506168535 07/23/2020 PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:			NEW ASSIGNMENT		
NATURE OF CONVEYANCE:			ASSIGNMENT		
CONVEYING PARTY	DATA	·			
		N	lame		Execution Date
SIDDARTH KRISHNAN	N				12/03/2019
RAJESH SATHIYANA	RAYANAN	1			09/13/2019
ATASHI BASU					09/29/2019
PAUL F. MA					09/29/2019
RECEIVING PARTY D	ΑΤΑ				
Name:	APPLI	ED MA	TERIALS, INC.		
Street Address:	3050 E	OWER	S AVENUE		
City:	SANTA	A CLAR	A		
State/Country:	CALIF	ORNIA			
Postal Code:	95054				
PROPERTY NUMBER			Numbor	7	
Property Type	9	10011	Number	_	
Application Number:		16841	020		
	be sent to	d; if tha	- <i>mail address first; if that is ur</i> at is unsuccessful, it will be se uy@dsiplaw.com		
Correspondent Name: SERVILLA WHITNEY LLC					
Address Line 1:	33 WOOD AVENUE SOUTH				
Address Line 2:		SUITE 830			
Address Line 4:		ISELIN	I, NEW JERSEY 08830		
ATTORNEY DOCKET NUMBER:		4	44014728US03CON		
NAME OF SUBMITTER:			JONATHAN B. WRIGHT		
SIGNATURE:		/	/Jonathan B. Wright, Reg. #72662/		
DATE SIGNED:		(07/23/2020		
Total Attachments: 5 source=00918846#page	√4 +;f				

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS: Names and Addresses of Inventors

1)	Siddarth Krishnan 36229 Kiote Dr Newark, CA 94560 United States of America	4)	Paul F. Ma 9635 N. 106th Way Scottsdale, AZ 85258 United States of America
2)	Rajesh Sathiyanarayanan 2055, Sobha Chrysanthemum Thanisandra Main Road, R K Hegde Na, Bangalore India	: 2000	
3)	Atashi Basu 675 Sharon Park Drive, Apt 136 Menlo Park, CA 94025 United States of America		₩.

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

"Methods And Materials For Modifying The Threshold Voltage Of Metal Oxide Stacks"

for which application for Letters Patent in the United States was filed on Dec 11, 2018, under Serial No. 16/216,500, 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, CA, 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 the Application), and the invention disclosed therein (hereinafter referred to as the 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 the 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.

PATENT REEL: 053293 FRAME: 0152

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 proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assigners 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)	Dec 3 2019 ₂₀₁₉	(INVENTOR) Siddarth Krishnan
2)	2019	(INVENTOR) Rajesh Sathiyanarayanan
3)	2019	(INVENTOR) Atashi Basu
4)		(INVENTOR) Paul F. Ma

2. Said Assigners 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 corriveyed in any and all countries and groups of countries. Such cooperation by said Assigners 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 recisuance 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 Assigners 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)		(INVENTOR) Siddarth Krishnan
2)	<u>13/09/</u> 2019	Rajest. S (INVENTOR) Rajesh Sathiyanarayanan
3)		(INVENTOR) Atashi Basu
4)	, 2019	(INVENTOR) Paul F. Ma

PATENT REEL: 053293 FRAME: 0154

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 proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assigners in providing such cooperation shall be paid for by said Assignee.

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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)		(INVENTOR) Siddarth Krishnan
2)		(INVENTOR) Rajesh Sathiyanarayanan
3)	<u>29 Sep</u> 2019	(INVENTOR) Atashi Basu
4)		(INVENTOR) Paul F. Ma

PATENT REEL: 053293 FRAME: 0155

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 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 Assigners in providing such cooperation shall be paid for by said Assignee.

 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.

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1)		(INVENTOR) Siddarth Krishnan
2)		(INVENTOR) Rajesh Sathiyanarayanan
3)		
4)	<u> </u>	(INVENTOR) Paul F. Ma