

Atty. Dkt. No. AMAT/6463/CPI/COPPER/PJS

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

COPY

Names and Addresses of Inventors:

1)	LING CHEN 784 Dartshire Way Sunnyvale, California 94087	2)	HUA CHUNG 4645 Piper Drive San Jose, California 95129
3)	BARRY L. CHIN 13174 Cumberland Drive Saratoga, California 95070	4)	HONG ZHANG 818 Yakima Drive Fremont, California 94539

(hereinafter referred to as Assignors), have invented a certain invention entitled:

ENHANCED CU GROWTH WITH ULTRATHIN BARRIER LAYER FOR HIGH PERFORMANCE INTERCONNECTS

enclosed herewith or for which application for Letters Patent in the United States was filed on ,
under Serial No. , executed on even date herewith; and

WHEREAS, Applied Materials, Inc., a corporation of the State of Delaware, having a place of business at 3050 Bowers Avenue, Santa Clara, California 95054 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as Application), and the invention disclosed therein (hereinafter referred to as Invention), and in and to all embodiments of the invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter referred to as Patents) thereon granted in any and all countries and groups of countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

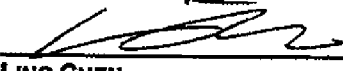
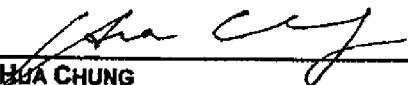
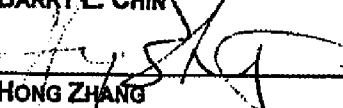
1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.

2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any application therefor and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.

4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

1)	<u>7-10</u>	2002	 LING CHEN
2)	<u>7/10</u>	2002	 HUA CHUNG
3)	_____	2002	_____ BARRY L. CHIN
4)	<u>7-18</u>	2002	 HONG ZHANG

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1)	_____	2002	_____
			LING CHEN
2)	_____	2002	_____
			HUA CHUNG
3)	<u>July 16</u>	2002	<u>Barry L. Chin</u>
			BARRY L. CHIN
4)	_____	2002	_____
			HONG ZHANG

**PATTERSON &
SHERIDAN, LLP**

ATTORNEYS AT LAW

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TEL 713.623.4844
FAX 713.623.4846

FACSIMILE COVER SHEET

DATE: September 8, 2006
FILE NO: APPM/005192.C5/CPI/COPPER/PJS
TO: Mail Stop Assignment Recordation Services
FAX NO: 571-273-0140
COMPANY: USPTO
FROM: Steven H. Ver Steeg
PAGE(S) with cover: 7
ORIGINAL TO FOLLOW? ☐ YES ☒ NO

RECORDATION COVER SHEET AND ASSIGNMENT

TITLE: ENHANCED COPPER GROWTH WITH ULTRATHIN BARRIER LAYER FOR HIGH PERFORMANCE INTERCONNECTS
U.S. SERIAL NO.: 11/470,922
FILING DATE: September 7, 2006
INVENTOR: LING CHEN, et al.
EXAMINER: Unknown
GROUP ART UNIT: Unknown
CONFIRMATION NO.: 8800

CONFIDENTIALITY NOTE

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^{499649_1}
PATENT

REEL: 018240 FRAME: 0150

RECORDATION FORM COVER SHEET

PATENTS ONLY

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

1. Name of conveying party(ies):

LING CHEN
HUA CHUNG
BARRY L. CHIN
HONG ZHANGJuly 10, 2002
July 10, 2002
July 16, 2002
July 18, 2002Additional name of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies)

Name: APPLIED MATERIALS, INC.Internal Address: Patent CounselStreet Address: P.O. Box 450-ACity: Santa ClaraState: CACountry: USAZip: 95052Additional Name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:

Execution Date(s) _____

- ☒ Assignment ☐ Merger
- ☐ Security Agreement ☐ Change of Name
- ☐ Government Interest Assignment
- ☐ Executive Order 9424, Confirmatory License
- ☐ Other

4. Application number(s) or patent number(s):



This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

11/470,922; Filed September 7, 2006

Additional numbers attached? ☐ Yes ☐ No

COPY

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

Name: Patterson & Sheridan, L.L.P.Internal Address: Applied Materials IncStreet Address: 3040 Post Oak Boulevard, Suite 1500City: HoustonState: TXZip: 77056Phone Number : 713-623-4844Fax Number: 713-623-4846Email Address: tpatterson@pattersonsheridan.com6. Total number of applications and patents involved: 17. 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 _____

Expiration Date _____

b. Deposit Account Number

50-1074/005192.C5/CPI/COPPER/PJSAuthorized User Name Robert W. Mulcahy

9. Signature :

Signature

September , 2006

Date

Robert W. Mulcahy - Reg No. 25,436

Name of Person Signing

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

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