PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
CHIEN-WEI WANG	01/29/2010
MING-FENG SHIEH	01/29/2010
CHING-YU CHANG	01/29/2010

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.		
Street Address:	NO. 8, LI-HSIN RD. 6		
Internal Address:	SCIENCE-BASED INDUSTRIAL PARK		
City:	HSIN-CHU		
State/Country:	TAIWAN		
Postal Code:	300-77		

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14727317

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NAME OF SUBMITTER:	DAVID M. O'DELL
SIGNATURE:	/David M. O'Dell/
DATE SIGNED:	02/08/2016

Total Attachments: 2

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PATENT 503683393 REEL: 037681 FRAME: 0038

Docket No.: 2009-0234 / 24061.1368

Customer No.: 42717

ASSIGNMENT

WHEREAS, we,

(1)	Chien-Wei Wang	of	No. 2, Alley 74, Lane 296, Minsheng Road Wufong Township, Taichung County 413, Taiwan, R.O.C
(2)	Ming-Feng Shieh	of	No. 68, Lane 186, Shenglong Street Yongkang City, Tainan County 710, Taiwan, R.O.C.
(3)	Ching-Yu Chang	of	No. 17, Hsinchen Road Yuansun Village, Yilang County 264, Taiwan, R.O.C.

have invented certain improvements in

METHOD AND APPARATUS OF PATTERNING A SEMICONDUCTOR DEVICE

for which we filed an application for Letters Patent of the United States of America on <u>December 30, 2009</u>, as U.S. Serial No. 12/649,462; and

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd., ("TSMC"), No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, R.O.C. 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:	Chien-Wei Wang		
Residence Address:	No. 2, Alley 74, Lane 296, Minsheng Road Wufong Township, Taichung County 413, Taiwan, R.O.C.		
Dated: WO,	1.29	Inventor Signature Chien Wei Wang	
Inventor Name:	Ming-Feng Shieh		
Residence Address:	No. 68, Lane 186, Shenglong Street Yongkang City, Tainan County 710, Taiwan, R.O.C.		
Dated: 7010.	1.29	1 Inventor Signature Ming Feng Shieh	
Inventor Name:	Ching-Yu Chang		
Residence Address:	No. 17, Hsinchen Road Yuansun Village, Yilang Co	ounty 264, Taiwan, R.O.C.	
Dated: >0/0 ·	1.29	Inventor Signature	

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