

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4810420

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the INVENTOR LIST previously recorded on Reel 044823 Frame 0729. Assignor(s) hereby confirms the ASSIGNMENT.
CONVEYING PARTY DATA	
Name	Execution Date
SARAVJEET SINGH	02/01/2018
KENNETH D. SCHATZ	02/01/2018
ALAN TSO	02/01/2018
MARLIN WIJEKOON	02/01/2018
DIMITRI KIOUSSIS	02/02/2018
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:	15847411
CORRESPONDENCE DATA	
Fax Number:	(303)571-4321
<i>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.</i>	
Phone:	4048156500
Email:	sserrano@kilpatricktownsend.com
Correspondent Name:	KILPATRICK TOWNSEND & STOCKTON LLP
Address Line 1:	1100 PEACHTREE STREET
Address Line 2:	SUITE 2800
Address Line 4:	ATLANTA, GEORGIA 30309
ATTORNEY DOCKET NUMBER:	80042-44014755US1-1065738
NAME OF SUBMITTER:	SHANNON SERRANO
SIGNATURE:	/Shannon Serrano/
DATE SIGNED:	02/05/2018

Total Attachments: 4

source=080042-1065738_Assignment_Cover_Sheets#page1.tif

source=080042-1065738_Assignment_Cover_Sheets#page2.tif

source=080042-1065738_Assignment_Cover_Sheets#page3.tif

source=080042-1065738_Assignment_Cover_Sheets#page4.tif

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4808176

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
HANSHEN ZHANG	01/31/2018
ZHENJIANG CUI	02/02/2018
NITIN INGLE	02/02/2018
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:	15847411
CORRESPONDENCE DATA	
Fax Number:	(303)571-4321
<i>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.</i>	
Phone:	4048156500
Email:	sserrano@kilpatricktownsend.com
Correspondent Name:	KILPATRICK TOWNSEND & STOCKTON LLP
Address Line 1:	1100 PEACHTREE STREET
Address Line 2:	SUITE 2800
Address Line 4:	ATLANTA, GEORGIA 30309
ATTORNEY DOCKET NUMBER:	80042-44014754US1-1067685
NAME OF SUBMITTER:	SHANNON SERRANO
SIGNATURE:	/Shannon Serrano/
DATE SIGNED:	02/02/2018
Total Attachments: 2	
source=080042-1067685_Assignment#page1.tif	
source=080042-1067685_Assignment#page2.tif	

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ANNOTATED

EPAS ID: PAT4808176

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
HANSHEN ZHANG	SARAVJEET SINGH	01/31/2018 02/01/2018
ZHENJIANG GUI	KENNETH D. SCHATZ	02/02/2018 02/01/2018
NITIN INGLE	ALAN TSO	02/02/2018 02/01/2018
	MARLIN WIJEKON	02/01/2018
	DIMITRI KIOUSSIS	02/02/2018
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:	15847411	
CORRESPONDENCE DATA		
Fax Number:	(303)571-4321	
<i>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.</i>		
Phone:	4048156500	
Email:	sserrano@kilpatricktownsend.com	
Correspondent Name:	KILPATRICK TOWNSEND & STOCKTON LLP	
Address Line 1:	1100 PEACHTREE STREET	
Address Line 2:	SUITE 2800	
Address Line 4:	ATLANTA, GEORGIA 30309	
ATTORNEY DOCKET NUMBER:	80042-44014754US1-1067685 080042-44014755US01-1065738	
NAME OF SUBMITTER:	SHANNON SERRANO	
SIGNATURE:	/Shannon Serrano/	
DATE SIGNED:	02/02/2018	
Total Attachments: 2		
source=080042-1067685_Assignment#page1.tif		
source=080042-1067685_Assignment#page2.tif		

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses
of Inventors:

1)	Saravjeet Singh 969 Glenbar Ave. Sunnyvale, CA 94087	2)	Kenneth D. Schatz 1731-B Marshall Ct. Los Altos, CA 94024
3)	Alan Tso 1746 Barberry Lane San Jose, CA 95122	4)	Marlin Wijekoon 438 East Charleston Road Palo Alto, CA 94306
5)	Dimitri Kioussis 5706 Selfert Avenue San Jose, CA 95118		

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

MULTI-ZONE GAS DISTRIBUTION SYSTEMS AND METHODS

for which application for Letters Patent in the United States was filed on December 19, 2017,
under Application No. 15/847,411, 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:

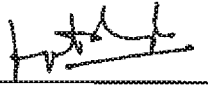
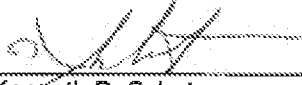
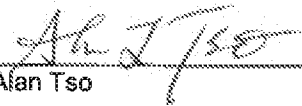
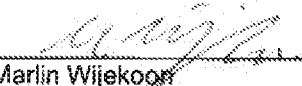
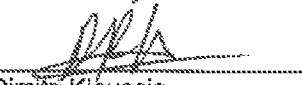
1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention 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 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, 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.

1) <u>2/1/2018</u> DATE	<u></u> Saravjeet Singh
2) <u>2/1/2018</u> DATE	<u></u> Kenneth D. Schatz
3) <u>2/1/2018</u> DATE	<u></u> Alan Tso
4) <u>2/1/2018</u> DATE	<u></u> Marlin Wijekoon
5) <u>2/2/2018</u> DATE	<u></u> Dimitri Kloussis