

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT																		
NATURE OF CONVEYANCE:	ASSIGNMENT																		
CONVEYING PARTY DATA																			
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Ilya Zwieback</td> <td>07/25/2013</td> </tr> <tr> <td>Ping Wu</td> <td>07/25/2013</td> </tr> <tr> <td>Varatharajan Rengarajan</td> <td>07/25/2013</td> </tr> <tr> <td>Avinash K. Gupta</td> <td>07/25/2013</td> </tr> <tr> <td>Thomas E. Anderson</td> <td>07/25/2013</td> </tr> <tr> <td>Gary E. Ruland</td> <td>07/25/2013</td> </tr> <tr> <td>Andrew E. Souzis</td> <td>07/26/2013</td> </tr> <tr> <td>Xueping Xu</td> <td>07/25/2013</td> </tr> </tbody> </table>		Name	Execution Date	Ilya Zwieback	07/25/2013	Ping Wu	07/25/2013	Varatharajan Rengarajan	07/25/2013	Avinash K. Gupta	07/25/2013	Thomas E. Anderson	07/25/2013	Gary E. Ruland	07/25/2013	Andrew E. Souzis	07/26/2013	Xueping Xu	07/25/2013
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RECEIVING PARTY DATA																			
<table border="1"> <tr> <td>Name:</td> <td>II-VI Incorporated</td> </tr> <tr> <td>Street Address:</td> <td>375 Saxonburg Boulevard</td> </tr> <tr> <td>City:</td> <td>Saxonburg</td> </tr> <tr> <td>State/Country:</td> <td>PENNSYLVANIA</td> </tr> <tr> <td>Postal Code:</td> <td>16056</td> </tr> </table>		Name:	II-VI Incorporated	Street Address:	375 Saxonburg Boulevard	City:	Saxonburg	State/Country:	PENNSYLVANIA	Postal Code:	16056								
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PROPERTY NUMBERS Total: 2																			
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13902016</td> </tr> <tr> <td>PCT Number:</td> <td>US1342604</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13902016	PCT Number:	US1342604												
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Application Number:	13902016																		
PCT Number:	US1342604																		
CORRESPONDENCE DATA																			
Fax Number:	4129455933																		
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>																			
Phone:	412-471-8815																		
Email:	assignments@webblaw.com																		
Correspondent Name:	The Webb Law Firm																		
Address Line 1:	One Gateway Center																		
Address Line 2:	420 Ft. Duquesne Blvd., Ste 1200																		

OP \$80.00 13902016

Address Line 4: Pittsburgh, PENNSYLVANIA 15222	
ATTORNEY DOCKET NUMBER:	4397-131898
NAME OF SUBMITTER:	Richard L. Byrne
Signature:	/Richard L. Byrne/
Date:	08/21/2013
Total Attachments: 8 source=131898assignment#page1.tif source=131898assignment#page2.tif source=131898assignment#page3.tif source=131898assignment#page4.tif source=131898assignment#page5.tif source=131898assignment#page6.tif source=131898assignment#page7.tif source=131898assignment#page8.tif	

**RECORDATION FORM COVER SHEET
PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Ilya Zwieback
Ping Wu
Varatharajan Rengarajan
Avinash K. Gupta

Additional name(s) of conveying party(ies) attached? ☒ Yes ☐ No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) 07/25/13, 07/25/13, 07/25/13, 07/25/13

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Joint Research Agreement
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other _____

2. Name and address of receiving party(ies)

Name: II-VI INCORPORATED

Internal Address: _____

Street Address: 375 Saxonburg Boulevard

City: Saxonburg

State: PA

Country: US Zip: 16056

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application or patent number(s):

☐ This document is being filed together with a new application.

A. Patent Application No.(s)

13/902,016
PCT/US2013/042604

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Richard L. Byrne, Esquire

Internal Address: The Webb Law Firm

Street Address: One Gateway Center
420 Ft. Duquesne Blvd., Ste 1200

City: Pittsburgh

State: PA Zip: 15222

Phone Number: 412-471-8815

Fax Number: 412-945-5933

Email Address: assignments@webblaw.com

6. Total number of applications and patents involved: two

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 80

- ☒ Authorized to be charged by credit card
☐ Authorized to be charged to deposit account
☐ Enclosed
☐ None required (government interest not affecting title)

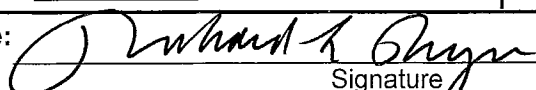
8. Payment Information

a. Credit Card Last 4 Numbers 1916
Expiration Date 05/2015

b. Deposit Account Number 23-0650

Authorized User Name _____

9. Signature:


Signature

August 21, 2013
Date

Richard L. Byrne, Registration No. 28,498
Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

8

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

**RECORDATION FORM COVER SHEET
PATENTS ONLY**

Page 2

U.S. Patent Application No. 13/902,016, filed 5/24/2013 and
International Patent Appln. No. PCT/US2013/042604 filed 5/24/13
U.S. Patent No. _____, issued _____

Additional Information (continued from Page 1)

Name of conveying party(ies)

Thomas E. Anderson

Gary E. Ruland

Andrew E. Souzis

Xueping Xu

Execution Date(s): 07/25/13, 07/25/13, 07/26/13,

07/25/13

Name and address of receiving party(ies)

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Name of conveying party(ies)

Execution Date(s): _____

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Name: _____

Internal Address: _____

Street Address: _____

City: _____

State: _____

Country: _____ Zip: _____

Application No. 13/902,016

Attorney Docket No. 4397-131898

ASSIGNMENT

WHEREAS, as a below named inventor, I have invented certain new and useful improvements in

**"VANADIUM COMPENSATED, SI SIC SINGLE CRYSTALS OF NU AND PI TYPE
AND THE CRYSTAL GROWTH PROCESS THEREOF"**

(Invention Title)

☐ for which a United States Provisional Patent application was filed on _____ (mm/dd/yyyy) and bears Application Number _____ (hereinafter "said application").

AND/OR

☐ for which I have this day executed an application for a United States Patent (hereinafter "said application").

AND/OR

☒ for which an application for a United States Patent was filed on 05/24/2013 (mm/dd/yyyy) and bears Application Number 13/902,016 (hereinafter "said application").

AND/OR

☒ for which an international patent application was filed under the Patent Cooperation Treaty on 05/24/2013 (mm/dd/yyyy), bearing Application No. PCT/US2013/042604 (hereinafter "said application").

AND, WHEREAS, II-VI Incorporated, a corporation of Pennsylvania, having a place of business at 375 Saxonburg Boulevard, Saxonburg, PA 16056, hereinafter called the "assignee", is desirous of acquiring the entire right, title, and interest in and to said application and the inventions and improvements therein disclosed.

NOW, THEREFORE, for good and valuable consideration paid to me by said assignee, the receipt of which is hereby acknowledged, I as the inventor or as one of the inventors, hereinafter the assignor(s), do hereby assign, sell and transfer unto said assignee the full and exclusive right, title and interest in and to said application and the inventions and improvements therein disclosed for the United States and all foreign countries and any Letters Patent which may issue therefor in the United States and all foreign countries and all divisions, reissues, continuations, continuations-in-part, renewals and/or extensions thereof. Such assignment extends to the full ends of the terms of these applications and patents as fully and entirely as the same would have been held and enjoyed by me had this Assignment not been made.

I covenant that I am the lawful owner(s) of said application, inventions and improvements, that the same are unencumbered, that no license has been granted to make, use or vend the said inventions or improvements or any of them, and that I have the full right to make this Assignment.

And for the consideration aforesaid, I agree individually and, if applicable, jointly that I will communicate to said assignee or the representatives thereof any facts known to me respecting said inventions and improvements, and will, upon request but without expense to me, testify in any legal proceedings, sign all lawful papers, execute all divisional, reissue,

Application No. 13/902,016

Attorney Docket No. 4397-131898

continuation, continuation-in-part, renewal and/or extension applications, make all rightful oaths, and generally do all other and further lawful acts deemed necessary or expedient by said assignee or by counsel for said assignee to assist or enable said assignee to obtain and enforce full benefits from the rights and interests herein assigned. This Assignment shall be binding upon my heirs, executors, administrators and/or assigns, and shall inure to the benefit of the heirs, executors, administrators, successors and/or assigns, as the case may be, of said assignee.

1. FULL NAME OF ASSIGNOR:

RESIDENCE:

Ilya Zwicback

Township of Washington,
New Jersey

EXECUTED this 25 day of July, 2013

[Signature]
SIGNATURE

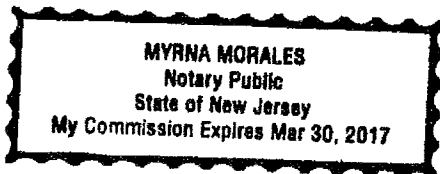
STATE of New Jersey

COUNTY of Morris

On this 25 day of July, in the year 2013, before me Myrna Morales,
DAY MONTH YEAR NOTARY PUBLIC NAME

a notary public, personally appeared Ilya Zwicback,
NAME OF DOCUMENT SIGNER

proved on the basis of satisfactory evidence to be the person whose name is subscribed to this instrument, and acknowledged he/she executed the same. Witness my hand and official seal



[Signature]
NOTARY PUBLIC

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☒ Checked Box indicates 3 additional page(s) for inventor signatures.

Application No. 13/902,016

Attorney Docket No. 4397-131898

2. FULL NAME OF ASSIGNOR:

Ping Wu

RESIDENCE:

Warren, New Jersey

EXECUTED this 25 day of July, 2013

[Signature]
SIGNATURE

STATE of New Jersey

COUNTY of Morris

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[Signature]
NOTARY PUBLIC

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3. FULL NAME OF ASSIGNOR:

Varatharajan Rengarajan

RESIDENCE:

Flanders, New Jersey

EXECUTED this 25 day of July, 2013

[Signature]
SIGNATURE

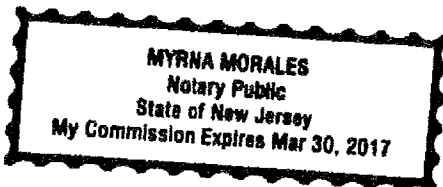
STATE of New Jersey

COUNTY of Morris

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Application No. 13/902,016

Attorney Docket No. 4397-131898

4. FULL NAME OF ASSIGNOR:

Avinash K. Gupta

RESIDENCE:

Basking Ridge, New Jersey

EXECUTED this 25 day of July, 2013

[Signature]
SIGNATURE

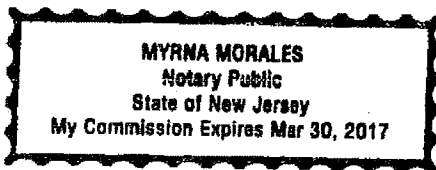
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[Signature]
NOTARY PUBLIC

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5. FULL NAME OF ASSIGNOR:

Thomas E. Anderson

RESIDENCE:

Morristown, New Jersey

EXECUTED this 25 day of July, 2013

[Signature]
SIGNATURE

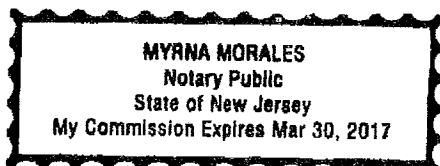
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Application No. 13/902,016

Attorney Docket No. 4397-131898

6. FULL NAME OF ASSIGNOR:

Gary E. Ruland

RESIDENCE:

Morris Plains, New Jersey

EXECUTED this 25 day of July, 2013

[Signature]
SIGNATURE

STATE of New Jersey

COUNTY of Morris

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[Signature]
NOTARY PUBLIC

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7. FULL NAME OF ASSIGNOR:

Andrew E. Souza

RESIDENCE:

Hawthorne, New Jersey

EXECUTED this 26 day of July, 2013

[Signature]
SIGNATURE

STATE of New Jersey

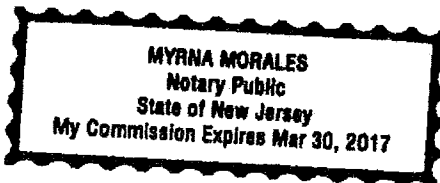
COUNTY of Morris

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a notary public, personally appeared

Andrew E. Souza
NAME OF DOCUMENT SIGNER

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[Signature]
NOTARY PUBLIC

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Application No. 13/902,016

Attorney Docket No. 4397-131898

8. FULL NAME OF ASSIGNOR:

Xueping Xu

RESIDENCE:

Westport, Connecticut

EXECUTED this 25 day of July, 2013

[Signature]
SIGNATURE

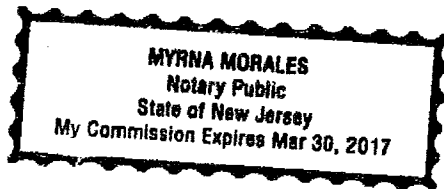
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