503888604 06/24/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHENG-YEN TSAI	06/03/2016
HSIN-YI LEE	06/03/2016
CHUNG-CHIANG WU	06/03/2016
DA-YUAN LEE	06/03/2016
WENG CHANG	06/13/2016
MING-HSING TSAI	06/07/2016

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	15192570	

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	20151083/24061.3257US01	
NAME OF SUBMITTER:	JO EL MERCER	
SIGNATURE:	/Jo El Mercer/	
DATE SIGNED:	06/24/2016	

PATENT REEL: 039008 FRAME: 0214 503888604

Total Attachments: 3

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PATENT REEL: 039008 FRAME: 0215 Docket No.: TSMC Ref P20151083US00 / 24061.3257US01

Customer No.: 000042717

ASSIGNMENT

WHEREAS, we,

(1)	Cheng-Yen Tsai	of	Hsin-Chu, Taiwan (R.O.C.)
(2)	Hsin-Yi Lee	of	Hsinchu City, Taiwan (R.O.C.)
(3)	Chung-Chiang Wu	of	Hsin-Chu, Taiwan (R.O.C.)
(4)	Da-Yuan Lee	of	Hsinchu County, Taiwan (R.O.C.)
(5)	Weng Chang	of	Hsin-Chu, Taiwan (R.O.C.)
(6)	Ming-Hsing Tsai	of	Chu-Pei City, Taiwan (R.O.C.)

have invented certain improvements in

ATOMIC LAYER DEPOSITION METHODS AND STRUCTURES THEREOF

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 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.

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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.

Dagidamaa Addusas	No. 0. Li III de Douis Colonia De la
Residence Address:	No. 8, Li-Hsin Road 6, Science-Based Industrial Park, Hsin-Chu 300-77, Taiwan (R.O.C.)
Dated: <u>66/03</u> /7	
	Inventor Signature
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Residence Address:	No.66, Shijie Rd., East Dist., Hsinchu City 30072, Taiwan (R.O.C.)

Inventor Name:

Inventor Name:

Chung-Chiang Wu

Cheng-Yen Tsai

Residence Address:

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Hsin-Chu 300-77, Taiwan (R.O.C.)

Dated: 06/03/2016

Inventor Signatura

Hsin-Yi Lee

Inventor Signature

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Customer No.: 000042717

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6/13,2016

Inventor Signature

Inventor Name:

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Taiwan

6/1/016 Dated:

Ming Wing Tsai
Inventor Signature

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RECORDED: 06/24/2016

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