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HEET U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

Patent and Trademark Office 102264391 To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. 1 Name of conveying party(ies): Name and address of receiving party(ies): Taiwan Semiconductor Manufacturing Co. Ltd. No. 121 Park Avenue 3 Yao-Chi Chang Science-Based Industrial Park Jeff Lu Hsin-Chu, Taiwan, R.O.C. Additional name(s) & address(es) attached □ Yes ☑ No Nature of conveyance: Merger Assignment Security Agreement Change of Name Other: Execution Date: Sept. 10, 2002 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: __09-10-02 B. Patent No(s) A. Patent Application No(s). Additional numbers attached? □ Yes Ø No 5 Name and address of party to whom correspondence Total number of applications and patents involved: concerning document should be mailed: RANDY W. TUNG Total fee (37 CFR 3.41) \$40.00 Tung & Associates 838 W. Long Lake Road **Enclosed** \Box Suite 120 Bloomfield Hills, Michigan 48302 Authorized to charge credit card (w/filing fee) 50-0484 Deposit Account Number: 40.00 0 (Attach duplicate copy of this page if paying by deposit account) DO NOT USE THIS SPACE 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. October 21, 2002 Randy W. Tung Date Name of Person Signing Signature Registration No. 31,311 Total number of pages including cover sheet, attachments, and document: 3

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments

Washington, D.C. 20231

67,200-952 2002-0169

ASSIGNMENT

WHEREAS, we, YAO-CHI CHANG and JEFF LU, have invented certain

improvements in

A METHOD FOR STI ETCHING USING ENDPOINT DETECTION

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, YAO-CHI CHANG and

<u>JEFF LU</u>, 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 <u>roth</u> day of <u>september</u>, 200, 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

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PATENT REEL: 013414 FRAME: 0409 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.

Jao-Chi Chang

YAO-CHICHANG

JEFF LII

TUNG & ASSOCIATES 838 W. Long Lake Road Suite 120

Bloomfield Hills, Michigan 48302

RECORDED: 10/21/2002

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