504180398 01/17/2017

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHENG-YI WU	09/28/2016
LI-HSUAN CHU	09/28/2016
CHING-WEN WEN	09/30/2016
CHIA-CHUN HUNG	09/28/2016
CHEN LIANG CHANG	09/28/2016
CHIN-SZU LEE	09/28/2016
HSIANG LIU	10/12/2016

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:	TAIWAN	
Postal Code:	300-77	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15282258

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: 2146515000

Email: ipdocketing@haynesboone.com

Correspondent Name: HAYNES AND BOONE, LLP IP SECTION

Address Line 1: 2323 VICTORY AVENUE

Address Line 2: SUITE 700

Address Line 4: DALLAS, TEXAS 75219

ATTORNEY DOCKET NUMBER:	2016-0338/24061.3390US01	
NAME OF SUBMITTER: DELL WHITTON		
SIGNATURE:	/Dell Whitton/	

504180398 REEL: 040985 FRAME: 0285

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DATE SIGNED:	01/17/2017	
Total Attachments: 3		
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PATENT REEL: 040985 FRAME: 0286

Docket No.: P20160338US00/24061.3390US01

Customer No.: 000042717

ASSIGNMENT

WHEREAS, we,

(1)	Cheng-Yi Wu	of	Taichung City, Taiwan, Republic of China
(2)	Li-Hsuan Chu	of	Taichung City, Taiwan, Republic of China
(3)	Ching-Wen Wen	of	Taichung City, Taiwan, Republic of China
(4)	Chia-Chun Hung	of	Taichung City, Taiwan, Republic of China
(5)	Chen Liang Chang	of	New Taipei City, Taiwan, Republic of China
(6)	Chin-Szu Lee	of	Taoyuan City, Taiwan, Republic of China
(7)	Hsiang Liu	of	Hsinchu, Taiwan, Republic of China

have invented certain improvements in

AN IMPROVED DIELECTRIC FILM FOR FABRICATION

for which we have executed an application for Letters Patent of the United States of America,

	of even date filed herewith; and
X	filed on 09-30-2016 and assigned application number 15/282,258; 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 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.

Inventor Name:

Cheng-Yi Wu

Residence Address:

No. 36-37, Junfu 13th Road, Beitun District Taichung City 406, Taiwan, Republic of China

Dated: 2016 09 28

Inventor Signature

Inventor Name:

Li-Hsuan Chu

Residence Address:

18F.-1, No. 482, Yumen Road, Xitun District,

Taichung City 407, Taiwan, Republic of China

Dated: $\geq 0.16 \cdot 0.9 \Rightarrow 8$

LI — HSUAN . CHL Inventor Signature

Inventor Name:

Ching-Wen Wen

Residence Address;

No. 18, Lane 39, Liwen Street, Taiping District

Taichung City 411, Taiwan, Republic of China

Dated: >016 09 30

Ching-Wen Wen
Inventor/Signature

Docket No.: P20160338US00/24061.3390US01

Customer No.: 000042717

Inventor Name:	Chia-Chun Hung	
Residence Address:	No .31, Renyou Lane, Beitun D Taichung City 406, Taiwan, Re	
Dated: 9/5 1 >0	16	Chia - Chan Hung Inventor Signature
Inventor Name:	Chen Liang Chang	
Residence Address:	5F., No. 30, Zhongxiao 3rd Roa New Taipei City 244, Taiwan, l	ad, Linkou District Republic of China
Dated: $9(28)$	2,2016	Chen Liang Chang Inventor Signature
Inventor Name:	Chin-Szu Lee	
Residence Address:		, Lane 131, Section 2, Fudan Road y 32449, Taiwan, Republic of China
Dated: 9/28	,2016	Chin - SZU Lee Inventor Signature
Inventor Name:	Hsiang Liu	
Residence Address:	103, Zefan Rd. Hsinchu 30067,	Taiwan, Republic of China
Dated: /0/12/2	016	HSanghan Inventor Signature
		.

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