## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2890330

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
LUDOVIC GODET	05/27/2014
DANIEL DISTASO	05/29/2014
NINI MUNOZ	06/06/2014
TRISTAN MA	06/06/2014
YU LIU	05/29/2014

#### RECEIVING PARTY DATA

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

### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	14274018

### **CORRESPONDENCE DATA**

**Fax Number:** (412)202-5017

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
Correspondent Name: DANIEL N. DAISAK

Address Line 1: 3120 PRINCETON PIKE, SUITE 303

Address Line 2: KACVINSKY DAISAK PLLC

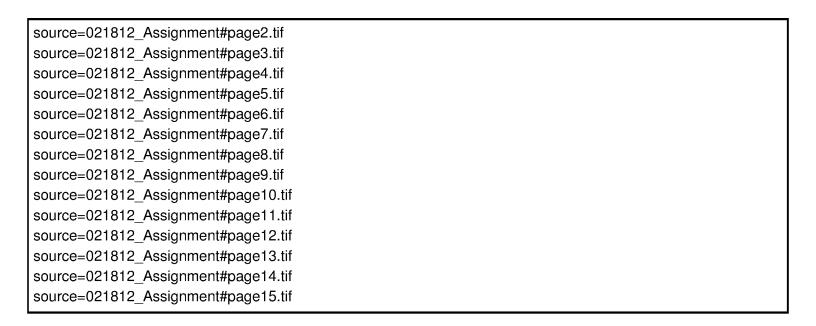
Address Line 4: LAWRENCEVILLE, NEW JERSEY 08648

ATTORNEY DOCKET NUMBER:	021812
NAME OF SUBMITTER:	DANIEL N. DAISAK, REG. NO. 39160
SIGNATURE:	/DND39160/
DATE SIGNED:	06/09/2014

**Total Attachments: 15** 

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502843733 REEL: 033059 FRAME: 0518



### **ASSIGNMENT**

WHEREAS, the undersigned, to wit:

Ludovic Godet Danlel Distaso Nini Munoz Tristan Ma Yu Liu

(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 DYNAMIC CONTROL OF ION BEAM ENERGY AND ANGLE

(X on	ly 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)	which was filed as US Patent Application No. <u>14/274018</u> , filed on <u>May 9, 2014</u> .

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:

2

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 22 day of 1045
Name: Ludgwif GODET
STATE OF CALIFORNIA COUNTY OF
Before me, a Notary Public did personally appear the above-named Ludovic GODET, 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: Daniel DISTASO
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX
Before me, a Notary Public did personally appear the above-named Daniel DISTASO, 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: Nini MUNOZ
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX
Before me, a Notary Public did personally appear the above-named Nini MUNOZ, 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
social transc
IN WITNESS WHEREOF, I have hereunto set my hand and seal this day of, 2014.
Name: Tristan MA
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX
Before me, a Notary Public did personally appear the above-named Tristan MA, 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: Yu LiU	
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX	
Before me, a Notary Public did personally app and/or proved to me on the basis of satisfactory evide foregoing instrument and acknowledged the same to , 2014.	
Notary Public	My Commission Expires:

### ASSIGNMENT

WHEREAS, the undersigned, to wit:

Ludovic Godet Daniel Distaso Nini Munoz Tristan Ma Yu Liu

(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 DYNAMIC CONTROL OF ION BEAM ENERGY AND ANGLE

(X on	lly one):
(A)	which was executed concurrently herewith and is being filed herewith in the United
4.000.1	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)	which was filed as US Patent Application No. <u>14/274018</u> , filed on
	<u>May 9, 2014</u> .

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, 01930, 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:

IN WITNESS WHEREOF, I have hereunto set my hand and seal this day of 2014.
Name: Ludovic GODET
STATE OF CALIFORNIA COUNTY OF
Before me, a Notary Public did personally appear the above-named Ludovic GODET, 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 29 day of Mg, 2014.  Name: Daniel DISTASO
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX
Before me, a Notary Public did personally appear the above-named Daniel DISTASO, 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 24 day of 1404, 2014.
<u> </u>
VALERIE E. ALTHAN
COMMONWEALTH OF MASSACHUSETTS  My Conversion Express

IN WITNESS WHEREOF, I have hereunto set my hand and seal this day of, 2014.	
Name: Nini MUNOZ	
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX	
Before me, a Notary Public did personally appear the above-named Nini MUNOZ, 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: Tristan MA	
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX	
Before me, a Notary Public did personally appear the above-named Tristan MA, 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 $29$ day of $Mey$ , 2014.				
Name: Yu LIU				
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX				
Before me, a Notary Public did personally appear the above-named Yu LIU, 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 Araby of Way				
<u>) Oue E. Oe-bwa-</u> My Commission Expires: Notary Public				
VALERIE E. ALTMAN  Notery Public COMMONWEALTH OF MASSACHUSETTS My Commission Expires January 11, 2019				

#### ASSIGNMENT

WHEREAS, the undersigned, to wit:

Ludovic Godet Daniel Distaso Nini Munoz Tristan Ma Yu Liu

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

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(X only	one):
(A)	which was executed concurrently herewith and is being filed herewith in the United States Patent and Trademark Office;
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(C)	which was filed as US Patent Application No. <u>14/274018</u> , filed on May 9, 2014

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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, 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 now hereby execute this document on the date(s) indicated below:

IN WITNESS WHEREOF, I have hereunto set my hand and seal this day of, 2014.				
Name: Ludovic GODET				
STATE OF CALIFORNIA COUNTY OF				
Before me, a Notary Public did personally appear the above-named Ludovic GODET, 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: Daniel DISTASO				
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX				
Before me, a Notary Public did personally appear the above-named Daniel DISTASO, 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				
TO A MARKET A C. COLORS CO.				

IN WITNESS WHEREOF, I have hereunto set my hand and seal this <u>day of June</u> , 2014.    June   June   Ame: Wini MUNOZ				
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX				
Before me, a Notary Public did personally appear the above-named Nini MUNOZ, 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 of day of, 2014.				
My Commission Epirge: VALERIE E. ALTMAN Notary Public  Notary Public  My Commission Expires My Commission Expires January 11, 2019				
IN WITNESS WHEREOF, I have hereunto set my hand and seal this 6th day of 7ume, 2014.  Name: Aristan MA				
Name: Aristan MA  COMMONWEALTH/STATE OF MASSACHUSETTS				
Name: Aristan MA  COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX  Before me, a Notary Public did personally appear the above-named Tristan MA, 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 or day of				
Name: Aristan MA  COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX  Before me, a Notary Public did personally appear the above-named Tristan MA, 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 of day of				

IN WITNESS WHEREOF, I have hereunto set my hand ar	nd seal this day of, 2014.		
Name: Yu LIU			
COMMONWEALTH/STATE OF MASSACHUSETTS COUNTY OF ESSEX			
Before me, a Notary Public did personally appear the above-named Yu LIU, 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.			
Notary Public	Ay Commission Expires:		