

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Marty W. DeGroot	06/08/2011
Gregory M. Kimball	03/09/2011
Harry A. Atwater	03/14/2011
Nathan S. Lewis	08/23/2011
RECEIVING PARTY DATA	
Name:	Dow Global Technologies Inc.
Street Address:	2040 Dow Center
City:	Midland
State/Country:	MICHIGAN
Postal Code:	48674
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	13160681
CORRESPONDENCE DATA	
Fax Number:	(651)351-2954
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
Email:	jbarnes@kaganbinder.com
Correspondent Name:	Kagan Binder, PLLC
Address Line 1:	221 Main St North
Address Line 2:	Suite 220
Address Line 4:	Stillwater, MINNESOTA 55082
ATTORNEY DOCKET NUMBER:	69941
NAME OF SUBMITTER:	Jennifer Barnes
Total Attachments: 3 source=DOW0033USasg#page1.tif source=DOW0033USasg#page2.tif source=DOW0033USasg#page3.tif	

CH \$40.00 13160681

This Assignment 110 is in the ENGLISH language and has the same meaning as other languages with the same 110 number and N/Date
 This Assignment 110 is in the ENGLISH language and has the same meaning as other languages with the same 110 number and N/Date
 FORM 110 (R 5/97)

INDIVIDUAL ASSIGNMENT AND INVENTOR'S DECLARATION
 (with Priority Rights)

I/we verily believe I am/we are the original, first and sole/joint inventor(s) of the subject matter which is embraced by and for which a patent is sought on the invention entitled: **IMPROVED GROUP IIB/VA SEMICONDUCTORS SUITABLE FOR USE IN PHOTOVOLTAIC DEVICES**

which invention was made and invented by me/us out of and in the course of my/our employment with my/our respective employers as stated below my/our name(s). I/we acknowledge that I/we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof in trust for our respective employers. As trustee(s), and for good and valuable consideration and/or the remuneration received for my/our work, I/we sell, assign and transfer unto:

Dow Global Technologies Inc.
 2040 Dow Center
 Midland, Michigan 48674
 United States of America

a corporation organized and existing under the laws of the State of Delaware (hereinafter referred to as the "Assignee"); my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or nominee(s)); and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Convention(s) and Treaties in the name of Assignee, and do hereby authorize Assignee or its designee to insert here the Priority Number, Filing Date, and Filing Country


Priority Number	Filing Date	Filing Country
61/355,344	June 16, 2010	United States of America

of the application, on which the claim for priority will be based; and in and to any Letters Patent that may be issued for the invention in any and all countries. I/we do hereby agree to assist Assignee in the prosecution of the application(s) and in any interference, conflict, opposition or litigation which may arise involving the invention or the patent or patents thereon, and to execute for any and all countries any document relating to applications derived from, corresponding to or equivalent to the above identified application as Assignee may request.

I/we authorize Assignee or its designee to translate this Assignment into all languages necessary; and we request that any such Letters Patent be issued to Assignee; and consent to the recording of this Assignment, or a Notarial True Copy thereof, being under covenant not only that I/we have full power to make the same, but also that such assigned rights are not encumbered by any grant, license, or other right heretofore given.

Subscribed and Declared by me/us.

At: Midland, MI
 this 8th day of June, 2010
 Effective as of June 16, 2010

Signature: 
 Full Name: Marty W. DeGroot
 Residence: 4604 Pinewood Drive
 Midland, Michigan 48640
 Country: United States of America
 Citizenship: Canada
 P.O. Address: Same as Residence
 Employed By: The Dow Chemical Company
 Of Country: United States of America

At: _____
 this _____ day of _____, 20____

Signature: _____
 Full Name: _____
 Residence: _____
 Country: _____
 Citizenship: _____
 P.O. Address: _____
 Employed By: _____
 Of Country: _____

At: _____
 this _____ day of _____, 20____

Signature: _____
 Full Name: _____
 Residence: _____
 Country: _____
 Citizenship: _____
 P.O. Address: _____
 Employed By: _____
 Of Country: _____

At: _____
 this _____ day of _____, 20____

Signature: _____
 Full Name: _____
 Residence: _____
 Country: _____
 Citizenship: _____
 P.O. Address: _____
 Employed By: _____
 Of Country: _____

() Additional names and signatures are attached.

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 FORM 110 (R 5-07)

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I/we verify believe I am/we are the original, first and sole/joint inventor(s) of the subject matter which is embraced by and for which a patent is sought on the invention entitled: **IMPROVED GROUP IIB/VA SEMICONDUCTORS SUITABLE FOR USE IN PHOTOVOLTAIC DEVICES**

which invention was made and invented by me/us out of and in the course of my/our employment with my/our respective employers as stated below my/our name(s). I/we acknowledge that I/we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof in trust for our respective employers. As trustee(s), and for good and valuable consideration and/or the remuneration received for my/our work, I/we sell, assign and transfer unto

California Institute of Technology
 Office of Technology Transfer
 1200 East California Blvd., M/C 210-85
 Pasadena, CA 91125

a private research university organized and existing under the laws of the State of California (hereinafter referred to as the "Assignee"); my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or nominee(s)); and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Conventions and Treaties in the name of Assignee, and do hereby authorize Assignee or its designee to insert here the Priority Number, Filing Date, and Filing Country

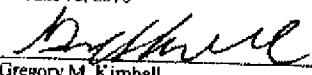
Priority Number	Filing Date	Filing Country
61/355,344	June 16, 2010	United States of America

of the application, on which the claim for priority will be based; and in and to any Letters Patent that may be issued for the invention in any and all countries. I/we do hereby agree to assist Assignee in the prosecution of the application(s) and in any interference, conflict, opposition or litigation which may arise involving the invention or the patent or patents thereon, and to execute for any and all countries any document relating to applications derived from, corresponding to or equivalent to the above identified application as Assignee may request.

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Subscribed and Declared by me/us


At: 1200 E. California Blvd Pasadena 91125
 this 9 day of March, 2011
 Effective as of June 16, 2010

Signature: 
 Full Name: Gregory M. Kimball
 Residence: 1124 E Del Mar Apt A
 Pasadena, California 91106
 Country: United States of America
 Citizenship: United States of America
 P.O. Address: Same as Residence
 Employed By: California Institute of Technology
 Of Country: United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 16, 2010

Signature: _____
 Full Name: Nathan S. Lewis
 Residence: 4808 Gould Avenue
 La Canada, California 91031
 Country: United States of America
 Citizenship: United States of America
 P.O. Address: Same as Residence
 Employed By: California Institute of Technology
 Of Country: United States of America

At: 1200 E. California Blvd
 this 14 day of March, 2011
 Effective as of June 16, 2010

Signature: 
 Full Name: Harry A. Awater
 Residence: 1945 Leman Street
 South Pasadena, California 91030
 Country: United States of America
 Citizenship: United States of America
 P.O. Address: Same as Residence
 Employed By: California Institute of Technology
 Of Country: United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 16, 2010

Signature: _____
 Full Name: _____
 Residence: _____
 Country: _____
 Citizenship: _____
 P.O. Address: _____
 Employed By: _____
 Of Country: _____

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which invention was made and invented by me/us out of and in the course of my/our employment with my/our respective employers as stated below my/our name(s). I/we acknowledge that I/we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof in trust for our respective employers. As trustee(s), and for good and valuable consideration and/or the remuneration received for my/our work, I/we sell, assign and transfer unto:

California Institute of Technology
Office of Technology Transfer
1200 East California Blvd., M/C 210-85
Pasadena, CA 91125

a private research university organized and existing under the laws of the State of California (hereinafter referred to as the "Assignee"); my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or nominee(s)); and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Convention(s) and Treaties in the name of Assignee, and do hereby authorize Assignee, and do hereby authorize Assignee or its designee to insert here the Priority Number, Filing Date, and Filing Country

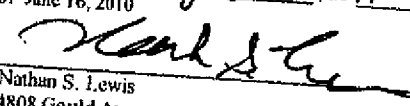
Priority Number	Filing Date	Filing Country
61/355 344	June 16, 2010	United States of America

of the application, on which the claim for priority will be based; and in and to any Letters Patent that may be issued for the invention in any and all countries. I/we do hereby agree to assist Assignee in the prosecution of the application(s) and in any interference, conflict, opposition or litigation which may arise involving the invention or the patent or patents thereon, and to execute for any and all countries any document relating to applications derived from, corresponding to or equivalent to the above identified application as Assignee may request.

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Subscribed and Declared by me/us:

At: _____ this _____ day of _____, 20____ Effective as of June 16, 2010	Signature: _____ Full Name: Gregory M. Kimball Residence: 450 S. Catalina Avenue, Apt. 102 Pasadena, California 91106 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: California Institute of Technology Of Country: United States of America
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At: <u>Pasadena, CA</u> this <u>23rd</u> day of <u>August</u> , 20 <u>11</u> Effective as of June 16, 2010	Signature:  Full Name: Nathan S. Lewis Residence: 4808 Gould Avenue La Canada, California 91011 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: California Institute of Technology Of Country: United States of America
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At: _____ this _____ day of _____, 20____ Effective as of June 16, 2010	Signature: _____ Full Name: Harry A. Atwater Residence: 1945 Leman Street South Pasadena, California 91030 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: California Institute of Technology Of Country: United States of America
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At: _____ this _____ day of _____, 20____	Signature: _____ Full Name: _____ Residence: _____ Country: _____ Citizenship: _____ P.O. Address: _____ Employed By: _____ Of Country: _____
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() Additional names and signatures are attached.