

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>Robert V. Fox</td> <td>01/25/2012</td> </tr> <tr> <td>Chivin Sun</td> <td>01/30/2012</td> </tr> <tr> <td>Rene G. Rodriguez</td> <td>01/27/2012</td> </tr> <tr> <td>Joshua J. Pak</td> <td>01/27/2012</td> </tr> </tbody> </table>		Name	Execution Date	Robert V. Fox	01/25/2012	Chivin Sun	01/30/2012	Rene G. Rodriguez	01/27/2012	Joshua J. Pak	01/27/2012
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Robert V. Fox	01/25/2012										
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RECEIVING PARTY DATA											
Name:	Battelle Energy Alliance, LLC										
Street Address:	P.O. Box 1625										
Internal Address:	MS 3899										
City:	Idaho Falls										
State/Country:	IDAHO										
Postal Code:	83415-3899										
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>13365800</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13365800						
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Application Number:	13365800										
CORRESPONDENCE DATA											
Fax Number:	(208)526-8339										
Phone:	208-526-6339										
Email:	kathryn.harris@inl.gov										
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>											
Correspondent Name:	Battelle Energy Alliance, LLC										
Address Line 1:	P.O. Box 1625										
Address Line 2:	MS 3899										
Address Line 4:	Idaho Falls, IDAHO 83415-3899										
ATTORNEY DOCKET NUMBER:	BA-388										
NAME OF SUBMITTER:	Stephen R. Christian										

CH \$40.00 13365800

Total Attachments: 13

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ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned ASSIGNOR does:

SELL, ASSIGN AND TRANSFER to Battelle Energy Alliance, LLC (BEA) a Delaware limited liability company, having a principal place of business at 2525 Fremont Avenue, Idaho Falls, Idaho 83415, the entire right, title and interest for the United States and all foreign countries and jurisdictions in any and all inventions and improvements which are disclosed in the Application for United States Letters Patent, Attorney Docket No. BA-388, entitled HYBRID PARTICLES AND ASSOCIATED METHODS, such application filed on February 3, 2012 and assigned Serial No. 13/365,800, such application and all divisionals, continuations, substitutes, renewals, reissues, reexaminations, and all other applications for patent or the legal equivalent thereof which have been or may be filed in the United States and all foreign countries and jurisdictions relating to any of such inventions and improvements; all original, reexamined and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions on such inventions and improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application made in the United States;

AUTHORIZE BEA to apply for and receive any and all United States and foreign patents relating to such inventions and improvements in its own name;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions and improvements in the name of BEA;

REPRESENT that no assignment, grant, mortgage, license or other agreement or encumbrance inconsistent with the rights and property conveyed by this assignment has been or will be made or entered into by the undersigned, and that the full right to convey the same is possessed by the undersigned, subject to any and all rights retained by the United States Government;

COVENANT to carry out in good faith the intent and purpose of this assignment, to execute all divisionals, continuations, substitutes, renewals, reissues, reexaminations, and all other patent applications relating to any and all such inventions and improvements; to execute all rightful oaths, declarations, assignments, powers of attorney and other papers; to communicate to BEA all facts and provide to BEA all documents and things known and accessible to the undersigned relating to such inventions and improvements and the history thereof, and testify as to the same in any interference, litigation or other proceeding relating thereto; and generally to do everything possible which BEA shall consider desirable for vesting title to such inventions and improvements in BEA, and to secure, maintain, defend and enforce valid and enforceable patent protection for such inventions and improvements; at the request of BEA and upon prior written arrangement, BEA may reimburse the undersigned for any burdensome expenses in carrying out the above covenants;

AGREE AND ACKNOWLEDGE that the SALE, ASSIGNMENT AND TRANSFER of rights and property set forth herein is and shall be IRREVOCABLE and BINDING upon the heirs, assigns, representatives and successors of each undersigned ASSIGNOR and EXTEND to the successors, assigns and nominees of BEA.

AUTHORIZE AND DIRECT any of the attorneys associated with Customer Number 85013 to insert the serial number and filing date of the application now identified by the attorney docket number and title set forth above as soon as the same shall have been made known to them by the United States Patent and Trademark Office.

ASSIGNORS:

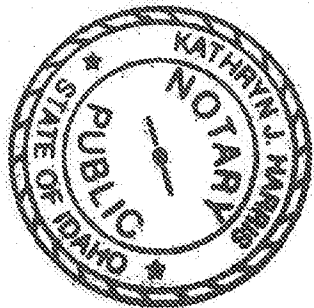
Signed: *Robert V. Fox*
Printed Name: Robert V. Fox
Residing at: Idaho Falls, ID

Date 1/25/2012

State of Idaho)
S.S.
County of Bonneville)

On this 25th day of January 2012, before me personally appeared Robert V. Fox, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same.

S
E
A
L



Kathryn J. Wangberg
Notary Public -- State of Idaho

My commission expires on 3/15/16

PATENT ASSIGNMENT AGREEMENT

Chivin Sun (Assignor) is a co-inventor together with, but not limited to, Battelle Energy Alliance, LLC (BEA) employee Robert V. Fox of an invention disclosed in BEA Invention Disclosure Record No. BA-388 entitled Hybrid Particles and Associated Methods as claimed in the Application for United States Letters Patent, Attorney Docket No. BA-388 referenced herein;

BEA in accordance with its U.S. Department of Energy Contract No. DE-AC07-05ID14517, desires to acquire the entire right, title and interest in such jointly developed invention;

In consideration of the mutual covenants, conditions, and terms set forth herein, and for other good and valuable consideration, the Parties agree as follows:

Assignor sells, assigns, and transfers the entire right, title and interest for the United States and all foreign countries and jurisdictions in any and all inventions and improvements which are disclosed in the Application for United States Letters Patent, Attorney Docket No. BA-388, entitled Hybrid Particles and Associated Methods, such application filed on February 3, 2012 and assigned Serial No. 13/365,800, such application and all divisionals, continuations, substitutes, renewals, reissues, reexaminations, and all other applications for patent or the legal equivalent thereof which have been or may be filed in the United States and all foreign countries and jurisdictions relating to any of such inventions and improvements; all original, reexamined and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions on such inventions and improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application made in the United States.

BEA has agreed to an Income Sharing Agreement, 10-ISA-01, with Assignor's employer, Idaho State University, and BEA shall have no other duty or obligation to Assignor or Idaho State University, Assignor's employer at the time of invention. Nothing in this Agreement shall be construed as establishing an employment relationship between BEA and Assignor.

Assignor acknowledges that BEA makes no representations as to the scope or extent of patent protection, if any, that may ultimately be obtained or that BEA will be successful in entering into patent license agreements and/or obtaining any patent licensing revenue or other income.

Assignor authorizes BEA to apply for and receive any and all United States and foreign patents relating to such inventions and improvements in its own name, and authorizes and requests the issuing authority to issue any and all United States and foreign patents granted on such inventions and improvements in the name of BEA.

Assignor represents and covenants that no assignment, grant, mortgage, license or other agreement or encumbrance inconsistent with the rights and property conveyed by this assignment has been or will be made or entered into by him/her, and that the full right to convey the same is possessed by him or her, subject to any and all rights retained by the United States Government.

Assignor covenants to carry out in good faith the intent and purpose of this assignment, to execute all divisionals, continuations, substitutes, renewals, reissues, reexaminations, and all other patent applications relating to any and all such inventions and improvements; to execute all rightful oaths, declarations, assignments, powers of attorney and other papers; to communicate to BEA all facts and provide to BEA all documents and things known and accessible to him/her relating to such inventions and improvements and the history thereof, and testify as to the same in any interference, litigation or other

proceeding relating thereto; and generally to do everything possible which BEA shall consider desirable for vesting title to such inventions and improvements in BEA, and to secure, maintain, defend and enforce valid and enforceable patent protection for such inventions and improvements; at the request of BEA and upon prior written arrangement, BEA may reimburse him or her for any burdensome expenses in carrying out the above covenants;

Assignor agrees and acknowledges that the SALE, ASSIGNMENT AND TRANSFER of rights and property set forth herein is and shall be IRREVOCABLE and BINDING upon his or her heirs, assigns, representatives and successors and EXTEND to the successors, assigns and nominees of BEA.

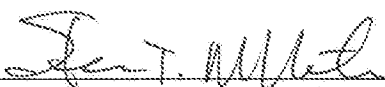
Assignor authorizes and directs any of the attorneys associated with United States Patent and Trademark Office Customer Number 00085013 to insert the serial number and filing date of the application now identified by the attorney docket number and title set forth above when the same shall have been made known to them by the United States Patent and Trademark Office.

This Agreement forms the entire understanding between Assignor and BEA, and supersedes all other agreements, expressed or implied, between the Assignor and BEA concerning the jointly developed invention excepting the Income Sharing Agreement 10-ISA-01 referenced above, and Cooperative Research and Development Agreement (CRADA) 08-CR-14 entered into by the Parties dated September 5, 2008.

Any litigation concerning this Assignment Agreement will be brought in a court of competent jurisdiction in the State of Idaho, in accordance with Idaho law.

IN WITNESS WHEREOF, the undersigned have executed this Agreement on the respective dates set forth below.

BATTELLE ENERGY ALLIANCE, LLC

By: 

Steven T. McMaster, Director
Technology Deployment

Date: 6/20/12

PATENT ASSIGNMENT AGREEMENT

Rene G. Rodriguez (Assignor) is a co-inventor together with, but not limited to, Battelle Energy Alliance, LLC (BEA) employee Robert V. Fox of an invention disclosed in BEA Invention Disclosure Record No. BA-388 entitled Hybrid Particles and Associated Methods as claimed in the Application for United States Letters Patent, Attorney Docket No. BA-388 referenced herein;

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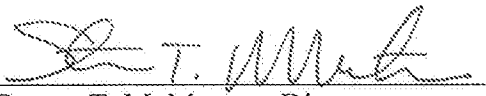
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Steven T. McMaster, Director
Technology Deployment

Date: 6/20/12

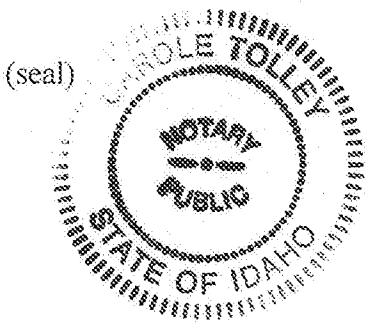
ASSIGNOR:

Rene G. Rodriguez
Rene G. Rodriguez

State of Idaho)
County of Bannock) SS

On this 27th day of January, in the year of 2011¹², before me personally appeared Rene G. Rodriguez known or identified to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the date and year this certificate first above written



Carole Tolley
Notary Public for Idaho
Residing at: 420 Philbin #50, Picatello, ID
My Commission expires: 10/19/17 83202

The foregoing Assignment and Agreement is hereby acknowledged and approved by Idaho State University, 921 South 8th Avenue, Mail Stop 8045, Pocatello, Idaho, 83209-8045, it being recognized and agreed that BEA makes no representation or warranty, express or implied, as to the scope or nature of the patent claims, if any, that may be allowed or issue.

IDAHO STATE UNIVERSITY

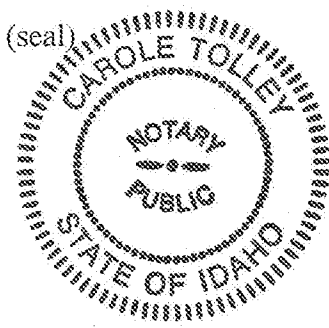
By: Richard Jacobson
Its: by Deb Jacobson

State of Idaho
County of Bannock)ss

On this 27th day of January in the year of 2017 before me, the undersigned, a notary public in and for said State, personally appeared Deb Jacobson known or identified to me to be the president, or vice-president, secretary or assistant secretary, of the corporation that executed the instrument or the person who executed the instrument on behalf of said corporation, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the date and year this certificate first above written.

Carole Tolley
Notary Public for State of Idaho
Residing at: 4200 Philbin #50, Pocatello ID
My Commission expires: 10/19/17 83202



PATENT ASSIGNMENT AGREEMENT

Joshua J. Pak (Assignor) is a co-inventor together with, but not limited to, Battelle Energy Alliance, LLC (BEA) employee Robert V. Fox of an invention disclosed in BEA Invention Disclosure Record No. BA-388 entitled Hybrid Particles and Associated Methods as claimed in the Application for United States Letters Patent, Attorney Docket No. BA-388 referenced herein;

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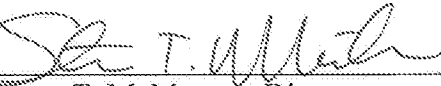
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BATTELLE ENERGY ALLIANCE, LLC

By: 
Steven T. McMaster, Director
Technology Deployment

Date: 6/20/12

ASSIGNOR:

Joshua J. Pak
Joshua J. Pak

State of Idaho)
County of Bannock) SS

On this 27th day of January, in the year of 2011¹², before me personally appeared Joshua J. Pak known or identified to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the date and year this certificate first above written

(seal)



Carole Tolley
Notary Public for Idaho
Residing at: 4200 Philbin #50 Pocatello, ID
My Commission expires: 10/19/17 83202

The foregoing Assignment and Agreement is hereby acknowledged and approved by Idaho State University, 921 South 8th Avenue, Mail Stop 8045, Pocatello, Idaho, 83209-8045, it being recognized and agreed that BEA makes no representation or warranty, express or implied, as to the scope or nature of the patent claims, if any, that may be allowed or issue.

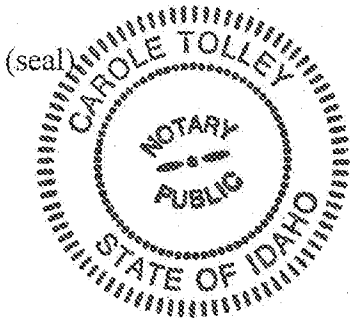
IDAHO STATE UNIVERSITY

By: Richard Jacobson
Its: by Deb E. O'Neil

State of Idaho
County of Bannock)ss.

On this 27th day of January in the year of 2012 before me, the undersigned, a notary public in and for said State, personally appeared Deb Easterly, known or identified to me to be the president, or vice-president, secretary or assistant secretary, of the corporation that executed the instrument or the person who executed the instrument on behalf of said corporation, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the date and year this certificate first above written.



Carol Tolley
Notary Public for State of Idaho
Residing at: 4201 Philbin #50, Pocatello ID
My Commission expires: 10/19/17 '83202