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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
HSIN-YI LEE	05/24/2016
CHENG-YEN TSAI	05/24/2016
DA-YUAN LEE	05/24/2016

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	15790739	

CORRESPONDENCE DATA

Fax Number: (214)200-0853

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: 214-651-5000

Email: ipdocketing@haynesboone.com

HAYNES AND BOONE, LLP IP SECTION **Correspondent Name:**

2323 VICTORY AVENUE Address Line 1:

Address Line 2: SUITE 700

Address Line 4: DALLAS, TEXAS 75219

ATTORNEY DOCKET NUMBER: 20151085 / 24061.3259US02		
NAME OF SUBMITTER:	JANIE MARTINEZ-HOLM	
SIGNATURE: /JANIE MARTINEZ-HOLM/		
DATE SIGNED:	10/24/2017	

Total Attachments: 2

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PATENT REEL: 043936 FRAME: 0477 504608403

Docket No.: P20151085US00/24061.3259US01

Customer No.: 000042717

ASSIGNMENT

WHEREAS, we,

(1)	Hsin-Yi Lee	of	Hsinchu City, Taiwan, Republic of China
(2)	Cheng-Yen Tsai	of	New Taipei City, Taiwan, Republic of China
(3)	Da-Yuan Lee	of	Hsinchu County, Taiwan, Republic of China

have invented certain improvements in

ATOMIC LAYER DEPOSITION METHODS AND STRUCTURES THEREOF

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.

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

15642857 1 - 1 -

PATENT REEL: 043936 FRAME: 0478 Docket No.: P20151085US00/24061.3259US01

Customer No.: 000042717

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:

Hsin-Yi Lee

Residence Address:

No. 66, Shije Road, East District

Hsinchu City, 30072, Taiwan, Republic of China

Dated: 24/ May / 2016

Hsin-Yi Lee Inventor Signature

Inventor Name:

Cheng-Yen Tsai

Residence Address:

No. 8, Li-Hsin Road 6, Science-Based Industrial Park

Hsin-Chu, Taiwan 300-77, Republic of China

Chang-Yen Tsai

Inventor Signature

Inventor Name:

Da-Yuan Lee

Residence Address:

10F, No.172, Section 2, Jiafong S. Road, Jhubei City

Hsinchu County 302, Taiwan, Republic of China

Dated: 24/ May / 70/6

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-2-

PATENT REEL: 043936 FRAME: 0479