505157501 10/24/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YANG YANG	07/24/2018
ESWARANAND VENKATASUBRAMANIAN	07/30/2018
KARTIK RAMASWAMY	07/24/2018
KENNETH S. COLLINS	08/20/2018
STEVEN LANE	07/24/2018
GONZALO MONROY	07/24/2018
LUCY ZHIPING CHEN	07/30/2018
YUE GUO	07/24/2018

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:	16055974	

CORRESPONDENCE DATA

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Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

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ATTORNEY DOCKET NUMBER:	APPM/025381US
NAME OF SUBMITTER:	KEITH TABOADA
SIGNATURE:	/Keith Taboada/

PATENT 505157501 REEL: 047299 FRAME: 0112

DATE SIGNED: 10/24/2018

Total Attachments: 2
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PATENT REEL: 047299 FRAME: 0113

Atty Dkt No.: 025381US01

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

1)	Yang YANG 5775 Morehouse Drive San Diego, California 92121-1714	2)	Eswaranand VENKATASUBRAMANIAN 1721 Warburton Avenue, Apt 12 Santa Clara, California 95050
3)	Kartik RAMASWAMY 10020 Viewpoint Lane San Jose, California 95120	4)	Kenneth S. COLLINS 7214 Glenview Drive San Jose, California 95120
5)	Steven LANE 674 Chemeketa Drive San Jose, California 95123	6)	Gonzalo MONROY 3288 21st Street, #120 San Francisco, California 94110
7)	Lucy Zhiping CHEN 998 Brackett Way Santa Clara, California 95054	8)	Yue GUO 18 Pelican Ln Redwood City, California 94065

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

PLASMA DEPOSITION OF CARBON HARDMASK

enclosed 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 conventional, 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,

PATENT REEL: 047299 FRAME: 0114

Atty Dkt No.: 025381US01

conventional, 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 therefore 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)	7/24/2018 3:31:10 PM CDT (DATE)	Yang YANG
2)	7/30/2018 12:46:10 PM CDT (DATE)	Docusigned by: /Eswaranand Venkatasubramanian/ 1=175849A173408 Eswaranand VENKATASUBRAMANIAN
3)	7/24/2018 2:05:35 PM CDT (DATE)	Docusigned by: /kartik Ramaswamy/
4)	8/20/2018 10:26:12 AM CDT (DATE)	DocuSigned by: (Kenneth S. Collins) IRCAFRECIESOMER. Kenneth S. COLLINS
5)	7/24/2018 2:29:48 PM CDT	Steven LANE
6)	7/24/2018 2:46:32 PM CDT (DATE)	Docusigned by: / Gowyalo Mouroy/ 200A834416E3407 Gonzalo MONROY
7)	7/30/2018 11:51:38 AM CDT (DATE)	/wy Luping Cun/ Lucy Zhiping CHEN
8)	7/24/2018 3:38:53 PM CDT (DATE)	Docusigned by: //W Gw/ 0A552BD3A398445 Yue GUO