

PATENT ASSIGNMENT

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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>Wlodzimierz W. Zmierczak</td> <td>10/26/2011</td> </tr> <tr> <td>Jan Dean Miller</td> <td>10/26/2011</td> </tr> <tr> <td>Raj Rajamani</td> <td>10/26/2011</td> </tr> </tbody> </table>		Name	Execution Date	Wlodzimierz W. Zmierczak	10/26/2011	Jan Dean Miller	10/26/2011	Raj Rajamani	10/26/2011		
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Raj Rajamani	10/26/2011										
RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>University of Utah</td> </tr> <tr> <td>Street Address:</td> <td>615 Arapeen Drive, Suite 310</td> </tr> <tr> <td>City:</td> <td>Salt Lake City</td> </tr> <tr> <td>State/Country:</td> <td>UTAH</td> </tr> <tr> <td>Postal Code:</td> <td>84108</td> </tr> </table>		Name:	University of Utah	Street Address:	615 Arapeen Drive, Suite 310	City:	Salt Lake City	State/Country:	UTAH	Postal Code:	84108
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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>13256377</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13256377						
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CORRESPONDENCE DATA											
<p>Fax Number: (801)566-0750 Phone: 801-566-6633 Email: andrea.phillips@tnw.com <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i></p> <p>Correspondent Name: Erik S. Ericksen Address Line 1: 8180 S. 700 E., Suite 350 Address Line 4: Sandy, UTAH 84070</p>											
ATTORNEY DOCKET NUMBER:	00846-U4164.PCT.US										
NAME OF SUBMITTER:	Erik S. Ericksen										
Total Attachments: 5 source=Assignment1#page1.tif source=Assignment1#page2.tif source=Assignment1#page3.tif source=Assignment1#page4.tif source=Assignment1#page5.tif											

OP \$40.00 13256377

WHEN RECORDED RETURN TO:
Erik S. Ericksen, M.S.
Thorpe North & Western, LLP
P.O. Box 1219
Sandy, UT 84091-1219

Docket No. 00846-U4164.PCT.US

ASSIGNMENT

WHEREAS, we, Wlodzimierz W. Zmierczak, resident of the State of Utah, whose postal mailing address is 850 Donnor Way, Unit 406, Salt Lake City, Utah 84108; and Jan Dean Miller, resident of the State of Utah, whose postal mailing address is 1886 Atkin Avenue, Salt Lake City, Utah 84106; and Raj Rajamani, resident of the State of Utah, whose postal mailing address is 2885 E. 2100 S. Salt Lake City, Utah 84109; (hereinafter "Assignors") have invented a certain new and useful improvement in a **FLUID-SPARGED HELICAL CHANNEL REACTOR AND ASSOCIATED METHODS** for which an application for United States Letters which was filed on September 13, 2011 as THORPE NORTH & WESTERN, LLP Docket No. 00846-U4164.PCT.US, and given U.S. Patent Application Serial No. 13/256/377; (Thorpe North & Western, LLP is hereby authorized to insert the specified data, when known) and:

WHEREAS, University of Utah, a Non-Profit Organization, organized and existing under the laws of the State of Utah, having a business address of 615 Arapeen Drive, Ste 310, Salt Lake City, Utah 84108, (hereinafter "Assignee"), is desirous of acquiring Assignor's entire right, title, and interest in the same;

NOW, THEREFORE, in consideration of one dollar (\$1.00) and other good and valuable consideration paid to us by the Assignee, the receipt and sufficiency whereof is hereby acknowledged, we the said Assignors, hereby grant and assign unto the said Assignee, our entire right, title and interest in said invention and in all patent applications based thereon, including but not limited to the above identified United States Patent Application and in all provisionals, divisions, continuations, and continuations-in-part of said application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in

countries foreign to the United States, and in all patents issuing thereon in the United States and foreign countries; the right, power and authority to file and prosecute U.S. and foreign patent applications on said invention, and to do so in its own name wherever such right may be legally exercised, and including the right to claim the priority and benefits of the International Convention for such applications; and the right to bring actions for infringement of any right in said invention in its own name, including past infringement, in any jurisdiction.

We hereby authorize and request the United States Commissioner of Patents and Trademarks, and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents, to issue any and all Letters Patent on said invention to the said Assignee as the owner of our entire interest, for the sole use and behoof of the said Assignee, its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by us had this assignment and sale not been made.

We hereby agree, without further consideration and without expense to us, to sign all lawful papers and to perform all other lawful acts which the Assignee may request of us to make this Assignment fully effective, including, by way of example but not of limitation, the following: prompt execution of all original, divisional, substitution, reissue, and other United States and foreign patent applications on said invention, and all lawful documents as requested by the Assignee to further the prosecution of any of such patent applications; and cooperation to

the best of our ability including, but not limited to, the execution of all lawful documents, the production of evidence in any actions or proceedings concerning the invention, including, but not limited to, nullification, reissue, extension, and infringement proceedings involving said invention.

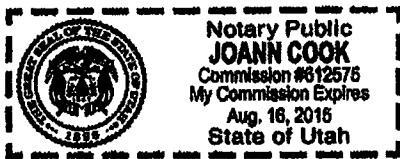
This assignment and agreement shall be binding upon our heirs and legal representatives.

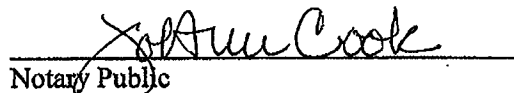
Executed this 26 day of October, 2011 at Salt Lake City
_____(place)


Wlodzimierz W. Zmierczak

STATE OF Utah)
County of Salt Lake) : ss

Before me personally appeared Wlodzimierz W. Zmierczak and acknowledged the foregoing instrument to be his free act and deed this 26th day of October, 2011.



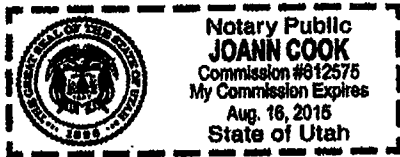

Notary Public

Executed this 26th day of October, 2011 at Salt Lake City UT
_____(place)

Jan Dean Miller
Jan Dean Miller

STATE OF Utah)
County of Salt Lake) : ss

Before me personally appeared Jan Dean Miller and acknowledged the foregoing
instrument to be his free act and deed this 26th day of October, 2011.



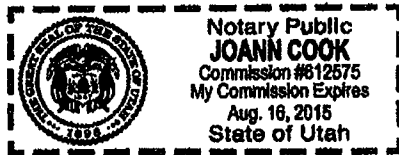
Joann Cook
Notary Public

Executed this 26 day of October, 2011 at Salt Lake City
_____(place)

Raj Rajamani
Raj Rajamani

STATE OF Utah)
County of Salt Lake : ss

Before me personally appeared Raj Rajamani and acknowledged the foregoing
instrument to be his free act and deed this 26th day of October, 2011.



JoAnn Cook
Notary Public