

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT2854368

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
HUNG-CHIH CHANG	04/15/2014
PIN-SHIANG CHEN	04/15/2014
CHEE-WEE LIU	04/15/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Taiwan Semiconductor Manufacturing Company, Ltd.
<b>Street Address:</b>	No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park
<b>City:</b>	Hsin-Chu
<b>State/Country:</b>	TAIWAN
<b>Postal Code:</b>	300-77
<b>Name:</b>	NATIONAL TAIWAN UNIVERSITY
<b>Street Address:</b>	NO. 1, SEC. 4, ROOSEVELT RD.
<b>Internal Address:</b>	ZHONGZHENG DIST.
<b>City:</b>	TAIPEI CITY
<b>State/Country:</b>	TAIWAN
<b>Postal Code:</b>	100
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14254628
<b>CORRESPONDENCE DATA</b>	
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<b>Address Line 1:</b>	17950 PRESTON RD., SUITE 1000
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<b>ATTORNEY DOCKET NUMBER:</b>	TSM14-0059
<b>NAME OF SUBMITTER:</b>	LISETTE REYES WASHINGTON
<b>SIGNATURE:</b>	/Lisette Reyes Washington/

PATENT

<b>DATE SIGNED:</b>	05/14/2014
	This document serves as an Oath/Declaration (37 CFR 1.63).
<b>Total Attachments: 1</b> source=TSM14-0059 Assignment TSMC NTU#page1.tif	

ATTORNEY DOCKET NO.  
TSM14-0059

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

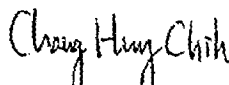
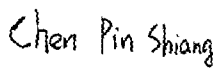

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. (TSMC), a corporation organized and existing under the laws of Taiwan, with its principal office at No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, and National Taiwan University (NTU), a university organized and 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	3D UTB Transistor Using 2D-Material Channels			
SIGNATURE OF INVENTOR AND NAME	 Hung-Chih Chang	 Pin-Shiang Chen	 Chee-Wee Liu	
DATE	2014.04.15	2014.04.15	2014.04.15	
RESIDENCE	Taichung City, Taiwan	Taipei City, Taiwan	Taipei City, Taiwan	

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