

PATENT ASSIGNMENT

Electronic Version v1.1
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SUBMISSION TYPE:	NEW ASSIGNMENT								
NATURE OF CONVEYANCE:	ASSIGNMENT								
CONVEYING PARTY DATA									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Heyun YIN</td> <td>10/21/2008</td> </tr> <tr> <td>George D. PAPASOULIOTIS</td> <td>10/21/2008</td> </tr> <tr> <td>Vikram SINGH</td> <td>10/21/2008</td> </tr> </tbody> </table>		Name	Execution Date	Heyun YIN	10/21/2008	George D. PAPASOULIOTIS	10/21/2008	Vikram SINGH	10/21/2008
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Heyun YIN	10/21/2008								
George D. PAPASOULIOTIS	10/21/2008								
Vikram SINGH	10/21/2008								
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									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12255181</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12255181				
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Application Number:	12255181								
CORRESPONDENCE DATA									
Fax Number:	(978)281-3152								
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>									
Phone:	978-282-5818								
Email:	constance.ouellette@vsea.com								
Correspondent Name:	Scott R. Faber								
Address Line 1:	Varian Semiconductor Equipment Associate								
Address Line 2:	35 Dory Road								
Address Line 4:	Gloucester, MASSACHUSETTS 01930								
ATTORNEY DOCKET NUMBER:	2007-123								
NAME OF SUBMITTER:	Scott R. Faber								

Total Attachments: 4
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**PATENT
 REEL: 021713 FRAME: 0987**

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ASSIGNMENT

WHEREAS, the undersigned, to wit:

Heyun YIN
George D. Papasouliotis
Vikram SINGH

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

**IMPLANTATION OF MULTIPLE SPECIES TO ADDRESS COPPER
RELIABILITY**

(X 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) which was filed as US Patent Application No. _____, filed on _____.

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, re-examinations, 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;

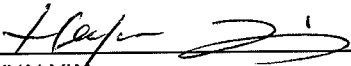
ASSIGNOR also does hereby agree to, at any time, upon request, without further or additional consideration, but at the expense of said **ASSIGNEE**, its successors, assigns, or legal representatives, execute and deliver any and all papers, make all rightful oaths, and do all lawful acts that may be necessary 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.

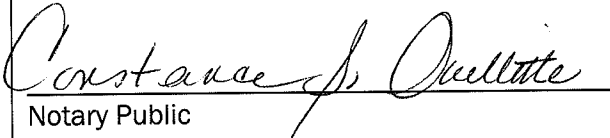
ASSIGNOR also does now hereby execute this document on the date(s) indicated below:

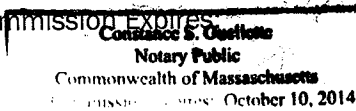
IN WITNESS WHEREOF, I have hereunto set my hand and seal this 21st day of October, 2008.


Name: HEYUN YIN

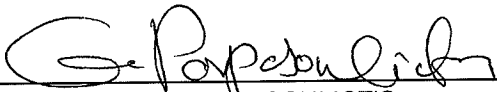
COMMONWEALTH/STATE OF MASSACHUSETTS
COUNTY OF ESSEX

Before me, a Notary Public did personally appear the above-named HEYUN YIN, 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 21st day of October, 2008.


Notary Public

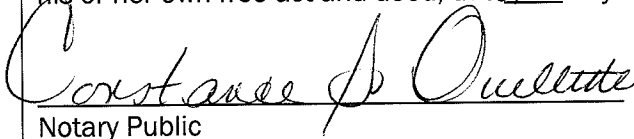
My Commission Expires:

Constance S. Ouellette
Notary Public
Commonwealth of Massachusetts
My Commission Expires: October 10, 2014

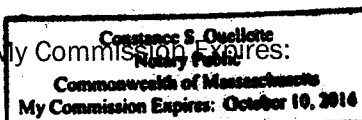
IN WITNESS WHEREOF, I have hereunto set my hand and seal this 21st day of October, 2008.


Name: GEORGE D. PAPASOULIOTIS

COMMONWEALTH/STATE OF MASSACHUSETTS
COUNTY OF ESSEX

Before me, a Notary Public did personally appear the above-named GEORGE D. PAPASOULIOTIS, 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 21st day of October, 2008.


Notary Public

My Commission Expires:

Constance S. Ouellette
Notary Public
Commonwealth of Massachusetts
My Commission Expires: October 10, 2014

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 21 day of October, 2008.

Vikram Singh
Name: VIKRAM SINGH

COMMONWEALTH/STATE OF MASSACHUSETTS
COUNTY OF ESSEX

Before me, a Notary Public did personally appear the above-named VIKRAM SINGH, 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 21st day of October, 2008.

Constance S. Ouellette
Notary Public

