PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SUBHASH DESHMUKH	06/12/2014
JOSEPH JOHNSON	08/22/2014
JINGJING LIU	06/26/2014
HE REN	08/27/2014

RECEIVING PARTY DATA

Name:	Applied Materials, Inc.
Street Address:	3050 Bowers Avenue
City:	Santa Clara
State/Country:	CALIFORNIA
Postal Code:	95054

PROPERTY NUMBERS Total: 1

Property Type	Number		
Application Number:	14290861		

CORRESPONDENCE DATA

Fax Number: (650)326-2422

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 650-326-2400

Email: kalvarez@kilpatricktownsend.com
Correspondent Name: CHRISTOPHER P. SCHAFFER

Address Line 1: KILPATRICK TOWNSEND & STOCKTON LLP Address Line 2: TWO EMBARCADERO CENTER, 8TH FLOOR

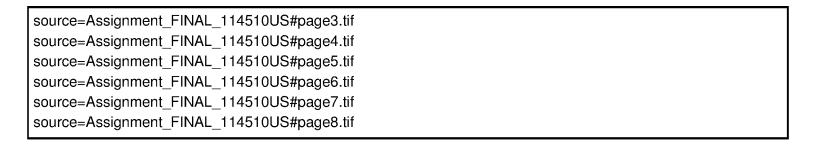
Address Line 4: SAN FRANCISCO, CALIFORNIA 94111

ATTORNEY DOCKET NUMBER:	A20630/T114510-889367		
NAME OF SUBMITTER:	CHRISTOPHER P. SCHAFFER		
SIGNATURE:	/Christopher P. Schaffer/		
DATE SIGNED:	09/11/2014		

Total Attachments: 8

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PATENT 502972521 REEL: 033723 FRAME: 0683



PATENT REEL: 033723 FRAME: 0684

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

1)	Subhash Deshmukh Livermore, CA	2)	Joseph Johnson Redwood City, CA
3)	Jingjing Liu Sunnyvale, CA	4)	He Ren San Jose, CA

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

PROCESS FOR ETCHING METAL USING A COMBINATION OF PLASMA AND SOLID STATE SOURCES

for which application for Letters Patent in the United States was filed on <u>May 29, 2014</u>, under Application No. 14/290,861, 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:

- 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, 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.

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	Date / /	Subhash Deshmukh
2)		
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σ,	Date	Jingjing Liu
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1)	Date	Subhash Deshmukh
2)	8/27/14	A J
	Date / /	Joseph Johnson
3)	Dota	
	Date	Jingjing Liu
4)		
	Date	He Ren

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2) Date	Joseph Johnson
3) 6/16/1014 Date	Jingjing Liu
4)	He Ren

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,	Date	Subhash Deshmukh
2)		
	Date	Joseph Johnson
3)		
Ο,	Date	Jingjing Liu
		He Ken
		V CC NEC
4)	8/27/2014	
	Date	He Ben