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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT		
CONVEYING PARTY D	ΑΤΑ				
		Name	Execution Date		
CHAO-HSUN WANG			05/30/2016		
HSIEN-CHENG WANG			05/30/2016		
MEI-YUN WANG			05/30/2016		
RECEIVING PARTY DA					
Name: TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.					
Street Address:	NO. 8, LI-HSIN ROAD 6,				
Internal Address:	SCIENCE-BASED INDUSTRIAL PARK				
City:	HSIN-CHU				
State/Country:	TAIWAN				
Postal Code:	300-77	,			
PROPERTY NUMBERS	G Total: 1				
Property Type	5 Total: 1	Number			
Property Type	5 Total: 1				
Property Type Application Number:		Number			
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Total Attachments: 2

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ASSIGNMENT

WHEREAS, we,

(1)	Chao-Hsun Wang	of	Taoyuan County, Taiwan, Republic of China
(2)	Hsien-Cheng Wang	of	Hsin-Chu, Taiwan, Republic of China
(3)	Mei-Yun Wang	of	Taoyuan County, Taiwan, Republic of China

have invented certain improvements in

A METHOD OF FORMING TRENCHES WITH DIFFERENT DEPTHS

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 June 9, 2016 and assigned application number 15/178,229; 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 and extensions, renewals, and reissue 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

PATENT REEL: 038864 FRAME: 0626

Docket No.: P20160116US00/24061.3361US01 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:	Chao-Hsun Wang
Residence Address:	3-1 1F, Chih-Cheng Road, Chung-Li City Taoyuan County, Taiwan, Republic of China
Dated: 5/3.5 /	12016 Chas Buy Many Inventor Signature
Inventor Name:	Hsien-Cheng Wang
Residence Address:	13F-1, No. 373, Section 2, Gong-Dao 5 Road Hsinchu, Taiwan 300, Republic of China
Dated: 5/33/	2016 Atrien-Cheng Wang Inventor Signature
Inventor Name:	Mei-Yun Wang
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Dated: 5/20	1 2016 Mei- Yun Waing Inventor Signature

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RECORDED: 06/09/2016

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