane 289, Syuefu E. Rd., Hsinchu County Jhudong Township 310, Taiwan, R.O.C.
(4)	Ching-Sen Kuo	of	3F., No. 11, Lane 14, Huaide St. Beitou District Taipei City 112, Taiwan, R.O.C.
(5)	Chun-Wei Chang	of	No. 38, Ln. 58, Yude Rd. Shanhua Dist. Tainan City 741, Taiwan, R.O.C.
(6)	Kai Tzeng	of	Ping-Pong Nei-Pui Country, Li-Qien Road No. 108 Hsin-Chu, Taiwan, R.O.C.

have invented certain improvements in

METHOD OF USING A SURFACTANT-CONTAINING SHRINKAGE MATERIAL TO PREVENT PHOTORESIST PATTERN COLLAPSE CAUSED BY CAPILLARY FORCES

for which we have filed an application for Letters Patent of the United States of America on March 7, 2016, and assigned U.S. Serial number $\frac{15/062,956}{15/062,956}$; 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, 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

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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.

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.

nventor	Name:	Wei-Chao	Chiu

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Dated:	2016/2/2	Wei-Chau Chiu
***		Inventor Signature

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