Phone Number: 408-563-0959

Fax Number: 408-986-3090

Email Address:

9. Signature:

	-2006  U.S. DEPARTMENT OF COMMERCE United States Patent and Trademark Office  ET  AMAT/010195 FEP EPI AG
, = -	lease record the attached documents or the new address(es) below.
1. Name of conveying party(ies)	2. Name and address of receiving party(ies)
Satheesh Kuppurao, David K. Carlson, Howard Beckford, Errol Sanchez	Name: Applied Materials, Inc.
Additional name(s) of conveying party(ies) attached? Yes .  3. Nature of conveyance/Execution Date(s):  Execution Date(s) January 19, 2006	No Street Address: P.O. Box 450-A
Assignment Merger  Security Agreement Change of Name	City: Santa Clara
☐ Joint Research Agreement ☐ Government Interest Assignment ☐ Executive Order 9424, Confirmatory License	State: CA  Country: USA  Zip: 95052
Other	Additional name(s) & address(es) attached? ☐ Yes ✓ No
4. Application or patent number(s):  A. Patent Application No.(s)	nis document is being filed together with a new application.  B. Patent No.(s)
Additional numbers	s attached?
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 1
Name: Applied Materials, Inc. Internal Address:	7. 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
Street Address: P.O. Box 450-A	Enclosed  None required (government interest not affecting title)
City: Santa Clara State: USA Zip: 95052	a. Credit Card Last 4 Numbers Expiration Date

Name of Person Signing Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to: Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

Signature

Robert W. Mulcahy

**PATENT REEL: 017484 FRAME: 0851** 

11336178

b. Deposit Account Number 50-1074

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Total number of pages including cover

sheet, attachments, and documents:

## ASSIGNMENT FOR APPLICATION FOR PATENT

## WHEREAS:

Names and Addresses of Inventors:

- 1. Satheesh Kuppurao 4578 Piper Dr San Jose, CA, 95129
- David K. Carlson
   4054 Claitor Way
   San Jose, CA, 95132
- 3. Howard Beckford 762 Mackoin Ct San Jose, CA, 95133
- 4. Errol Sanchez 324 Jill Drive Tracy, CA, 95377

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

"METHODS FOR IN-SITU GENERATION OF REACTIVE ETCH AND GROWTH SPECIE IN FILM FORMATION PROCESSES"

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, CA, 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 the Application), and the invention disclosed therein (hereinafter referred to as the 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 the 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,

-1-

PATENT REEL: 017484 FRAME: 0852 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 filling and prosecuting substitute, divisional, continuing or additional applications covering said Invention; (d) for filling 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)	Jan 19 , 2006	K. Salheesh
٠,		(INVENTOR) Satheesh Kuppurao
2)	JAMARY 19, 2006	David X. Carlson
		(INVENTOR) David K. Carlson
3)	JANUARY 19, 2006	Aband A. Beckford
		(INVENTOR) Howard Beckford
4)	January 19, 2006	timol Sant
		(INVENTOR) Errol Sanchez

-2-

RECORDED: 01/20/2006