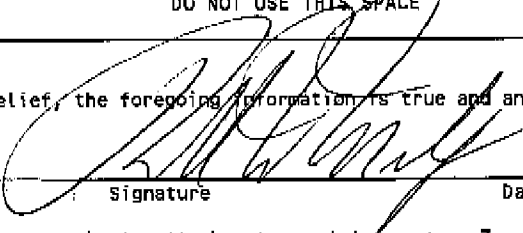


<b>FORM PTO-1595</b> (Modified)		<b>RECORDATION FORM COVER SHEET</b> PATENTS ONLY		5975.P1 CFI/L/B U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office	
To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof					
<b>1. Name of conveying party(ies):</b>  <div style="text-align: right; margin-right: 50px;"><u>EXECUTION DATE</u></div> Mei CHANG..... 9/9/03 Seshadri GANGULI..... 9/18/03 Nirmalya MAITY..... 9/18/03  Additional name(s) of conveying part(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<b>2. Name and address of receiving party(ies):</b> Name: <u>Applied Materials, Inc.</u>  Internal Address: <u>Legal Affairs Department</u>   Street Address: <u>P.O. Box 450-A</u>   City: <u>Santa Clara</u> State <u>CA</u> Zip <u>95052</u>  Additional Name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>3. Nature of conveyance:</b>  <input checked="" type="checkbox"/> Assignment <span style="margin-left: 100px;"><input type="checkbox"/> Merger</span>  <input type="checkbox"/> Security Agreement <span style="margin-left: 100px;"><input type="checkbox"/> Change of Name</span>  Other  Execution Date: <u>SEE ABOVE</u>			<b>4. Application number(s) or patent Number(s):</b>  If this document is being filed together with a new application, the execution date of the application is:		
<b>A. Patent Application No.(s)</b>  Serial No. <u>10/634,662</u> - Filing Date: <u>8/4/03</u> Additional Numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<b>B. Patent No.(s)</b>		
<b>5. Name and address of party to whom correspondence concerning document should be mailed:</b>  Name: <u>PATENT COUNSEL</u>  Internal Address: <u>Applied Materials, Inc.</u>  <u>Legal Affairs Dept.</u>  Street Address: <u>P.O. Box 450-A</u>   City: <u>Santa Clara</u> State: <u>CA</u> ZIP: <u>95052</u>			<b>6. Total number of applications and patents involved:</b> <u>1</u>  <b>7. Total fee (37 CFR 3.41).....\$40.00</b>  <input type="checkbox"/> Enclosed  <input checked="" type="checkbox"/> Authorized to be charged to deposit account  <b>8. Deposit account number:</b> <u>50-1074</u> (Attach duplicate copy of this page if paying by deposit account)		
DO NOT USE THIS SPACE					
<b>9. Statement and signature.</b>  To the best of my knowledge and belief, the foregoing information is true and any attached copy is a true copy of the original document.  Robert W. Mulcahy, Reg. No. 25,436 Name of Person Signing <span style="margin-left: 100px;"></span> <span style="margin-left: 100px;">01/13/04</span> Signature <span style="margin-left: 100px;">Date</span>  <b>10. Total number of pages comprising cover sheet, attachments, and document:</b> <u>3</u>					
OMB No. 0651-0011 (exp. 4/94)					

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

Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231**PATENT****REEL: 014255 FRAME: 0589**

Atty. Dkt. No. AMAT/5975.P1/CPI/COPPER/BG

**ASSIGNMENT FOR APPLICATION FOR PATENT**

WHEREAS:

Names and Addresses of Inventors:

1)	<b>MEI CHANG</b> 12881 Corte de Arguello Saratoga, CA 95070 CITIZENSHIP: U.S.A.	2)	<b>SESHADRI GANGULI</b> 713 Golden Oak Drive #7 Sunnyvale, CA 95086 CITIZENSHIP: INDIA
3)	<b>NIRMALYA MAITY</b> <del>939 E. La Mesa Terrace</del> <del>Sunnyvale, CA 94086</del> CITIZENSHIP: INDIA	1480 HOLLY AVE LOS ANGELES, CA 94024	

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

**RUTHENIUM LAYER FORMATION FOR COPPER FILM DEPOSITION**

enclosed herewith or for which application for Letters Patent in the United States was filed on August 4, 2003, under Serial No. 10/634,662, 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



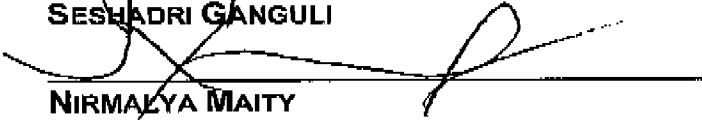
any application which is a division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.

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>9/19</u>	2003	 MEI CHANG
2)	<u>9/18</u>	2003	 SESHADRI GANGULI
3)	<u>9/15</u>	2003	 NIRMALYA MAITY

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**COVER**

**SHEET**

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**FAX**

**To: USPTO Assignment Branch**

**Fax #:**

**Subject: RECORD ASSIGNMENT**

Serial No. 10/634,662 – Filing Date: 8/4/2003

Docket No. 5975.P1

**Date: Monday, January 12, 2004**

**Pages: 48, including this cover sheet.**

COMMENTS:

**KINDLY RECORD ENCLOSED ASSIGNMENT.**

From the desk of...  
**Jo Ann Cottrell**  
Patent Administrator  
Applied Materials, Inc.  
2881 Scott Blvd., M/S 2061  
Santa Clara, CA 95050

(408) 235-6536  
Fax: (408) 986-3090

**RECORDED: 01/13/2004**

**PATENT**  
**REEL: 014255 FRAME: 0592**