506005598 04/08/2020

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DAWEI SUN	02/11/2020
STEVEN M. ANELLA	01/27/2020
QIN CHEN	01/27/2020
RON SERISKY	02/14/2020
JULIAN G. BLAKE	01/28/2020
DAVID J. CHIPMAN	01/27/2020

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:	16749336

CORRESPONDENCE DATA

Fax Number: (508)898-2020

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: 508-898-1818

Email: annmarie.mahan@iplawboutique.com NIELDS LEMACK & FRAME LLC **Correspondent Name:**

176 E. MAIN STREET Address Line 1:

Address Line 2: SUITE 5

Address Line 4: WESTBOROUGH, MASSACHUSETTS 01581

ATTORNEY DOCKET NUMBER:	4401766US01
NAME OF SUBMITTER:	ROBERT C. FRAME
SIGNATURE:	/Robert C. Frame/
DATE SIGNED:	04/08/2020

PATENT REEL: 052346 FRAME: 0349 506005598

Total Attachments: 8 source=4401766US01-Assignment#page1.tif source=4401766US01-Assignment#page2.tif source=4401766US01-Assignment#page3.tif source=4401766US01-Assignment#page4.tif source=4401766US01-Assignment#page5.tif source=4401766US01-Assignment#page6.tif source=4401766US01-Assignment#page7.tif source=4401766US01-Assignment#page8.tif

PATENT REEL: 052346 FRAME: 0350

ASSIGNMENT

WHEREAS, the undersigned, to wit:

Dawei Sun Steven M. Anella Qin Chen Ron Serisky Julian G. Blake David J. Chipman

(Hereinafter collectively ASSIGNOR), have/has made a certain new and useful invention as set forth in an application for United States Letters Patent, entitled:

Carbon Nanotube Electrostatic Chuck

(A only one);	
(A)	which was executed concurrently herewith and is being filed herewith in the United States Patent and Trademark Office;
(B)	which was executed on, 20, and is being filed herewith in the United States Patent and Trademark Office;
(C)	X which was filed as US Patent Apple. No. 16/749,336 filed on January 22, 2028.

AND WHEREAS, Applied Materials, Inc. (hereinafter ASSIGNEE), a corporation organized and existing under the laws of the state of California, and having its principal place of business at 3050 Bowers Avenue, Santa Clara, California 95054-3299, is desirous of acquiring the entire right, title, and interest in and to said invention and any and all patents that may be obtained therefore, and in and to said application and any and all patents that may issue therefrom;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR does hereby sell, assign, transfer, and set over unto said ASSIGNEE, its successors, assigns, and legal representatives, all right, title, and interest in and to said invention throughout the world, and any and all patents of the United States and foreign countries that may be obtained therefor, and in and to said application, including any and all continuations, continuations-in-part, divisionals, reissues, re-examinations, substitutions, and extensions thereof, and any and all patents of the United States and foreign countries that may issue therefrom, such right, title, and interest including the right to file applications and obtain patents, utility models, industrial models and designs for said invention in the name of said ASSIGNEE, its successors, assigns, and legal representatives throughout the world, including all rights of priority, all rights to publish cautionary notices reserving ownership of said invention, and all rights to register said invention in appropriate registries;

ASSIGNOR also does hereby covenant that it has the full right to convey the entire right, title, and interest herein assigned, and that it has not and will not execute any agreement in conflict herewith;

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PATENT REEL: 052346 FRAME: 0351

ASSIGNOR also does hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States on said invention or resulting from said application, including any continuations, continuations-in-part, divisions, reissues, reexaminations, substitutions, and extensions thereof, to said ASSIGNEE, its successors, assigns, and legal representatives as the ASSIGNEE of the entire right, title, and interest herein assigned;

ASSIGNOR also does hereby agree to, at any time, upon request, without further or additional consideration, but at the expense of said ASSIGNEE, its successors, assigns, or legal representatives, execute and deliver any and all papers, make all rightful oaths, and do all lawful acts that may be necessary or desirable to perfect the entire right, title, and interest here assigned in said ASSIGNEE, its successors, assigns, and legal representatives, and generally do everything possible to vest the entire right, title and interest herein assigned in said ASSIGNEE, its successors, assigns, and legal representatives;

ASSIGNOR also does hereby agree to, at any time, upon request, without further or additional consideration, but at the expense of said ASSIGNEE, its successors, assigns, or legal representatives, execute and deliver any and all papers, make all rightful oaths, and do all lawful acts that may be necessary or desirable to make application for and obtain any and all continuations, continuations-in-part, divisions, reissues, re-examinations, substitutions, and extensions of said application, or any application on said invention, or any patent issuing therefor or therefrom:

ASSIGNOR also does hereby agree to, at any time, upon request, without further or additional consideration but at the expense of said ASSIGNEE, its successors, assigns, and legal representatives, communicate to said ASSIGNEE, its successors, assigns, and legal representatives, any known facts relating to said invention or said application or any patent issuing therefor or therefrom, and testify as to the same in any interference or other litigation proceeding when requested to do so, and aid said ASSIGNEE, its successors, assigns, and legal representatives, in obtaining and enforcing property protection for said invention in all countries;

ASSIGNOR also does hereby grant the Legal Department of Varian Semiconductor Equipment Associates, Inc., at the address shown above, the power to insert on this assignment any further information, including, but not limited to application number(s) and filing date(s), which may be necessary or desirable in order to comply with any rule or request of the United States Patent and Trademark Office for the purposes of recording this document.

ASSIGNOR also does now hereby execute this document on the date(s) indicated below:

I have hereunto set my hand and seal this <u>11</u> day of <u>44</u> , 2020.
Name: Dawei Son
Lamana Namé: Dawei Sun
I have hereunto set my hand and seal this day of, 2020.
Nanc: Sieven M. Anella
Lhave hereunto set my hand and seal thisday of, 2020.
Name: Qin Chen
;
I have hereunto set my hand and seal thisday of, 2020.
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Name: Ron Serisky
I have hereunto set my hand and seal this day of, 2020.
Name: Julian G. Blake
I have hereunto set my hand and seal thisday of, 2020.
Name: David J. Chipman
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I have hereunto set my hand and seal this day of, 2020.	
Name: Dawel Sun	
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Name: Qin Chen	
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Name: Ron Serisky	
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Name: Julian G. Blake	
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Name: David J. Chipman	

I have hereunto set my hand and seal thisday of, 2020.
Name: Dawei Sun
I have hereunto set my hand and seal this day of, 2020.
Name: Steven M. Anella
I have hereunto set my hand and seal this 21 day of Janary 2020. 2001
Name: Qin Chen
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Name: Ron Serisky
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Name: David J. Chipman

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Name: Dawei Sun
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Name: Steven M. Anella
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I have hereunto set my hand and seal thisday of, 2020.
Name: Qin Chen
I have hereunto set my hand and seal this 14 day of February , 2020. Luly Name: Ron Serisky
I have hereunto set my hand and seal thisday of, 2020.
Name: Julian G. Blake
I have hereunto set my hand and seal thisday of, 2020.
Name: David J. Chipman

Annount to the contract of the
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Name: Dawei Sun
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Name: Steven M. Anella
I leave hereumo sei my hund and seal this day of 2020.
Name: Qin Chen
i have hereunto set my hand and seal this day of, 2020.
Name: Rob Serisky
1 have hereumo set my band and seal this 28 day of Jang 2020. 4al can G Blak
Pame: Julian G. Blake
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Sans: David J. Chipman

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Name: Ron 5	erisky
l have hercunio set my hand and seal this	day of, 2028.
Name: Julian	AN THE R.
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I have hereunto set my hand and seal this 22^{2}	Tony of Thursday, 2020.
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