

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT2728447

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>NICOLE HERBOTS</td> <td>12/21/2012</td> </tr> <tr> <td>SHAWN WHALEY</td> <td>11/07/2012</td> </tr> <tr> <td>ROBERT CULBERTSON</td> <td>12/12/2012</td> </tr> <tr> <td>ROSS BENNETT-KENNETT</td> <td>12/10/2012</td> </tr> <tr> <td>ASHLEE MURPHY</td> <td>12/10/2012</td> </tr> <tr> <td>MATTHEW BADE</td> <td>02/26/2013</td> </tr> <tr> <td>SAM FARMER</td> <td>11/05/2012</td> </tr> <tr> <td>BRANCE P. HUDZIETZ</td> <td>01/16/2012</td> </tr> </tbody> </table>		Name	Execution Date	NICOLE HERBOTS	12/21/2012	SHAWN WHALEY	11/07/2012	ROBERT CULBERTSON	12/12/2012	ROSS BENNETT-KENNETT	12/10/2012	ASHLEE MURPHY	12/10/2012	MATTHEW BADE	02/26/2013	SAM FARMER	11/05/2012	BRANCE P. HUDZIETZ	01/16/2012
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RECEIVING PARTY DATA																			
Name:	ARIZONA BOARD OF REGENTS, A BODY CORPORATE OF THE STATE OF ARIZONA, ACTING FOR AND ON BEHALF OF ARIZONA STATE UNIVERSITY																		
Street Address:	1475 NORTH SCOTTSDALE ROAD																		
Internal Address:	SKYSONG SUITE 200																		
City:	SCOTTSDALE																		
State/Country:	ARIZONA																		
Postal Code:	85257																		
PROPERTY NUMBERS Total: 1																			
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>14238979</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	14238979														
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Application Number:	14238979																		
CORRESPONDENCE DATA																			
Fax Number:	(312)913-0002																		
Phone:	312-913-0001																		
Email:	harper@mbhb.com																		
<i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i>																			
Correspondent Name:	MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP																		
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Address Line 2: SUITE #3100
Address Line 4: CHICAGO, ILLINOIS 60606

ATTORNEY DOCKET NUMBER:	11-1360-PCT-US
NAME OF SUBMITTER:	DAVID HARPER
Signature:	/David Harper/
Date:	02/14/2014

Total Attachments: 9

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ASSIGNMENT

Case No: **11-1360-PCT**

Serial No: **PCT/US12/62746**

Inventors: **Nicole Herbots, Shawn Whaley, Robert Culbertson, Ross Bennett-Kennett, Ashlee Murphy, Matthew Bade, Sam Farmer and Brance Hudzietz**

Date of Execution
of Application:

Filing Date: **October 31, 2012**

In consideration of good and valuable consideration provided to assignor, the receipt and sufficiency whereof are hereby acknowledged, the undersigned hereby assign to:

**Arizona Board of Regents, a body corporate of the State of Arizona, acting for and
on behalf of Arizona State University**

its successors and assigns, the entire right, title and interest in the invention or improvements of the undersigned disclosed in an application for Letters Patent of the United States, entitled:

**“Methods for Wafer Bonding and for Nucleating Bonding Nanophases Using Wet and Steam
Pressurization”**

and identified as:

Case No. 11-1360-PCT

in the offices of MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP and in said application and any and all other applications, both United States and foreign (including but not limited to all countries on the list below*), which the undersigned may file, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent of the United States and foreign countries (including but not limited to all countries on the list below*), which may be obtained on any of said applications, and in any reissue or extension of such patents, and further assigns to said assignee the priority right provided by the International Convention.

The undersigned hereby authorize and request the United States Commissioner of Patents and Trademarks to issue said Letters Patent to said assignee.

The undersigned hereby authorize and request the attorneys of record in said application to insert in this assignment the filing date and serial number of said application when officially known, and the date of execution of the application.

The undersigned warrant themselves to be the owners of the entire right, title and interest in said invention or improvements and to have the right to make this assignment, and further warrant that there are no outstanding prior assignments, licenses, or other encumbrances on the interest herein assigned.

For said considerations the undersigned hereby agree, upon the request and at the expense of said assignee, its successors and assigns, to execute any and all divisional, continuation and substitute applications for said invention or improvements, and any necessary oath, affidavit or declaration relating thereto, and any application for the reissue or extension of any Letters Patent that may be granted upon said application and any and all applications and other documents for Letters Patent in foreign countries (including but not limited to all countries on the list below*) on said invention

for the said considerations the undersigned authorize said assignee to apply for patents for said invention or improvements in its own name in such countries where such procedure is proper and further agree, upon the request of said assignee, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignee, its successors and assigns, in any proceedings or transactions involving such applications or patents, including the preparation and execution of preliminary statements, giving and producing evidence, and performing any and all other acts necessary to obtain, maintain and enforce said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in the assignee, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignee, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

*Countries include, but are not limited to: all member countries of the Patent Cooperation Treaty (PCT) including Albania, Algeria, Antigua and Barbuda, Armenia, Australia, Austria, Azerbaijan, Barbados, Belarus, Belgium, Belize, Benin, Bosnia and Herzegovina, Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Central African Republic, Chad, China, Colombia, Congo, Costa Rica, Cote d'Ivoire, Croatia, Cuba, Cyprus, Czech Republic, Democratic People's Republic of Korea, Denmark, Dominica, Ecuador, Estonia, Finland, France, Gabon, Gambia, Georgia, Germany, Ghana, Greece, Grenada, Guinea, Guinea-Bissau, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Kazakhstan, Kenya, Krygyzstan, Latvia, Lesotho, Liberia, Liechtenstein, Lithuania, Luxembourg, Madagascar, Malawi, Mali, Mauritania, Mexico, Monaco, Mongolia, Morocco, Mongolia, Republic of Moldova, Netherlands, New Zealand, Niger, Norway, Poland, Portugal, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Saint Lucia, Senegal, Sierra Leone, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Tajikistan, The former Yugoslav Republic of Macedonia, Togo, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, United Kingdom, United Republic of Tanzania, United States of America, Uzbekistan, Vietnam, Yugoslavia, Zambia, Zimbabwe.

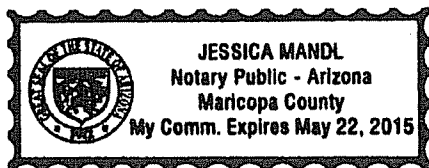
WITNESS my hand and seal this 21st day of December, 2012.


Nicole Herbots

State of Arizona

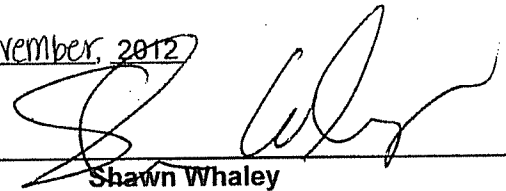
County of Maricopa

The foregoing instrument was acknowledged before me this 21 day of December, 2012 by Nicole Herbots




NOTARY PUBLIC

WITNESS my hand and seal this 7th day of November, 2012

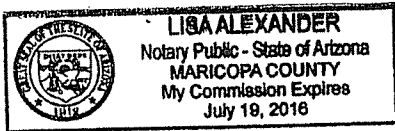



Shawn Whaley

State of Arizona

County of Maricopa

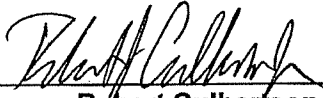
The foregoing instrument was acknowledged before me this 7th day of
November, 2012 by Shawn Whaley





NOTARY PUBLIC

WITNESS my hand and seal this 12th day of December, 2012.



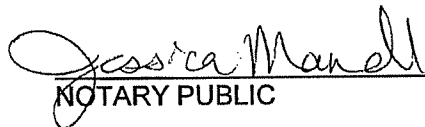
Robert Culbertson

State of Arizona

County of Maricopa

The foregoing instrument was acknowledged before me this 12th day of
December, 2012, by Robert Culbertson





NOTARY PUBLIC

WITNESS my hand and seal this 10th day of December, 2012.



Ross Bennett-Kennett

State of Arizona

County of Maricopa

The foregoing instrument was acknowledged before me this 10th day of December, 2012 by Ross Bennett-Kennett




NOTARY PUBLIC

WITNESS my hand and seal this 10th day of December, 2012.

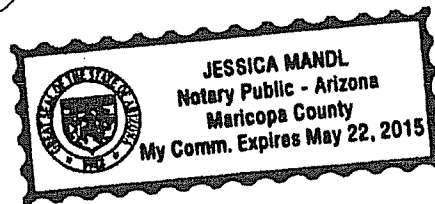
State of Arizona
~~Maricopa~~

County of Maricopa

Ashlee Murphy
Ashlee Murphy

The foregoing instrument was acknowledged before me this 10th day of
December, 2012, by Ashlee Murphy

Jessica Mandl
NOTARY PUBLIC

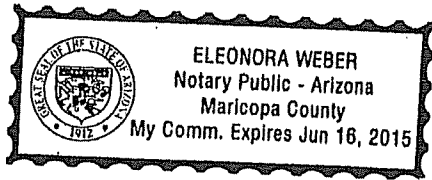


WITNESS my hand and seal this 26th day of February, ~~2012~~ 2013

Bridget L. Gade, mother
of Matthew Bade, a minor

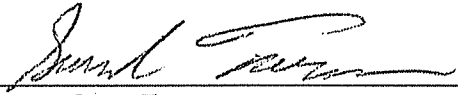
State of Arizona
County of Maricopa

The foregoing instrument was acknowledged before me this 26th day of
February, ~~2012~~ 2013 by E. Weber



E. Weber
NOTARY PUBLIC

WITNESS my hand and seal this 5th day of November, 2012.

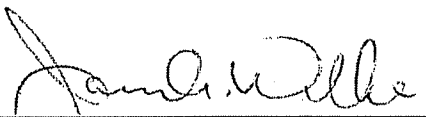


Sam Farmer

State of Wisconsin

County of Milwaukee

The foregoing instrument was acknowledged before me this 5th day of
November, 2012 by Sam Farmer



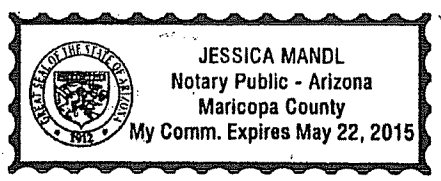
NOTARY PUBLIC
Commission Expires

WITNESS my hand and seal this 16th day of January, 2012.

[Signature]
Brance P. Hudzeitz
Hudzeitz BH

State of Arizona
County of Maricopa

The foregoing instrument was acknowledged before me this 16th day of January, ^{13^{9m}} ~~2012~~ by Brance P. Hudzeitz



[Signature]
NOTARY PUBLIC