505885611 01/28/2020

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
COSTEL BILOIU	07/29/2019
APPU NAVEEN THOMAS	07/30/2019
TYLER ROCKWELL	08/02/2019
FRANK SINCLAIR	07/30/2019
CHRISTOPHER CAMPBELL	11/01/2019

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:	16524646

CORRESPONDENCE DATA

Fax Number: (919)999-2798

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: 919-636-4767

Email: bjackson@kdbfirm.com, docketing@kdbfirm.com

Correspondent Name: KACVINSKY DAISAK BLUNI PLLC
Address Line 1: 101 CARNEGIE CENTER SUITE 106
Address Line 4: PRINCETON, NEW JERSEY 08540

ATTORNEY DOCKET NUMBER:	44016750
NAME OF SUBMITTER:	BARBARA J. JACKSON
SIGNATURE:	/Barbara J. Jackson/
DATE SIGNED:	01/28/2020

Total Attachments: 9

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PATENT REEL: 051720 FRAME: 0388

505885611



PATENT REEL: 051720 FRAME: 0389

ASSIGNMENT

WHEREAS, the undersigned, to wit:

Costel Biloiu
Appu Naveen Thomas
Tyler Rockwell
Frank Sinclair
Christopher Campbell

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

APPARATUS AND SYSTEM HAVING EXTRACTION ASSEMBLY FOR WIDE ANGLE ION BEAM

(X or	ily one):
(A)	multiply which was executed concurrently herewith and is being filed herewith in the United States Patent and Trademark Office;
(8)	which was executed on, 20, and is being filed herewith in the United States Patent and Trademark Office:
(C)	which was filed as US Patent Application No. 16/524,646, filed on July 29, 2019

AND WHEREAS, Applied Materials, Inc., (hereinafter ASSIGNEE), a corporation organized and existing under the laws of the state of Delaware, and having its principal place of business at 3050 Bowers Avenue, Santa Clara, California, 95054, 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;

ŧ

PATENT REEL: 051720 FRAME: 0390 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;

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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:

OY/L9/20/9

Name: Costel glidid

Date

Name: Appu Naveen Thomas

PATENT APPLICATION Attorney Oocket No. 44016750

<u> 5/2//1</u> Davis	Name: Ayler Rockwell
Date	Name: Frank Sinclair
 Date	Name: Christopher Campbell

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Costel Biloiu Appu Naveen Thomas Tyler Rockwell Frank Sinclair Christopher Campbell

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Date Name: Costel Bilolu

30**TWLY 2019
Date Name: Appu Naveen Thomas

PATENT APPLICATION Attorney Cocket No. <u>44016750</u>

Date	Name: Tyler Rockwell
<u> 430/19</u>	ESAULE Name: Frank Sincialr
Date	Name: Christopher Carrohell

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Name: Costel glidid

Date

Name: Appu Naveen Thomas

PATENT APPLICATION Attorney Docket No. <u>44016750</u>

Dete	Name: Tyler Rockwell	
Date	Name: Frank Sinclair	**********
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