

6837/TCG/ALD/BG

FORM PTO-1596  
(Rev. 6-93)  
OMB No. 3451-0011 (exp. 6/96)

RECORDATION FORM COVER SHEET

U.S. Department of Commerce  
Patent and Trademark Office

PATENTS ONLY

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

1. Name of conveying party(ies):  
 Hyungsuk Alexander Yoon  
 Michael X. Yang  
 Hui Zhang  
 Soonil Hong  
 Ming Xi

DATE ASSIGNMENT SIGNED  
 April 21, 2003  
 April 11, 2003  
 April 15, 2003  
 May 7, 2003  
 April 11, 2003

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

3. Nature of conveyance:  
 Assignment  
 Security Agreement  
 Other

Merger  
 Change of Name

Execution Date:

2. Name and address of receiving party(ies):  
 Name: Applied Materials, Inc.  
 Internal Address:  
 Street Address: 3050 Bowers Avenue  
P.O. Box 450A  
 City: Santa Clara State: CA Zip: 95054

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

4. Application number(s) or registration number(s):  
 If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_ (Date of Filing)

A. Patent Application No.(s) 10/322,345 Filed: December 18, 2002

B. Patent No.(s)  
 Additional numbers attached?  Yes  No

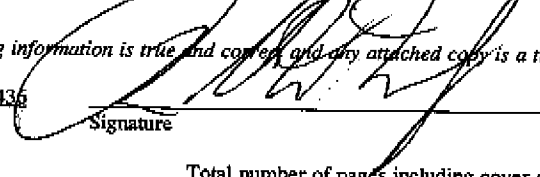
5. Name and address of party to whom correspondence concerning document should be mailed:  
 Name: Patent Counsel  
 Internal Address: APPLIED MATERIALS, INC.  
 Street Address: P.O. Box 450A  
 City: Santa Clara State: CA Zip: 95052

6. Total number of applications and patents involved:  
 7. Total fee (37 C.F.R. 3.41)----- \$ 40.00  
 Enclosed  
 Authorized to be charged to deposit account  
50-1074

8. Deposit account number:  
50-1074

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.*

ROBERT W. MULCAHY, Registration No. 25,435  
 Name of Person Signing  Signature Date 5/21/03

Total number of pages including cover sheet, attachments and document: 7

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

Case No. 6837/TCG/ALD/BG

**ASSIGNMENT FOR APPLICATION FOR PATENT**

WHEREAS:

Names and Addresses  
of Inventors:

- |   |  |
|---|--|
| 1) Hyungsuk Alexander Yoon<br>980 Kiely Boulevard #220<br>Santa Clara, CA 95051 | 4) Soonil Hong<br>49 Showers Drive K428<br>Mountain View, CA 94040 |
| 2) Michael X. Yang<br>793 Cereza Drive<br>Palo Alto, CA 94036                   | 5) Ming Xi<br>151 Churchill Avenue<br>Palo Alto, CA 94301          |
| 3) Hui Zhang<br>3555 Sunnydays Lane<br>Santa Clara, CA 95051                    |  |

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

**SELECTIVE DEPOSITION OF A BARRIER LAYER ON A METAL FILM**

for which application for Letters Patent in the United States was executed on 12/18/2002 under serial no. 10/322,345, executed 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) 4/21, 2003

*Hyungsuk Yoon*  
HYUNGSUK ALEXANDER YOON

2) \_\_\_\_\_, 2003

\_\_\_\_\_  
MICHAEL X. YANG

3) \_\_\_\_\_, 2003

\_\_\_\_\_  
HUI ZHANG

4) \_\_\_\_\_, 2003

\_\_\_\_\_  
SOONIL HONG

5) \_\_\_\_\_, 2003

\_\_\_\_\_  
MING XI

Case No. 6837/TCG/ALD/BG

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\_\_\_\_\_  
HYUNGSUK ALEXANDER YOON

2) 4/11, 2003

  
\_\_\_\_\_  
MICHAEL X. YANG


3) 4/15, 2003

  
\_\_\_\_\_  
HUI ZHANG

4) \_\_\_\_\_, 2003

\_\_\_\_\_  
SOONIL HONG

5) 4/11, 2003

  
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Case No. 6837/TCG/ALD/BG

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2) \_\_\_\_\_, 2003

\_\_\_\_\_  
MICHAEL X. YANG

3) \_\_\_\_\_, 2003

\_\_\_\_\_  
HUI ZHANG

4) May 7 \_\_\_\_\_, 2003

  
\_\_\_\_\_  
SOONIL HONG

5) \_\_\_\_\_, 2003

\_\_\_\_\_  
MING XI