11/06/2014 503050742

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT3097343

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PETER L KELLERMAN	10/23/2014
FREDERICK CARLSON	10/23/2014
DAVID MORRELL	10/23/2014
BRIAN MACKINTOSH	11/04/2014
NANDISH DESAI	10/29/2014

RECEIVING PARTY DATA

Name:	VARIAN SEMICONDUCTOR EQUIPMENT ASSOCIATES, INC.	
Street Address:	Street Address: 35 DORY ROAD	
City:	GLOUCESTER	
State/Country:	MASSACHUSETTS	
Postal Code:	01930	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14517217

CORRESPONDENCE DATA

Fax Number: (979)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: 9196364767

Email: sshippie@kdbfirm.com **Correspondent Name:** DANIEL N. DAISAK

3120 PRINCETON PIKE, SUITE 303 Address Line 1: Address Line 4: LAWRENCEVILLE, NEW JERSEY 08648

ATTORNEY DOCKET NUMBER:	022254
NAME OF SUBMITTER:	DANIEL N. DAISAK, REG. NO. 39160
SIGNATURE:	/DND39160/
DATE SIGNED:	11/06/2014

Total Attachments: 6

source=022254_ExecutedAssignment#page1.tif source=022254_ExecutedAssignment#page2.tif

source=022254_ExecutedAssignment#page3.tif
source=022254_ExecutedAssignment#page4.tif
source=022254_ExecutedAssignment#page5.tif
source=022254_ExecutedAssignment#page6.tif

ASSIGNMENT

WHEREAS, the undersigned, to wit:

Peter L. Kellerman Frederick Carlson David Morrell Brian Mackintosh Nandish Desai

(X only one):

(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 METHOD FOR CONTROLLING THICKNESS OF A CRYSTALLINE SHEET GROWN ON A MELT

(A)	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. 14/517217 filed on October 17.
2014	,

AND WHEREAS, Varian Semiconductor Equipment Associates, Inc., (hereinafter ASSIGNEE), a corporation organized and existing under the laws of the state of Delaware, and having its principal place of business at 35 Dory Road, Gloucester, Massachusetts, O1930, 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;

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:

3

PATENT

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 23 day of 22 Section 2014. A JULIA Name: David MORRELL	
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX	
Before me, a Notary Public did personally appear the above-named David MORRELL, personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 2 day of 2 day ber	
Jourse & all Supplies My Commission Explanation Explanation Explanation	
Notary Public Notary Public	
mother attraction ditto di	
IN WITNESS WHEREOF, I have hereunto set my hand and seal this day of, 2014.	
Name: Brian MACKINTOSH	
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX	
Before me, a Notary Public did personally appear the above-named Brian MACKINTOSH, personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this day of, 2014.	
My Commission Expires: Notary Public	

IN WITNESS WHEREOF, I have hereunto set my hand and seal this day of, 2014.		
Name: David MORRELL		
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX		
Before me, a Notary Public did personally appear the above-named David MORRELL, personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this day of, 2014.		
My Commission Expires: Notary Public		
IN WITNESS WHEREOF, I have hereunto set my hand and seal this <u>44</u> day of <u>Nov.</u> , 2014.		
Mame: Brian MACKINTOSH		
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX		
Before me, a Notary Public did personally appear the above-named Brian MACKINTOSH, personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this the day of Notan local process. 2014.		
<u>)Οντί ε. Ος frac</u> My Commission Expires:		
Notary Public A VALERIE E. ALTMAN Notary Public Notary Public Notary Public Notary Public Notary Public		
My Commission Expires January 11, 2019		

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 29 day of <u>OC7º BEK</u> , 2014. Name: Nandish DESAI
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX
Before me, a Notary Public did personally appear the above-named Nandish DESAI, personally known to me and/or proved to me on the basis of satisfactory evidence to be the person who signed and sealed the foregoing instrument and acknowledged the same to be his or her own free act and deed, this 29 day of 2014.
<u>Jalerie E. Olfman</u> My Commission Expires: Notary Public
Notary Public Notary Public COMMONWEALTH OF MASSACHUSETTS My Contribusion Explicit Jainusry 11, 2019