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To the Honorable Commissioner of Patents and Trademarks:	Please ittached original documents or copy thereof.			
Name of conveying party(ies):	2. Name and address of receiving party(ies)			
Alexander T. Schwarm Arulkumar P. Shanmugasundram /	Name: Applied Materials, Inc.			
Rong Pan	Internal Address:			
Manuel Hernandez	Internal Address:			
Amna Mohammad Additional name(s) of conveying party(ies) attached? Yes No				
Nature of conveyance:				
AssignmentMerger	Street Address:3050 Bowers Avenue			
Security Agreement Change of Name				
Other				
1) 6/14/02 2) 6/15/02	Or Santa Clara Or CA 7 95054			
3) 6/14/02 4) 6/14/02	City: Santa Clara State: CA Zip: 95054			
Execution Date: 5) 6/14/02	Additional name(s) & address(es) attached? Yes V			
4. Application number(s) or patent number(s):	1/7/12/2017			
If this document is being filed together with a new appli	cation the execution date of the application is:			
	B. Patent No.(s)			
A. Patent Application No.(s) TBD	B. Faterit No.(3)			

Additional numbers at				
	6. Total number of applications and patents involved:			
concerning document should be mailed:	7. Total fee (37 CFR 3.41)\$40.00			
Name: Patent Counsel, MS/2061	7. Total lee (37 GFR 3.41)			
	Enclosed			
Internal Address:	Authorized to be charged to deposit account			
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	8. Deposit account number:			
Street Address:Legal Affairs Department	08-0219			
Applied Materials, Inc.; P.O. Box 450A				
Applied Materials, Inc., 1.0. Dex 1007				
City: Santa Clara State: CA Zip: 95052				
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9. Signature.				
THE FURETTER AND ACTOR ASSESSED.				
40.00 CH Reg No. 36, 268	Mary Rox Symph06/18/2002			
Many Rose Scozzatav Reg No. 36, 268 Name of Person Signing	Signature Date			
· Name of Letson organis	ver sheet, attachments, and documents: 1.7			

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

Commissioner of Patents & Trademarks, Box Assignments

Washington, D.C. 20231

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

1)	Alexander T. Schwarm 9303 La Puente Drive Austin, Texas 78749 United States of America	2)	Arulkumar P. Shanmugasundram 428 Madera Avenue #10 Sunnyvale, California 94086 United States of America
3)	Rong Pan 191 Accacia Street Daly City, California 94014 United States of America	4)	Manuel Hernandez 777 South Mathilda Sunnyvale, California 94087 United States of America
5)	Amna Mohammad 201 W. California Avenue, #314 Sunnyvale, CA 94086 United States of America		

(hereinafter referred to as Assignors), have invented a certain invention disclosed in an application entitled:

FEEDBACK CONTROL OF SUB-ATMOSPHERIC CHEMICAL VAPOR DEPOSITION PROCESSES

for which application for Letters Patent in the United States is attached hereto; 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 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, substitution, or continuation of said Application; (d) in and to each and every reissue or extension of any of said Patents, and each and every provisional application to which said Application claims priority, or which otherwise relates to said Application, and (e) in and to all rights of action and damages for any past, present or future infringement relating to said Application and said Invention, including all rights of actions and damages from publication of any and all applications and/or issuance of any Patent relating thereto.
- 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

PATENT REEL: 013038 FRAME: 0493

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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.
- The undersigned hereby grant(s) to Assignee and to the firm of Hale and Dorr LLP the power to insert on this Assignment any further identification, including the application number and filing date, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said

Assignee on the dates indicated below.

1)

Alexander T. Schwarm

MANJUNATH YEDATORE

Name (typed):

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 $(\mathbf{r},\mathbf{r}) = \frac{1}{r} = \frac{1}{r} = \frac{r^2 + r^2}{r^2}$

IN WITNE Assignee on the d			Assignors have executed and delivered this instrument to said
2)		, 2002	Arulkumar P. Shanmugasundram
WitnessName (typed):		* - ***	Witness Name (typed):

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

3)

Witness Serjamin Lee

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IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

· · · · · · · · · 200

Name (typed):

3)

ed): Cary China

Witness____

Name (typed):

Benjama Le

-5-

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IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said

Assignee on the dates indicated below.

<u>4/14/</u>, 200

A M

Name (typed):

Cary Ching

RECORDED: 06/18/2002

Amna Mohammad

Keni Muhi Kevin Mukai