502583335 11/26/2013

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2629413

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KAI WU	08/20/2013
KIEJIN PARK	09/09/2013
SANG HO YU	08/21/2013
SANG-HYEOB LEE	09/06/2013
KAZUYA DAITO	08/27/2013
JOSHUA COLLINS	08/22/2013
BENJAMIN C. WANG	08/27/2013

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:	13968057

CORRESPONDENCE DATA

Fax Number: (713)623-4846 **Phone**: 713-623-4844

Email: psdocketing@pattersonsheridan.com, rrathbun@pattersonsheridan.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: PATTERSON & SHERIDAN, LLP - - APPM/TX

Address Line 1: 3040 POST OAK BOULEVARD, SUITE 1500

Address Line 4: HOUSTON, TEXAS 77056

ATTORNEY DOCKET NUMBER: 017857US

PATENT

REEL: 031678 FRAME: 0470

P \$40.00 1396805

502583335

NAME OF SUBMITTER:	KEITH M. TACKETT
Signature:	/Keith M. Tackett/
Date:	11/26/2013
Total Attachments: 2 source=017857_Assignment#page1.tif source=017857_Assignment#page2.tif	

PATENT REEL: 031678 FRAME: 0471

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

1)	Kai WU 969 Towle Way	2)	Kiejin PARK 7210 Clarendon Street
	Apt. 11		San Jose, California 95129
	Palo Alto, California 94306		
0)	Sang Ho YU		Sang-Hyeob LEE
3)	11676 Palm Spring Ct.	4)	41510 Apricot Lane
	Cupertino, California 95014		Fremont, California 94539
	Kazuya DAITO	0.	Joshua COLLINS
5)	440 N. Winchester Blvd.	6)	1172 Maraschino Drive
	Santa Clara, California 95050	,	Sunnyvale, California 94087
7	Benjamin C. WANG		
7)	185 Estancia Dr., Unit 240 874 Bi	rig b	r#Z [ev
	San Jose, California 95134 Santa	Claro	7. #2 Ber

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

TUNGSTEN GROWTH MODULATION BY CONTROLLING SURFACE COMPOSITION

for which application for Letters Patent in the United States was filed on August 15, 2013, under Serial No. 13/968,057, 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, 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

1

Atty Dkt No. 017857 USA/MDP/WCVD/PJT

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.

oolgiio	9 0.7 1.10 4-1.1-	Λ
1)	8/20/13 (DATE)	Wedai
	18 1/2/12	Kai Wb
2)	#9/9/13 (DATE)	Kiejin PARK
3)	(DATE)	7
,	9/6/13 (DATE)	Sang Ho YU
4)		Sang-Hyeob LEE
5)	8/27/13 (DATE)	Rogerya 1
	8/22/2013 (DATE)	KazuvadaliTO
6)	CZ XE(ZOI) (DATE)	Joshua COLLINS
7)	8/24/2013 (DATE)	A Day
·		Benjamin C. WANG