

Form PTO-1595 (Rev. 01-09)
OMB No. 0651-0027 (exp. 02/28/2009)

U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

RECORDATION FORM COVER SHEET PATENTS ONLY

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

<p>1. Name of conveying party(ies): Seshadri Ganguli (05/20/2011), Srinivas Gandikota (05/20/2011), Yu Lei (05/31/2011), Xinliang Lu (05/31/2011), Additional name(s) of conveying party(ies) attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>3. Nature of conveyance/Execution Date(s): Execution Date(s): <u>in parentheses after inventor name</u> <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Change of Name <input type="checkbox"/> Security Agreement <input type="checkbox"/> Joint Research Agreement <input type="checkbox"/> Government Interest Assignment <input type="checkbox"/> Executive Order 9424, Confirmatory License <input type="checkbox"/> Other _____</p>	<p>2. Name and address of receiving party(ies) Name: <u>APPLIED MATERIALS, INC.</u> Internal Address: _____ Street Address: _____ 3050 Bowers Avenue City: <u>Santa Clara</u> State: <u>California</u> Country: <u>United States of America</u> Zip: <u>95054</u> Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>4. Application or patent number(s): <input type="checkbox"/> This document is being filed together with a new application. A. Patent Application No.(s) <u>13/093,710 filed 04/25/2011</u> B. Patent No.(s) Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>6. Total number of applications and patents involved: 1</p> <p>7. Total fee (37 CFR 1.21(h) & 3.41) \$ <u>40.00</u> <input checked="" type="checkbox"/> Authorized to be charged to deposit account <input type="checkbox"/> Enclosed <input type="checkbox"/> None required (government interest not affecting title)</p>
<p>5. Name and address to whom correspondence concerning document should be mailed: Name: <u>B. Todd Patterson</u> <u>PATTERSON & SHERIDAN, LLP</u> Internal Address: <u>Atty. Dkt.: APPM/14327US</u> Street Address: <u>3040 Post Oak Blvd, Suite 1500</u> City: <u>Houston</u> State: <u>TX</u> Zip: <u>77056</u> Phone Number: <u>(713) 623-4844</u> Fax Number: <u>(713) 623-4846</u> Email Address: <u>tpatterson@pattersonsheridan.com</u></p>	<p>8. Payment Information Deposit Account Number <u>50-1074</u> Authorized User Name <u>Robert W. Mulcahy</u></p>
<p>9. Signature: _____ Signature <u>Robert W. Mulcahy - 25,436</u> Name of Person Signing</p> <p style="text-align: right;">Date <u>June 7, 2011</u></p> <p style="text-align: right;">Total number of pages including cover sheet, attachments, and documents: 5</p>	

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted by facsimile to the Patent and Trademark Office, facsimile no. (571) 273-0140, on the date shown below.

Dated: June 7, 2011 Signature: (Keith M. Tackett)

CH \$40.00 501074 13093710

RECORDATION FORM COVER SHEET (PTO-1595) (supplemental sheet)					
Additional Conveying Party(ies)/Execution Date(s) (1. Continued): Sang Ho Yu (05/20/2011), Hoon Kim (05/25/2011), Paul F. Ma (05/20/2011), Mei Chang (05/13/2011), Maitreyee Mahajani (05/20/2011), and Patricia M. Liu (05/20/2011)					
Additional Assignees (2. Continued): Assignee Name: _____ Internal Address: _____ Street Address: _____ City: _____ State: _____ Country: _____ Zip: _____					
Assignee Name: _____ Internal Address: _____ Street Address: _____ City: _____ State: _____ Country: _____ Zip: _____					
Assignee Name: _____ Internal Address: _____ Street Address: _____ City: _____ State: _____ Country: _____ Zip: _____					
Additional Applications and/or Patents (4. Continued): <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border-right: 1px solid black; padding: 5px; vertical-align: top;"> Additional Patent Application Numbers 4A. Continued: </td> <td style="width: 50%; padding: 5px; vertical-align: top;"> Additional Patent Numbers 4B. Continued: </td> </tr> <tr> <td colspan="2" style="text-align: right; padding: 5px;"> Additional numbers attached? <input type="checkbox"/> Yes <input type="checkbox"/> No </td> </tr> </table>		Additional Patent Application Numbers 4A. Continued:	Additional Patent Numbers 4B. Continued:	Additional numbers attached? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Additional Patent Application Numbers 4A. Continued:	Additional Patent Numbers 4B. Continued:				
Additional numbers attached? <input type="checkbox"/> Yes <input type="checkbox"/> No					

Atty Dkt No.: 014327/MDP/ALD-MDP/CROCKER S

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

- | | |
|--|--|
| 1) SESHADRI GANGULI
980 Belmont Terrance, #6
Sunnyvale, California 94086 | 2) SRINIVAS GANDIKOTA
2727 Monroe Street
Santa Clara, California 95051 |
| 3) YU LEI
1727 Parkview Green Circle
San Jose, California 95131 | 4) XINLIANG LU
45 Japala Court
Fremont, California 94539 |
| 5) SANG HO YU
11676 Palm Spring Ct.
Cupertino, California 95014 | 6) HOON KIM
3770 Flora Vista Ave., #1303
Santa Clara, California 95051 |
| 7) PAUL F. MA
2181 Rancho McCormick Blvd.
Santa Clara, California 95050 | 8) MEI CHANG
12881 Corte de Arguello
Saratoga, California 95070 |
| 9) MAITREYEE MAHAJANI
20255 Knollwood Drive
Saratoga, California 95070 | 10) PATRICIA M. LIU
18813 Bellgrove Circle
Saratoga, California 95070 |

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

NMOS METAL GATE MATERIALS, MANUFACTURING METHODS, AND EQUIPMENT USING CVD AND ALD PROCESSES WITH METAL BASED PRECURSORS

for which application for Letters Patent in the United States was filed on April 25, 2011, under Serial No. 13/093,710, 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 conventional, division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.


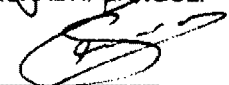
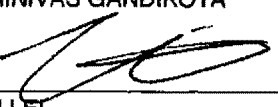
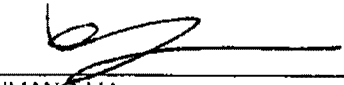
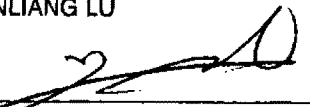

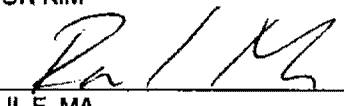

Atty Dkt No.: 014327/MDP/ALD-MDP/CROCKER S

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, conventional, 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 therefore 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>5/20/11</u> (DATE)	 _____ SESHADRI GANGULI
2)	<u>5/20/11</u> (DATE)	 _____ SRINIVAS GANDIKOTA
3)	<u>05/31/11</u> (DATE)	 _____ YU LEI
4)	<u>05/31/11</u> (DATE)	 _____ XINLIANG LU
5)	<u>5/20/11</u> (DATE)	 _____ BANG HO YU
6)	<u>5/25/11</u> (DATE)	 _____ HOON KIM
7)	<u>5/20/11</u> (DATE)	 _____ PAUL F. MA
8)	<u>5/13/2011</u> (DATE)	 _____ MEI CHANG

Atty Dkt No.: 014327/MDP/ALD-MDP/CROCKER S

9) 5/20/11 (DATE)

Maitreyee Mahajani
MAITREYEE MAHAJANI

10) 5/20/11 (DATE)

Patricia M Liu
PATRICIA M. LIU