503510089 10/05/2015 PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
HSIEN-CHIEH TSAI		11/06/2013
TZ-WEI LIN		11/06/2013
SHENG-JEN YANG		11/06/2013
HUNG-YIN LIN		11/06/2013
CHERNG-CHANG TSUEI		11/06/2013
CHEN-HSIANG LU		11/06/2013

RECEIVING PARTY DATA	RECE	VING	PARTY	DATA
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Internal Address:	INDUSTRIAL PARK	
City:	HSINCHU	
State/Country:	TAIWAN	
Postal Code:	300	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14875409

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DATE SIGNED:	10/05/2015

Total Attachments: 2

source=0219assignment#page1.tif source=0219assignment#page2.tif NP-14152-US-B TSMC-2-13-1100

ASSIGNMENT

Inventor(s)-to-Assignee

PATENT REEL: 036730 FRAME: 0716

This assignment agreement is applicable to an invention entitled (Invention Title) <u>ADVANCED PROCESS CONTROL METHOD FOR CONTROLLING WIDTH OF</u> SPACER AND DUMMY SIDEWALL IN SEMICONDUCTOR DEVICE

The PATENT RIGHTS referred to in this agreement are:

(*check one*) a patent application for this invention, executed by the ASSIGNOR(S)

concurrently with this assignment.

XU.S. patent application Serial No.<u>14/081,623</u>, filed on <u>November 15, 2013</u>

a U.S. patent application based on PCT International Application

 No.________filed on (date)
 10/10

 Serial No.______, if known).
 11/10

U.S. patent No.____, issued_____.

The PATENT RIGHTS also include all divisions, reissues, continuations and extensions of the patents and patent applications identified above.

The PATENT RIGHTS assigned under this agreement are:

(check one) \boxtimes U.S. patent rights only.

Worldwide patent rights. In this case, the assignee shall have the right to

claim the benefit of the filing date of any U.S. or foreign patent application for this invention.

The ASSIGNOR(S) referred to in this agreement is (or are) the inventor(s) whose signatures appear on page 2 of this Assignment and any Supplemental Sheet(s).

The ASSIGNEE referred to in this agreement is:

(Name of Assignee) TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD. (Address) NO.8, LI-HSIN RD.6, SCIENCE-BASED INDUSTRIAL PARK, HSINCHU, TAIWAN 300, R.O.C.

(*check one*) An individual.

A Partnership.

A Corporation of <u>TAIWAN, R.O.C.</u> (specify state or country)

The ASSIGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good and valuable consideration, receipt of which is acknowledged, hereby assign(s) the following rights to the ASSIGNEE, its successors and assigns:

the full and exclusive right to the invention;

the entire right, title and interest in and to the PATENT RIGHTS;

the right to sue and recover for any past infringement; and

the right to claim priority under 35 USC 119, 35 USC 120, or any other applicable

provisions, based on any earlier patent applications for this invention.

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> THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO ASSIGNEE: <u>TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.</u> INVENTION TITLE: <u>ADVANCED PROCESS CONTROL METHOD FOR</u> <u>CONTROLLING WIDTH OF SPACER AND DUMMY SIDEWALL IN</u> <u>SEMICONDUCTOR DEVICE</u>

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademark to issue all Letters Patent to the ASSIGNEE as the assignee of the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE, or its representatives, any fact known to the ASSIGNOR(S) with respect to said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause and all Letter Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNOR(S) authorize(s) the attorneys and agents who have the power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

Hsien-Chieh TSAI

Sheng-Jen YANG

Tz-Wei LIN

Name of sole or first-inventor

Name of second inventor, if any

Hsien- Chieh TSAI Signature <u>کە ۱3 /11/6</u> Date

2013/11

Date

Ta- Wei LIN

Signature

<u>Sheriz-Jen</u> YANG Signature

<u>Hung</u>-Signature

Date

att

<u>herng Chang (Suei</u> gnature I Date

Date

Signature

Signature

RECORDED: 10/05/2015

PATENT REEL: 036730 FRAME: 0717

Name of third inventor, if any Hung-Yin LIN

Name of fourth inventor, if any

Cherng-Chang TSUEI Name of fifth inventor, if any

Chen-Hsiang LU Name of sixth inventor, if any