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To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Cheng-Yuan TSAI
Chih-Lung LIN
You-Hua CHOU

Additional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies)

Name: Taiwan Semiconductor Manufacturing Co., Ltd.

Internal Address: _____

Street Address: No. 8, Li-Hsin Rd. 6

Science-Based Industrial Park

City: Hsin-Chu

State: _____

Country: Taiwan, R.O.C. Zip: 300-77

Additional name(s) & address(es) attached? Yes No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) 7/4/05; 6/17/05; 6/16/05

- Assignment Merger
- Security Agreement Change of Name
- Joint Research Agreement
- Government Interest Assignment
- Executive Order 9424, Confirmatory License
- Other _____

4. Application or patent number(s):

This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

07/25/2005 FFANAEIA 00000027 11186353

05 FC 3021

40.00 DP

Additional numbers attached? Yes No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Daniel R. McClure

Internal Address: Thomas, Kayden, Horstemeyer &

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6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00

- Authorized to be charged by credit card
- Authorized to be charged to deposit account
- Enclosed
- None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers 1009
Expiration Date 07/09

b. Deposit Account Number _____

Authorized User Name _____

9. Signature:

Daniel R. McClure
Signature

July 21, 2005
Date

Daniel R. McClure

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

5

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

PATENT
REEL: 016783 FRAME: 0778

113261 U.S. PTO
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ASSIGNMENT

WHEREAS, Cheng-Yuan TSAI, Chih-Lung LIN, and You-Hua CHOU hereafter referred to as ASSIGNOR, has/have invented certain new and useful improvements as described and set forth in the below identified application for United States Letters Patent:

Title: METHOD FOR FORMING A HIGH DENSITY DIELECTRIC FILM BY CHEMICAL VAPOR DEPOSITION

Filed: _____ Serial No. _____

Executed on: July 4, 2005

WHEREAS, Taiwan Semiconductor Manufacturing Co., Ltd. of No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, R.O.C. hereinafter referred to as ASSIGNEE, is desirous of acquiring ASSIGNOR'S interest in the said invention and application and in any U.S. Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has/have sold, assigned and transferred, and by these presents does/do sell, assign and transfer unto the said Assignee, and Assignee's successors and assigns, all his/her/their rights, title and interest in and to the said invention and application and all future improvements thereon, and in and to any Letters Patent which may hereafter be granted on the same in the United States, the said interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said Assignor had this Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees/agree that he/she/they will, without charge to said Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in said Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has/have signed his/her/their name(s) on the date(s) indicated.

Cheng-Yuan Tsai
Cheng-Yuan TSAI

2005/7/4
Date:

Chih-Lung LIN

Date:

You-Hua CHOU

Date:

IN TESTIMONY WHEREOF, Assignor has/have signed his/her/their name(s) on the date(s) indicated.

Cheng-Yuan TSAI

Date:

Lin Chih-Lung

Chih-Lung LIN

6/17/2005

Date:

You-Hua CHOU

Date:

IN TESTIMONY WHEREOF, Assignor has/have signed his/her/their name(s) on the date(s) indicated.

Cheng-Yuan TSAI

Date:

Chih-Lung LIN

Date:

You-hua Chou

You-Hua CHOU

June 16, 2005

Date:

TSMC2003-1719/0503-A30363US

RECORDED: 07/21/2005

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