503672309 01/29/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MICHAEL WENYOUNG TSIANG	01/04/2016
PRAKET P. JHA	01/18/2016
XINHAI HAN	01/07/2016
NAGARAJAN RAJAGOPALAN	01/14/2016
BOK HOEN KIM	01/09/2016
TSUTOMU KIYOHARA	01/14/2016
SUBBALAKSHMI SREEKALA	12/15/2015

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:	14879043		

CORRESPONDENCE DATA

Fax Number: (713)623-4846

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.

using a lax number, if provided, if that is unsuccessful, it will be sent via 05 ma

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ATTORNEY DOCKET NUMBER:	APPM/22356US
NAME OF SUBMITTER:	KEITH TABOADA
SIGNATURE:	/Keith Taboada/

PATENT 503672309 REEL: 037624 FRAME: 0806

DATE SIGNED:	01/29/2016	
Total Attachments: 4		
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PATENT REEL: 037624 FRAME: 0807

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

1)	Michael Wenyoung TSIANG 40314 San Sebastian Place Fremont, California 94539	2)	Praket P. JHA 4241 Norwalk Drive, Apt. Z-209 San Jose, California 95129
3)	Xinhai HAN 4411 Laird Circle Santa Clara, California 95054	4)	Nagarajan RAJAGOPALAN 2344 Falling Water Court Santa Clara, California 95054
5)	Bok Hoen KIM 1116 Sterling Gate Drive San Jose, California 95120	6)	Tsutomu KIYOHARA 2200 Agnew Rd. #305 Santa Clara, California 95054
7)	Subbalakshmi SREEKALA 2286 Lynwood Terrace Milpitas, California 95035	8)	- January Gamorina 30004

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

GATE STACK MATERIALS FOR SEMICONDUCTOR APPLICATIONS FOR LITHOGRAPHIC OVERLAY IMPROVEMENT

for which application for Letters Patent in the United States was filed on October 8, 2015, under Serial No. 14/879,043, 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 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,

PATENT REEL: 037624 FRAME: 0808

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, 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.

	,	A
1)	1/4/16 (DATE)	ud 1
	1 1 -	Michael Wenyoung TSIANG
2)	1/18/16 (DATE)	PPA
		Praket P. JHA
3)	1/7/2016 (DATE)	263
		Xinhai HAN
4)	1/14/16 (DATE)	R-N-gray and Nagarajan RAJAGOPALAN
		Nagarajan RAJAGOPALAN
5)	1/9/20/(DATE)	Collin
	,	Bok Hoen KIM
6)	(DATE)	Marke
		Tsutomu KIYOHARA
7)	(DATE)	
٠,	(DATE)	Subbalakshmi SRFFKALA

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PATENT REEL: 037624 FRAME: 0810

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, 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.

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		Nagarajan HAJAGOPALAN
5)	(DATE)	Pok Haan KIM
		DOK HOELL KIIVI
6)	(DATE)	Tsutomu KIVOHADA
7\	12/15/2015	The state of the s
7)	(DATE)	Suhhalakehmi SDEEKALA
4)5)6)7)		Nagarajan RAJAGOPALAN Bok Hoen KIM Tsutomu KIYOHARA Subbalakshmi SREEKALA