506733234 06/24/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6780051

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SUKETU A. PARIKH	04/13/2020
RONG TAO	02/24/2020
ROEY SHAVIV	11/19/2019
JOUNG JOO LEE	09/12/2019
SESHADRI GANGULI	03/27/2020
SHIRISH PETHE	04/14/2020
DAVID GAGE	11/15/2019
JIANSHE TANG	03/27/2020
MICHAEL A. STOLFI	03/27/2020

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:	17356717

CORRESPONDENCE DATA

Fax Number: (732)935-7122

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: 732-935-7100

Email: lzaveta@mtiplaw.com

MOSER TABOADA/ALAN TABOADA Correspondent Name:

Address Line 1: 1030 BROAD STREET

Address Line 2: SUITE 203

Address Line 4: SHREWSBURY, NEW JERSEY 07702

ATTORNEY DOCKET NUMBER:	44016935C1
NAME OF SUBMITTER:	ALAN TABOADA

PAIENI **REEL: 056657 FRAME: 0010** 506733234

SIGNATURE:	/ALAN TABOADA/
DATE SIGNED:	06/24/2021
Total Attachments: 8	
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PATENT REEL: 056657 FRAME: 0011

Case No. 44016935uso1

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

Suketu A Parikh 4624 Aviara Court San Jose CA, 95135 USA

Rong Tao

1131 Arlington Lane San Jose, CA 95129 USA

Roey Shaviv

501 El Capitan Place Palo Alto, CA 94306 USA

Joung Joo Lee

6467 Crystal Springs Dr San Jose, CA 95120 USA

Seshadri Ganguli

980 Belmont Terrace #6 Sunnyvale, CA 94086 USA

Shirish Pethe

10175 Parkwood Drive Cupertino, CA 95014 USA

David Gage

3185 Garden Ave San Jose, CA 95111 USA

Jianshe Tang

6203 Lean Avenue San Jose, CA 95123 USA

Michael A Stolfi

18 Dennis Drive Clifton Park, NY, 12065 USA

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

METHODS AND APPARATUS FOR FORMING DUAL METAL INTERCONNECTS

for which we have filed an application for a Patent of the United States on July 19, 2019, Serial No. 16/516,817; 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

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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.
- 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.

4/13/2020	(DATE)	Sold Special S
2/24/2020	(DATE)	SUKETU A. PARIKH Docusigned by:
	(DATE)	RONG TAO
		ROEY SHAVIV

	(DATE)	Docusigng O'LING JOO LEE
3/27/2020	(DATE)	Sushadri Ganguli 1E29ECECB7BD44F SESHADRI GANGULI
	(DATE)	SHIRISH PETHE
	(DATE)	DocuSigned DAVID GAGE
3/27/2020	(DATE)	Jianslu Tang
3/27/2020	(DATE)	Michael A Stolfi MICHAEL A. STOLFI

(DATE)	JOUNG JOO LEE
(DATE)	SESHADRI GANGULI
4/14/2020 (DATE)	Shirish Puth
(DATE)	DAVID GAGE
(DATE)	JIANSHE TANG
(DATE)	MICHAEL A. STOLFI

(UAIE)	
,	JOUNG JOO LEE
(DATE)	
	SESHADRI GANGULI
(DATE)	
1.1	SHIRISH PETHE
11/15/19 (DATE)	dlaw M Age
/ *	DAVID GAGE / /
(DATE)	
	JIANSHE TANG
(DATE)	
	MICHAEL A. STOLFI

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.
- 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.

(DATE)	SUKETU A. PARIKH	
9/12/2019 (DATE)	RONG TAO	
(DATE)	ROEY SHAVIV	

<u>ናራም /2 20/ኝ</u> (DATE)		
7	JOUNA JOO LEE	
(DATE)	SESHADRI GANGULI	
/0. s mm.	acompin annaoci	
(DATE)	SHIRISH PETHE	
(DATE)		
	DAVID GAGE	
(DATE)	JIANSHE TANG	
(DATE)		
\	MICHAEL A. STOLFI	

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.
- 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.

(DATE)	SUKETU A. PARIKH
(DATE)	RONG TAO
11/19/2019 (DATE)	Rocy Shaviv

RECORDED: 06/24/2021

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