PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
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EPAS ID: PAT4315191

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the ADDITION OF 2ND ASSIGNEE previously recorded on Reel 032808 Frame 0855. Assignor(s) hereby confirms the ASSIGNMENT OF THE ASSIGNOR'S INTEREST.

CONVEYING PARTY DATA

Name	Execution Date
MING-HAN LIAO	04/01/2014
MINGHWEI HONG	04/02/2014

RECEIVING PARTY DATA

Name:	Taiwan Semiconductor Manufacturing Company, Ltd.
Street Address:	8, Li-Hsin Rd. 6, Hsinchu Science Park
City:	HsinChu
State/Country:	TAIWAN
Postal Code:	300-78
Name:	NATIONAL TAIWAN UNIVERSITY
Street Address:	NO. 1, SEC. 4, ROOSEVELT RD., ZHONGZHENG DIST.
City:	TAIPEI CITY
State/Country:	TAIWAN
Postal Code:	100

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14245785

CORRESPONDENCE DATA

Fax Number: (972)732-9218

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: 972-732-1001
Email: docketing@slatermatsil.com
Correspondent Name: SLATER MATSIL, LLP
Address Line 1: 17950 PRESTON RD., SUITE 1000
Address Line 4: DALLAS, TEXAS 75252

ATTORNEY DOCKET NUMBER:	TSM14-0060
NAME OF SUBMITTER:	MARANDA BRALLEY
SIGNATURE:	/Maranda Bralley/

DATE SIGNED:	03/13/2017

Total Attachments: 7

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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MING-HAN LIAO	04/01/2014
MINGHWEI HONG	04/02/2014

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, 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:	14245785

CORRESPONDENCE DATA

Fax Number:	(972)732-9218
Phone:	972-732-1001
Email:	docketing@slater-matsil.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name:	SLATER & MATSIL, L.L.P.
Address Line 1:	17950 PRESTON ROAD, SUITE 1000
Address Line 4:	DALLAS, TEXAS 75252

ATTORNEY DOCKET NUMBER:	TSM14-0060
NAME OF SUBMITTER:	WENDY SAXBY

Signature:	/Wendy Saxby/
Date:	05/02/2014

Total Attachments: 2
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RECEIPT INFORMATION

EPAS ID:	PAT2839808
Receipt Date:	05/02/2014

ATTORNEY DOCKET NO.
TSM14-0060

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. (TSMC), a corporation organized and existing under the laws of Taiwan, with its principal office at No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, and National Taiwan University (NTU), a university organized and existing under the laws of Taiwan, with its principal office at No. 1, Sec. 4, Roosevelt Rd., Zhongzheng Dist., Taipei City, Taiwan 100, are desirous of acquiring my entire right, title and interest in and to the said invention, and to the 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 TSMC and NTU, their successors and assigns, my entire right, title and interest in and to said invention and in 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 TSMC and NTU, as assignees 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 TSMC and NTU, their 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 TSMC and NTU, or to their successors, assigns, and legal representatives, any facts known to me respecting said invention or the file history thereof, and at the expense of said Assignees, 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 TSMC and NTU, their 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	MOS DEVICES WITH ULTRA-HIGH DIELECTRIC CONSTANTS AND METHODS OF FORMING THE SAME			
SIGNATURE OF INVENTOR AND NAME	Ming-Han Liao 2014/4/1 Ming-Han Liao	Minghwei Hong		
DATE	2014/4/1			
RESIDENCE	Taipei City, TW	Zhubei City, TW		

ATTORNEY DOCKET NO.
TSM14-0060

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. (TSMC), a corporation organized and existing under the laws of Taiwan, with its principal office at No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, and National Taiwan University (NTU), a university organized and existing under the laws of Taiwan, with its principal office at No. 1, Sec. 4, Roosevelt Rd., Zhongzheng Dist., Taipei City, Taiwan 100, are desirous of acquiring my entire right, title and interest in and to the said invention, and to the 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 TSMC and NTU, their successors and assigns, my entire right, title and interest in and to said invention and in 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 TSMC and NTU, as assignees 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 TSMC and NTU, their 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 TSMC and NTU, or to their successors, assigns, and legal representatives, any facts known to me respecting said invention or the file history thereof, and at the expense of said Assignees, 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 TSMC and NTU, their 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	MOS DEVICES WITH ULTRA-HIGH DIELECTRIC CONSTANTS AND METHODS OF FORMING THE SAME			
SIGNATURE OF INVENTOR AND NAME	Ming-Han Liao	Minghwei Hong		
DATE		4/2/2014		
RESIDENCE	Taipei City, TW	Zhubei City, TW		