

## 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>Kuo-Chang Liao</td> <td>07/04/2008</td> </tr> <tr> <td>Weijun Song</td> <td>03/03/2003</td> </tr> <tr> <td>Dang Quan Liao</td> <td>07/05/2002</td> </tr> </tbody> </table>		Name	Execution Date	Kuo-Chang Liao	07/04/2008	Weijun Song	03/03/2003	Dang Quan Liao	07/05/2002		
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<table border="1"> <tr> <td>Name:</td> <td>Semiconductor Manufacturing International (Shanghai) Corporation</td> </tr> <tr> <td>Street Address:</td> <td>18 Zhang Jiang Rd., Pudong New Area</td> </tr> <tr> <td>City:</td> <td>Shanghai</td> </tr> <tr> <td>State/Country:</td> <td>CHINA</td> </tr> <tr> <td>Postal Code:</td> <td>201203</td> </tr> </table>		Name:	Semiconductor Manufacturing International (Shanghai) Corporation	Street Address:	18 Zhang Jiang Rd., Pudong New Area	City:	Shanghai	State/Country:	CHINA	Postal Code:	201203
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CORRESPONDENCE DATA											
Fax Number: 6503262422 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: 650-326-2400 Email: mtejera@kilpatricktownsend.com Correspondent Name: Kilpatrick Townsend & Stockton LLP Address Line 1: Two Embarcadero Center Address Line 2: Eighth Floor Address Line 4: San Francisco, CALIFORNIA 94111-3834											
ATTORNEY DOCKET NUMBER:	87720-007400US-679374										
NAME OF SUBMITTER:	Dah-Bin Kao										
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Kuo-Chang Liao

Application No.: 12/960,357

Filed: Dec 3, 2010

For: **METHOD AND RESULTING  
STRUCTURE FOR DEEP TRENCH  
POLYSILICON HARD MASK  
REMOVAL**

Customer No.: 20350

Confirmation No.: 7049

Examiner: ABDELAZIEZ YASSER A

Technology Center/Art Unit: 2898

**COMMUNICATION REGARDING  
ASSIGNMENT OF PATENT  
APPLICATION**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Commissioner:

Submitted for recordation is executed assignment of this Application by one of the three co-inventors: Kuo Chang Liao.

The other two co-inventors, Mr. Dang Quan Liao and Mr. Weijun Song, no longer work at Semiconductor Manufacturing International (Shanghai) Corporation (SMIC) and cannot be reached for signing the declaration and assignment of this Application. A petition under 37 CFR 1.183 to waive 37 CFR 1.48(a)(2), a petition under 37 CFR 1.47(a) for non-signing inventor, and a petition under 37 CFR 1.48(a) to add a named inventor were filed on behalf of Mr. Dang Quan Liao and Mr. Weijun Song on December 9, 2011. The petition was granted on December 22, 2011. In addition, Mr. Dang Quan Liao and Mr. Weijun Song have conveyed the right of all their company-related inventions to Semiconductor Manufacturing International (Shanghai) Corporation (SMIC) in an EMPLOYEE INTELLECTUAL PROPERTY RIGHT AGREEMENT. A Chinese version of the agreement signed by Mr. Dang Quan Liao and Mr.

Weijun Song is hereby submitted for recordation. Also submitted is an English version of the agreement provided by SMIC.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (650) 326-2400.

Respectfully submitted,

/Dah-Bin Kao/

Dah-Bin Kao  
Reg. No. 53,092

KILPATRICK TOWNSEND & STOCKTON LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel: (415) 576-0200  
Fax: (415) 576-0300  
DBK:mtt

Attachments



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

KILPATRICK TOWNSEND & STOCKTON LLP  
TWO EMBARCADERO CENTER  
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SAN FRANCISCO CA 94111-3834

**MAILED**

**DEC 22 2011**

**OFFICE OF PETITIONS**

In re Application of :  
Liao, Song and Liao :  
Application No. 12/960,357 :  
Filed: 12/03/2010 :  
Attorney Docket No. 87720-007400US- :  
679374 :  
Title: METHOD AND RESULTING :  
STRUCTURE FOR DEEP TRENCH :  
POLYSILICON HARD MASK REMOVAL :

**DECISION ON PETITIONS**

This is a decision on the petition under 37 CFR 1.183 to waive 37 CFR 1.48(a)(2), the petition under 37 CFR 1.47(a),<sup>1</sup> and the petition under 37 CFR 1.48(a) to add a named inventor filed December 9, 2011.

The petitions are **GRANTED**.

Applicants request that Dang Quan Liao be added as an inventor for this application. Additionally, applicants assert that Weijun Song and Dang Quan Liao constructively refused or cannot be located to sign the declaration and join the application. Therefore, applicants seek relief under 37 CFR 1.183 to waive 37 CFR 1.48(a)(2), 37 CFR 1.47(a), and 37 CFR 1.48(a).

Pursuant to 37 CFR 1.183, in an extraordinary situation, when justice requires, any requirement of the regulations, which is not a requirement of the statutes, may be suspended or waived by the Director or the Director's designee, *sua sponte*, or on petition of the interested party.

<sup>1</sup> Applicants obtained an extension of time for response within the first month.

In the present petition, applicants showed that they made a diligent effort to locate Dang Quan Liao to obtain a statement from him that the error in inventorship occurred without deceptive intention on his part. In view of the fact that Dang Quan Liao cannot be located, it is agreed that justice would be served by waiving the requirement of 37 CFR 1.48(a)(2). Accordingly, the petition under 37 CFR 1.183 is **granted**.

As to the petition under 37 CFR 1.47(a), the Office notes that a grantable petition under 37 CFR 1.47(a) requires:

- (1) proof that the non-signing inventor cannot be reached or refuses to sign the oath or declaration after having been presented with the application papers (specification, claims and drawings);
- (2) an acceptable oath or declaration in compliance with 35 U.S.C. §§ 115 and 116;
- (3) the petition fee; and
- (4) a statement of the last known address of the non-signing inventor.

A review of the petition reveals that applicants have meet the requirements of 37 CFR 1.47(a). Specifically, applicants demonstrated that Weijun Song and Dang Quan Liao constructively refused or cannot be located to sign the declaration and join in the application. Thus, the petition under 37 CFR 1.47(a) is **granted**.

The above-identified application and papers have been reviewed and are found to be in compliance with 37 CFR 1.47(a). Accordingly, the above-identified application is hereby accorded Rule 1.47(a) status. As provided in 37 CFR 1.47(c), this Office will forward notice of this application's filing to the non-signing inventors at their last known addresses provided in the petition. Notice of the filing of this application will also be published in the Official Gazette.

Pursuant to 37 CFR 1.48(a):

*Nonprovisional application after oath /declaration filed.* If the inventive entity is set forth in error in an executed § 1.63 oath or declaration in a nonprovisional application, and such error arose without any deceptive intention on the part of the person named as an inventor in error or on the part of the person who through error was not named as an inventor, the inventorship of the nonprovisional application may be amended to name only the actual inventor or inventors. Amendment of the inventorship requires:

- (1) A request to correct the inventorship that sets forth the desired inventorship change;

- (2) A statement from each person being added as an inventor and from each person being deleted as an inventor that the error in inventorship occurred without deceptive intention on his or her part;
- (3) An oath or declaration by the actual inventor or inventors as required by § 1.63 or as permitted by §§ 1.42, 1.43 or § 1.47;
- (4) The processing fee set forth in § 1.17(i); and
- (5) If an assignment has been executed by any of the original named inventors, the written consent of the assignee (see § 3.73(b) of this chapter).

Applicants have met the requirements of 37 CFR 1.48(a). Accordingly, the petition under 37 CFR 1.48(a) is **granted**. A corrected filing receipt setting forth the desired inventorship change to include Dang Quan Liao as a named inventor accompanies this decision.

The application is being forwarded to Technology Center Art Unit 2812.

Telephone inquiries related to this decision may be directed to the undersigned at (571) 272-3211.



Christina Tartera Donnell  
Senior Petitions Attorney  
Office of Petitions

Enclosure: Corrected Filing Receipt

Semiconductor Manufacturing International Corporation  
中芯国际集成电路制造(上海)有限公司

智能财产所属权同意书

我 宋卫军 作为中芯国际集成电路制造(上海)有限公司(SMIC)的一名工作人员,我所有之一切和公司业务有关的发明创造都属于公司所有,我自己完全没有所属权。发明创造方面包括:

- 半导体装置、设备、器件或方法方面,设计或发展。
- 制程或是设备上之发明或发展。
- 制造方法方面之改良。
- 在半导体工业或科学领域,任何形式的智力开发中之理论或实践上的发明发展。

我同意 SMIC 有完全之所属权,可以由 SMIC 使用安排和处理。即使我离开 SMIC 2 (至少两年)年之内,相关(上述之项目)之创造仍然属于 SMIC 所有。(SMIC 将按您发明成果贡献大小给予奖励)

SMIC 要求员工决不侵犯别家公司之智能财产权,或同意未经合法手续,决不非法挪用别人智能财产(包括资料,文件或任何与 IP 有关的财产)。

我同意不侵占他人的知识产权,未经履行合法手续不得非法使用他人的知识产权(包括资料、文件或任何与 IP 有关的智力成果)。我决不能抄袭、仿效、侵害、复制第三人的专利权、商标专用权、著作权或任何违反法律的行为。

签名: 宋卫军 日期: 2003.3.3

\*\*本同意书须于寄回聘书日、报到日、试用期满日各签认一次。

.07 80/70



**Semiconductor Manufacturing Int'l (Shanghai) Corporation**

**INTELLECTUAL PROPERTY RIGHT AGREEMENT**

I, \_\_\_\_\_, as an employee of Semiconductor Manufacturing Int'l (Shanghai) Corporation (SMIC), agree that: any invention-creation which is made by me and is related to business of the company belongs to the company. I have no right in said invention-creation at all. Said invention-creation includes:

- ① design or improvement on semiconductor device, equipment, element, or method;
- ② design or improvement on manufacture procedure or equipment;
- ③ improvement on manufacture method;
- ④ any form of intellectual or practical invention-creation in the semiconductor industry or scientific field development.

I agree that SMIC has complete right in said invention-creation, and SMIC can use and dispose it. Even any related invention-creation as described above that is made within two (at least two years) years since the termination of my employment from SMIC still belongs to SMIC. (SMIC will reward the inventor according to the contribution of the invention achievement.)

SMIC requires that an employee should not infringe other company's intellectual property, or illegally use other's intellectual property (including information, document, or any intellectual achievement related to IP) without authorization.

I agree that I'll not infringe other's intellectual property, or illegally use other's intellectual property (including information, document, or any intellectual achievement related to IP) without authorization. I'll not plagiarism, imitate, infringe, copy a third party's patent right, exclusive right of trademark, or copy right, or carry out any actions against law.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Semiconductor Manufacturing International Corporation  
中芯国际集成电路制造(上海)有限公司

智能财产所属权同意书

我 廖瑞东 作为中芯国际集成电路制造(上海)有限公司(SMIC)的一名工作人员,我所有之一切和公司业务有关的发明创造都属于公司所有,我自己完全没有所属权。发明创造方面包括:

- 半导体装置、设备、器件或方法方面,设计或发展。
- 制程或是设备上之发明或发展。
- 制造方法方面之改良。
- 在半导体工业或科学领域,任何形式的智力开发中之理论或实践上的发明发展。

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我同意不侵占他人的知识产权,未经履行合法手续不得非法使用他人的知识产权(包括资料、文件或任何与 IP 有关的智力成果)。我决不能抄袭、仿效、侵害、复制第三人的专利权、商标专用权、著作权或任何违反法律的行为。

签名: 廖瑞东 日期: 2012.7.5

\*\*本同意书须于寄回聘书日、报到日、试用期满日各签认一次。

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- ② design or improvement on manufacture procedure or equipment;
- ③ improvement on manufacture method;
- ④ any form of intellectual or practical invention-creation in the semiconductor industry or scientific field development.

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Signature \_\_\_\_\_ Date \_\_\_\_\_

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, Kuo Chang Liao of 18 Zhang Jiang Rd. Pudong New Area, Shanghai, 201203 People's Republic of China; Weijun Song of 18 Zhang Jiang Rd. Pudong New Area, Shanghai, 201203 People's Republic of China; and Dang Quan Liao of 18 Zhang Jiang Rd. Pudong New Area, Shanghai, 201203 People's Republic of China, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: **A METHOD AND RESULTING STRUCTURE FOR  
DEEP TRENCH POLYSILICON HARD MASK  
REMOVAL FOR MEMORY DEVICES**

Filing Date: Not Yet Assigned

Application No.: Not Yet Assigned ; and

WHEREAS, Semiconductor Manufacturing International (Shanghai) Corporation, a corporation of People's Republic of China, located at 18 Zhang Jiang Rd., Pudong New Area, Shanghai, 201203, People's Republic of China, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignors hereby authorize and request Townsend and Townsend and Crew LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111-3834, to insert herein above the application number and filing date of said application when known.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: July 4, 2008

Kuo Chang Liao  
Kuo Chang Liao

Dated: \_\_\_\_\_

Weijun Song  
Weijun Song

Dated: \_\_\_\_\_

Dang Quan Liao  
Dang Quan Liao

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