

PATENT ASSIGNMENT

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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>Min Hao Hong</td> <td>08/24/2012</td> </tr> <tr> <td>You-Hua Chou</td> <td>08/24/2012</td> </tr> <tr> <td>Chih-Tsung Lee</td> <td>08/24/2012</td> </tr> <tr> <td>Shiu-Ko JangJian</td> <td>08/24/2012</td> </tr> <tr> <td>Miao-Cheng Liao</td> <td>08/24/2012</td> </tr> <tr> <td>Hsiang Hsiang Ko</td> <td>08/31/2012</td> </tr> <tr> <td>Chen-Ming Huang</td> <td>08/24/2012</td> </tr> </tbody> </table>		Name	Execution Date	Min Hao Hong	08/24/2012	You-Hua Chou	08/24/2012	Chih-Tsung Lee	08/24/2012	Shiu-Ko JangJian	08/24/2012	Miao-Cheng Liao	08/24/2012	Hsiang Hsiang Ko	08/31/2012	Chen-Ming Huang	08/24/2012
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Hsiang Hsiang Ko	08/31/2012																
Chen-Ming Huang	08/24/2012																
RECEIVING PARTY DATA																	
Name:	Taiwan Semiconductor Manufacturing Company																
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																	
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13594254</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13594254												
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Application Number:	13594254																
CORRESPONDENCE DATA																	
Fax Number:	9727329218																
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>																	
Phone:	972-732-1001																
Email:	docketing@slater-matsil.com																
Correspondent Name:	Slater & Matsil, L.L.P.																
Address Line 1:	17950 Preston Road																
Address Line 2:	Suite 1000																
Address Line 4:	Dallas, TEXAS 75252																

CH \$40.00 13594254

ATTORNEY DOCKET NUMBER:	TSM12-0480
NAME OF SUBMITTER:	Sherry L. Colgrove
Total Attachments: 2 source=TSM12-0480_Assignment#page1.tif source=TSM12-0480_Assignment#page2.tif	

ATTORNEY DOCKET NO.
TSM12-0480

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, the said application having been executed on the date set forth below; and

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. (TSMC), 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, Taiwan 300-77, R.O.C., is 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 the said TSMC, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefor, and all 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 the said TSMC, 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 TSMC, 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 TSMC, 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 company, 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, its successors, assigns and nominees 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	Two-Step Shallow Trench Isolation (STI) Process			
SIGNATURE OF INVENTOR AND NAME	<i>Min-Hao Hong</i> Min Hao Hong	<i>You-Hua Chou</i> You-Hua Chou	<i>Chih-Tsung Lee</i> Chih-Tsung Lee	<i>Shiu-Ko Jang</i> Shiu-Ko JangJian
DATE	<i>08/24/2012</i>	<i>Aug. 24. 2012</i>	<i>Aug / 24 / 2012</i>	<i>08/24/2012</i>
RESIDENCE (City, County, State)	Kaohsiung City, Taiwan, R.O.C.	Hsin-Chu, Taiwan, R.O.C.	Hsin-Chu, Taiwan, R.O.C.	Tainan City, Taiwan, R.O.C.

ATTORNEY DOCKET NO.
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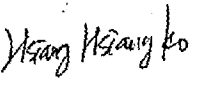
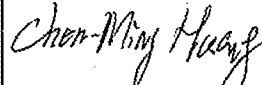
WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd. (TSMC), a corporation organized and existing under the laws of Taiwan, the Republic of China, with its principal office at No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, R.O.C., is desirous of acquiring my entire 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 the said TSMC, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefor, and all 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 the said TSMC, 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 TSMC, 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.

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

TITLE OF INVENTION	Two-Step Shallow Trench Isolation (STI) Process			
SIGNATURE OF INVENTOR AND NAME	 Miao-Cheng Liao	 Hsiang Hsiang Ko	 Chen-Ming Huang	
DATE	8/24/2012	Aug. 31, 2012	Aug. 24, 2012	
RESIDENCE (City, County, State)	Yunlin, Taiwan, R.O.C.	Sinying City, Taiwan, R.O.C.	Hsinchu City, Taiwan, R.O.C.	