To the Honorable Commissioner of Patents:

1. Name of conveying party(ies):
   - Hun-Jan Tao
   - Chia-Shiung Tsai
   - Anthony Yen

2. Address of receiving party(ies):
   - Taiwan Semiconductor Manufacturing Co. Ltd.
   - No. 121 Park Avenue 3
   - Science-Based Industrial Park
   - Hsin-Chu, Taiwan, R.O.C.

3. Nature of conveyance:
   - Assignment
   - Security Agreement
   - Other
   - Execution Date: February 29, 2000

4. Application number(s) or patent number(s):
   - If this document is being filed together with a new application, the execution date of the application is: 02-29-00

   A. Patent Application No(s):

   B. Patent No(s):

5. Name and address of party to whom correspondence concerning document should be mailed:
   - RANDY W. TUNG
   - Tung & Associates
   - 835 W. Long Lake Road
   - Suite 120
   - Bloomfield Hills, Michigan 48302

6. Total number of applications and patents involved:
   - 1

7. Total fee (37 CFR 3.41)
   - $40.00

   - Enclosed
   - Authorized to be charged to deposit account

8. Deposit Account Number:
   - 50-0484

   (Attach duplicate copy of this page if paying by deposit account)

9. Statement and signature:
   - To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

   Randy W. Tung
   Name of Person Signing
   Registration No. 31,311

   Signature

   May 18, 2000

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231
ASSIGNMENT

WHEREAS, we, HUN-JAN TAO, CHIA-SHIUNG TSAI and ANTHONY YEN have invented certain improvements in PLASMA ETCH METHOD FOR FORMING PATTERNED LAYER WITH ENHANCED CRITICAL DIMENSION (CD) CONTROL for which we are about to make application for Letters Patent of the United States; and

WHEREAS, TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD. of No. 121, Park Avenue 3, Science-Based Industrial Park, Hsin-Chu, Taiwan, R.O.C. is desirous of acquiring the entire right, title and interest in and to said invention;

NOW, THEREFORE, in consideration of One Dollar ($1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, we, HUN-JAN TAO, CHIA-SHIUNG TSAI and ANTHONY YEN, by these presents, do hereby sell, assign and transfer unto the said corporation and its assigns, for the territory of the United States of America and all foreign countries, the entire right, title and interest, including all priority rights under the International Convention associated with each country of the Union, in and to said invention as described in the patent application executed by us on the 29th day of February, 2000, preparatory to
obtaining Letters Patent of the United States thereon, and in and to said application and any Letters Patent that may be granted in pursuance of said application and any divisional, continuation or continuation-in-part application thereof, and in and to any reissue of any such patent, and in and to any patent applications which may be filed on said invention in countries foreign to the United States and any Letters Patent granted thereon.

We further authorize said corporation to apply for foreign patents on said invention in its own name or through its designees, including subsidiaries, related companies or assignees, under the International Convention or otherwise, and we further agree to execute all papers, including those required for the United States and foreign applications, and to perform such other proper acts as said corporation or its designees the rights herein assigned.

[Signatures]

HUN-JAN TAO

CHIA-SHIENG TSAI

ANTHONY YEN

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838 W. Long Lake Road
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RECORDED: 05/18/2000