Form PTC-1595 (Rev. 09/04) OMB No. 0861-0027 (exp. 6/30/2005)	U.S. Department of COMMERCE United States Patenti and Trademark Office			
RECORDATION FO				
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): NYI OO MYO June 28, 2005 KENRIC CHOI June 17, 2005	Name and address of receiving party(ies) Name: APPLIED MATERIALS, INC.			
SHREYAS KHER June 14, 2005 PRAVIN NARWANKAR June 28, 2005	Internal Address: Patent Counsel			
Additional name of conveying party(ies) attached? ⊠ Yes ☐ No				
3. Nature of conveyance:	Street Address: P.O. Box 450-A			
Execution Date(s) Merger	City: Santa Clara			
☐ Security Agreement ☐ Change of Name	State: CA			
Government Interest Assignment Executive Order 9424, Confirmatory License	Country: USA Zip: 95052			
☐ Other	Additional Name(s) & address(es) attached? ☐ Yes ☑ No			
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)			
11/925,681; Filed October 26, 2007				
Additional numbers attached? Yes No				
Name and address of party to whom correspondence concerning this document should be mailed:	6. Total number of applications and patents involved: 1			
Name: Patterson & Sheridan, L.L.P.	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00			
Internal Address: Applied Materials, Inc.	 Authorized to be charged by credit card 			
Street Address: 3040 Post Oak Boulevard, Suite 1500	☐ Enclosed☐ None required (government interest not affecting title)☐			
City: Houston	- House reduing (Reachander) independent me)			
State: <u>TX</u> Zip: <u>77056</u>	8. Payment information			
Phone Number : 713-623-4844	a. Credit Card Last 4 Numbers Expiration Date			
Fax Number: 713-623-4846 Email Address: tpatterson@pattersonsheridan.com	b. Deposit Account Number 50-1074/008527.D1/FEP/GCM/AG			
40	Authorized User Name Robert W. Mulcahy			
9. Signature : Signature	November 20, 2007			
Signature	Date ·			
Robert W. Mulcahy Reg No. 25,436 Name of Person Signing	Total number of pages, sheet, attachments, 4 and documents including cover			

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

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STEVE POPPE CRAIG R. METZNER PAUL DEATEN June 28, 2005 June 21, 2005 June 21, 2005

☑ 006/008

Atty. Docket No.: AMAT/8527.02/FEP/GCM/AG

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses

of Inventors:

1)	NYI OO MYO 526 Railway Ave., #703 Campbell, California 95008	2)	KENRIC CHOI 1400 Bowe Ave. # 1805 Santa Calra, California 95051
3)	SHREYAS KHER 1656 Adrien Drive Campbell, California 95008	4)	PRAVIN NARWANKAR 392 Waverly Street Sunnyvale, California 94086
5)	STEVE POPPE 4378 Campinia Place Pleasanton, California 94566	6)	CRAIG R. METZNER 618 Saddleback Terrace Fremont, California 94536
7)	PAUL DEATEN 4389 Moran Drive San Jose, California 95129		

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

APPARATUSES AND METHODS FOR ATOMIC LAYER DEPOSITION OF HAFNIUM-CONTAINING HIGH-K DIELECTRIC MATERIALS

for which application for Letters Patent in the United States was filed on May 12, 2005, under Serial No. 11/127,753, 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

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PATENT REEL: 020148 FRAME: 0005 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.

- 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 conventional, 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)	06 28 05 (DATE)	My Co
		NYI OO MYD V
2)	6 17/05 (DATE)	112
	t F	KENRIC CHOI
3)	614 05 (DATE)	Shayas Khu
		SHREYAS KHER
4)	6/28/05 (DATE)	Januaraman 42
	, ,	PRAVIN NARWANKAR
5)	4/28/05 (DATE)	Stucker
	,	STEVE POPPE
6)	6/21/05 (DATE)	Luy K M/h
	<i>'</i>	CRAIG R. METZNER

7) <u>6/21/05</u> (DATE)

PAUL DEATEN

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PATENT REEL: 020148 FRAME: 0007