

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3658211

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the NAME OF THE FIRST INVENTOR TO DAVID YANG CHAN SYUN previously recorded on Reel 035667 Frame 0661. Assignor(s) hereby confirms the NAME OF THE FIRST INVENTOR IS CHAN SYUN DAVID YANG AS SHOWN ON THE ASSIGNMENT.
<b>RESUBMIT DOCUMENT ID:</b>	503601552
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
CHAN SYUN DAVID YANG	04/29/2015
CHAO-CHENG CHEN	04/29/2015
CHIEN-HAO CHEN	04/29/2015
CHUN-HUNG LEE	04/29/2015
DE-FANG CHEN	04/29/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
<b>Street Address:</b>	NO. 8, LI-HSIN RD. 6
<b>Internal Address:</b>	SCIENCE-BASED INDUSTRIAL PARK
<b>City:</b>	HSIN-CHU
<b>State/Country:</b>	TAIWAN
<b>Postal Code:</b>	300-77
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14622385
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(972)732-9218
<i>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.</i>	
<b>Phone:</b>	972-732-1001
<b>Email:</b>	docketing@slater-matsil.com
<b>Correspondent Name:</b>	SLATER & MATSIL, LLP
<b>Address Line 1:</b>	17950 PRESTON RD.
<b>Address Line 2:</b>	STE. 1000
<b>Address Line 4:</b>	DALLAS, TEXAS 75252
<b>ATTORNEY DOCKET NUMBER:</b>	TSM14-1297

<b>NAME OF SUBMITTER:</b>	DONNA TURNER
<b>SIGNATURE:</b>	/Donna Turner/
<b>DATE SIGNED:</b>	12/15/2015
<b>Total Attachments: 8</b> source=TSM14-1297 Assignment Correction 2#page1.tif source=TSM14-1297 Assignment Correction 2#page2.tif source=TSM14-1297 Assignment Correction 2#page3.tif source=TSM14-1297 Assignment Correction 2#page4.tif source=TSM14-1297 Assignment Correction 2#page5.tif source=TSM14-1297 Assignment Correction 2#page6.tif source=TSM14-1297 Assignment Correction 2#page7.tif source=TSM14-1297 Assignment Correction 2#page8.tif	

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT												
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT												
<b>CONVEYING PARTY DATA</b>													
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<b>Address Line 4:</b> DALLAS, TEXAS 75252	
<b>ATTORNEY DOCKET NUMBER:</b>	TSM14-1297
<b>NAME OF SUBMITTER:</b>	DONNA TURNER
<b>Signature:</b>	/Donna Turner/
<b>Date:</b>	05/19/2015
<b>Total Attachments: 2</b> source=TSM14-1297 Assignment#page1.tif source=TSM14-1297 Assignment#page2.tif	
<b>RECEIPT INFORMATION</b>  <b>EPAS ID:</b> PAT3359133 <b>Receipt Date:</b> 05/19/2015	

ATTORNEY DOCKET NO.  
TSM14-1297

## ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made; and

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. ("Assignee"), a corporation organized and existing under the laws of Taiwan, the Republic of China, with its principal office at No. 8, Li-Hsin Rd. 6 Science-Based Industrial Park, Hsin-Chu 300-77 Taiwan, R.O.C., is desirous of acquiring my entire right, title and interest in and to said invention, and to said application and any Letters Patent that may issue thereon in the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to said Assignee, its successors and assigns, my entire right, title and interest in and to said invention and in and to said application and all patents which may be granted therefor, and all future non-provisional applications including divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner for Patents to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to said Assignee, as assignee of my entire right, title and interest. I declare that I have not executed and will not execute any agreement in conflict herewith.

I also hereby sell and assign to Assignee, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including, but not limited to, the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said Assignee, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention or the file history thereof, and at the expense of said Assignee, its legal representatives, successors, or assigns, will testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said Assignee, its legal representatives, successors, and assigns, to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	Self-Aligned Multiple Spacer Patterning Process			
SIGNATURE OF INVENTOR AND NAME	 Chan Syun David Yang	 Chao-Cheng Chen	 Chien-Hao Chen	 Chun-Hung Lee
DATE	4/29/2015	4/29/2015	4/29/2015	4/29/2015
RESIDENCE	Taipei, Taiwan	Hsin-Chu, Taiwan	Chuangwei Township, Taiwan	Hsin-Chu, Taiwan

## ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made; and


WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. ("Assignee"), a corporation organized and existing under the laws of Taiwan, the Republic of China, with its principal office at No. 8, Li-Hsin Rd. 6 Science-Based Industrial Park, Hsin-Chu 300-77 Taiwan, R.O.C., is desirous of acquiring my entire right, title and interest in and to said invention, and to said application and any Letters Patent that may issue thereon in the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to said Assignee, its successors and assigns, my entire right, title and interest in and to said invention and in and to said application and all patents which may be granted therefor, and all future non-provisional applications including divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner for Patents to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to said Assignee, as assignee of my entire right, title and interest. I declare that I have not executed and will not execute any agreement in conflict herewith.

I also hereby sell and assign to Assignee, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including, but not limited to, the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said Assignee, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention or the file history thereof, and at the expense of said Assignee, its legal representatives, successors, or assigns, will testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said Assignee, its legal representatives, successors, and assigns, to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	Self-Aligned Multiple Spacer Patterning Process			
SIGNATURE OF INVENTOR AND NAME	 De-Fang Chen			
DATE	4/29/2015			
RESIDENCE	Hsin-Chu, Taiwan			