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	U.S. DEPARTMENT OF COMMERCE		
	Patent and Trademark Office		
To the Honorable Commissioner of Pate 1030	hed original documents or copy thereof		
1. Name of converge (ies):	2. Name and address of receiving party(ies):		
Songjae Lee Sandy Chao Ho Seon Shin Solve L 0 de Seon Shin Sep 0 7 2005	Name: APPLIED MATERIALS, INC. Internal Address: Legal Affairs Department - M/S 2061 Street Address: P. O. Box 450A City: Santa Clara State: CA Zip: 95052		
Additional name(s) of conveying part(ies) attached?	Additional name(s) & address(es) attached? ☐ Yes 图 No		
3. Nature of conveyance: ☐ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Other Execution Date: See Above			
 Application number(s) or patent number(s): If this document is being filed together with a new application, the 	ne execution date of the application is: Herewith		
A. Patent Application No.(s)	B. Patent No.(s)		
	01/28/05		
Additional Numbers attached? □Yes ■ No			
5. Name and address of party to whom correspondence concerning this document should be mailed:	6. Total number of applications and patent involved:1		
Name: BRIAN M. DUGAN Internal Address: DUGAN & DUGAN, PC Street Address: 55 South Broadway City: Tarrytown State: NY Zip: 10591	7. Total Fee (37 CFR 3.41) \$40.00 ☐ Enclosed ☑ Authorized to be charged to deposit account		
	8. Deposit Account Number: 04-1696 (Attach duplicate copy of this page if paying by deposit account)		
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9. Statement and signature.			
To the best of my knowledge and belief, the foregoing information is document. Brian M. Dugan, Registration No. 41,720	September 7, 2005		
Name of Person Signing Signature Date			
Total number of pages comprising cover sheet, attachments, and document:5			

Mail documents to be recorded with the required cover sheet information to:
Mail Stop Assignment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

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PATENT REEL: 016970 FRAME: 0713

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

1)	Sandy Shih-Hsun CHAO+ 700 Harrison Avenue Campbell, CA 95008	2)	Songjae LEE* 7007 Silver Brook Ct. San Jose, CA 95120
3)	Ho Seon SHIN* 22431 Palm Ave Cupertino, CA 95014		

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

"METHODS AND APPARATUS FOR PROVIDING FLUID TO A SEMICONDUCTOR DEVICE PROCESSING APPARATUS"

for which application for Letters Patent in the United States was filed on 01/28/2005, under Serial No. 11/048,106, 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,

1 of 2

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.

258ller	Date: 8/11/05
Sandy Shih-Asun CHAO+ Employee No:	TERM/20120
,	Date:
Songjae LEE* Employee No: 89467	
	Date:
Ho Seon SHIN* Employee No: 63881	

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	Date:		
Sandy Shih-Hsun CHAO+ Employee No:	TERM/20120		
Songjae LEE* Employee No: 89467	Date:	4/13/05	
ceo seon se	Date:	4120/05	
Ho Seon SHIN* Employee No: 63881	-		

RECORDED: 09/07/2005