

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT				
NATURE OF CONVEYANCE:	ASSIGNMENT				
CONVEYING PARTY DATA					
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>I-SHUO LIU</td> <td>11/28/2013</td> </tr> </tbody> </table>		Name	Execution Date	I-SHUO LIU	11/28/2013
Name	Execution Date				
I-SHUO LIU	11/28/2013				
RECEIVING PARTY DATA					
Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED				
Street Address:	NO. 8, LI-HSIN ROAD, VI				
Internal Address:	HSINCHU SCIENCE PARK				
City:	HSINCHU				
State/Country:	TAIWAN				
PROPERTY NUMBERS Total: 1					
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>14097363</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	14097363
Property Type	Number				
Application Number:	14097363				
CORRESPONDENCE DATA					
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ATTORNEY DOCKET NUMBER:	181877-625061				
NAME OF SUBMITTER:	MATTHEW W. JOHNSON				
Signature:	/Matthew W. Johnson/				
Date:	12/05/2013				
Total Attachments: 1 source=625061_Assignment#page1.tif					

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SOLE

ASSIGNMENT

WHEREAS, I, I-SHUO LIU, citizen of the Republic of China, having a mailing address of 8F., Ln. 213, Bade Rd., East Dist., Hsinchu City 300, Taiwan residing at Hsinchu City, Taiwan, ASSIGNOR, am the inventor of the invention in "SYSTEMS AND METHODS FOR CHEMICAL MECHANICAL PLANARIZATION WITH PHOTOLUMINESCENCE QUENCHING" for which I have executed an application for a Patent of the United States

- which is executed on even date herewith or
- which is identified by Jones Day docket no. 181877-625061
- which was filed on November _____, 2013, Application No. _____
- We hereby authorize and request attorney(s) at Jones Day, to insert here in parentheses (Application number _____, filed _____) the filing date and application number of said application when known.

and WHEREAS, Taiwan Semiconductor Manufacturing Company Limited, a corporation organized and existing under the laws of Republic of China, and having an office for the transaction of business at No. 8, Li-Hsin Rd. VI, Hsinchu Science Park, Hsinchu, Taiwan, ASSIGNEE, is desirous of obtaining my entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I, the ASSIGNOR, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, my entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and all right to sue for infringement including past infringement..

AND I HEREBY authorize and request the Commissioner for Patents and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument..

AND I HEREBY covenant and agree that I have full right to convey the entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year set opposite my signature.

✓ Date 11.28, 2013

✓ I-shuo Liu L.S.
I-SHUO LIU