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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SATORU KOBAYASHI	01/12/2015
YUFEI ZHU	02/28/2015
SAURABH GARG	02/16/2015
SOONAM PARK	01/12/2015
DMITRY LUBOMIRSKY	01/12/2015

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:	15817599

CORRESPONDENCE DATA

Fax Number:

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: 973 597 2500

Email: tkellogg@lowenstein.com

Correspondent Name: LOWENSTEIN SANDLER LLP / AMAT PATENT DOC

Address Line 1: ONE LOWENSTEIN DRIVE

Address Line 4: ROSELAND, NEW JERSEY 07068

ATTORNEY DOCKET NUMBER:	R: 021278USAC01 28245.L0083C	
NAME OF SUBMITTER:	SAMUEL J. NOEL	
SIGNATURE:	/Samuel J. Noel/	
DATE SIGNED:	11/20/2017	

Total Attachments: 3

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PATENT REEL: 044177 FRAME: 0455

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PATENT REEL: 044177 FRAME: 0456 Case No.: 021278USA/SRP/FRONTIER SUSTAINING

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

- Satoru Kobayashi
 3482 Victoria Avenue
 Santa Clara, CA 95051
- 3) Saurabh Garg 151 N. Michigan Ave., Apt. 2318 Chicago, IL 60601
- 5) Dmitry Lubomirsky 862 Bette Avenue Cupertino, CA 95014

- 2) Yufei Zhu 1127 Palamos Avenue Sunnyvale, CA 94089
- 4) Soonam Park 935 La Mesa Terrace, Unit 1 Sunnyvale, CA 94086

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

CERAMIC RING TEST DEVICE

for which application for Letters Patent in the United States was executed on even date herewith; and /or for which an application for Letters Patent in the United States has been filed on Feb. 23, 2015, as Serial No. 14/628,733; 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 Assignor, 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.

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- 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, 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.

// 2, 2015 (date)	Satoru Kobayashi
2/28, 2015 (date)	Yufel Zhu
, 2015 (date)	Saurabh Garg
1/12 ,2015 (date)	Soonam Park
///Z2015 (date)	Omjiry Lubomirsky

- 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.
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- 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.

, 2015	
(date)	Satoru Kobayashi
	Yufei Zhu
02/16/ (date) / 2015	Saurath Garg
, 2015 (date)	Soonam Park
, 2015 (date)	Dmitry Lubomirsky

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