## PATENT ASSIGNMENT COVER SHEET

# Electronic Version v1.1 Stylesheet Version v1.2

## EPAS ID: PAT2752141

SUBMISSION TYPE:		NE	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		AS	ASSIGNMENT		
CONVEYING PARTY	/ DATA	1			
N				Execution Date	
JUAN NAVARRO-SORROCHE				02/11/2014	
WEIJUN GUO				02/11/2014	
RECEIVING PARTY	DATA				
Name: HALLIBURTON ENERGY SERVICES, INC.					
Street Address:	10200 BELLA	10200 BELLAIRE BLVD			
City:	HOUSTON				
State/Country:	TEXAS				
Postal Code:	77072				
Property <sup>-</sup>	Гуре		Number		
Droporty -	Euro III		Number	]	
Property <sup>-</sup> PCT Number:		US2013078			
PCT Number:		US2013078			
PCT Number:	E DATA				
PCT Number: CORRESPONDENC Fax Number:	E DATA (605)	US2013078 791-1857 736900			
PCT Number: CORRESPONDENC Fax Number: Phone:	E DATA (605) 6123	791-1857	456		
PCT Number: CORRESPONDENC Fax Number: Phone: Email: <i>Correspondence will</i>	E DATA (605) 6123 <sup>°</sup> Requ <i>be sent via US I</i>	791-1857 736900 lest@slwip. <i>Mail when t</i>	456 com <i>e email attempt is unsuccessful.</i>		
PCT Number: CORRESPONDENC Fax Number: Phone: Email: <i>Correspondence will</i> Correspondent Name	E DATA (605) 6123 Requ be sent via US M e: SCH	791-1857 736900 iest@slwip. <i>Mail when t</i> i WEGMAN,	456 		
PCT Number: CORRESPONDENC Fax Number: Phone: Email: <i>Correspondence will</i> Correspondent Name Address Line 1:	E DATA (605) 6123 Requ <i>be sent via US I</i> e: SCH\ P.O.	791-1857 736900 lest@slwip. <i>Mail when ti</i> WEGMAN, BOX 2938	456 com <i>e email attempt is unsuccessful.</i>		
PCT Number: CORRESPONDENC Fax Number: Phone: Email:	E DATA (605) 6123 Requ be sent via US M e: SCH\ P.O. MINN	791-1857 736900 iest@slwip. Mail when t WEGMAN, BOX 2938 IEAPOLIS,	456 com <i>e email attempt is unsuccessful.</i> _UNDBERG & WOESSNER, P.A.		
PCT Number: CORRESPONDENC Fax Number: Phone: Email: <i>Correspondence will</i> Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKE	E DATA (605) 6123 Requ be sent via US M e: SCHV P.O. MINN T NUMBER:	791-1857 736900 lest@slwip. <i>Mail when ti</i> WEGMAN, BOX 2938 IEAPOLIS, 188	456 com <i>e email attempt is unsuccessful.</i> LUNDBERG & WOESSNER, P.A. MINNESOTA 55402-0938		
PCT Number: CORRESPONDENC Fax Number: Phone: Email: <i>Correspondence will</i> Correspondent Name Address Line 1: Address Line 4:	E DATA (605) 6123 Requ be sent via US M e: SCHV P.O. MINN T NUMBER:	791-1857 736900 lest@slwip. <i>Mail when ti</i> WEGMAN, BOX 2938 IEAPOLIS, 188	456 com <i>e email attempt is unsuccessful.</i> LUNDBERG & WOESSNER, P.A. MINNESOTA 55402-0938		
PCT Number: CORRESPONDENC Fax Number: Phone: Email: <i>Correspondence will</i> Correspondent Name Address Line 1: Address Line 4: ATTORNEY DOCKE	E DATA (605) 6123 Requ be sent via US M e: SCHV P.O. MINN T NUMBER:	791-1857 736900 lest@slwip. <i>Mail when ti</i> WEGMAN, BOX 2938 IEAPOLIS, 188 	456 com <i>e email attempt is unsuccessful.</i> JUNDBERG & WOESSNER, P.A. MINNESOTA 55402-0938 D.612WO1 HELLE A. VOTH		

Total Attachments: 5
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#### RECORDATION FORM COVER SHEET PATENTS ONLY

Atty Ref/Docket No.: 1880.612WO1	Patent and Trademark Office	
To the Director of the U.S. Patent and Trademark Office: P 1. Name of conveying party(ies): Juan Navarro-Sorroche, Weijun Guo Additional name(s) of conveying party(ies) attached? [ ]Yes [X]No	Please record the attached original documents or copy thereof.         2. Name and address of receiving party(ies):         Name: Halliburton Energy Services, Inc.         Street Address:       10200 Bellaire Blvd         City:       Houston         State:       TX         Zip:       77072         Country:       United States of America	
<ul> <li>3. Nature of conveyance:</li> <li>[X] Assignment [] Merger</li> <li>[] Security Agreement [] Change of Name</li> <li>[] Other</li> <li>Execution Date: February 11, 2014, February 11, 2014</li> </ul>	Additional name(s) & address(es) attached? [ ]Yes [X]No	
<ul> <li>4. Application number(s) or patent number(s):</li> <li>4. Application filed together with a new application</li> <li>A. Patent Application No.(s)</li> <li>Serial No. PCT/US2013/078456</li> <li>Additional numbers attached? []Yes [X]No</li> </ul>	ion, the execution date of the application is: B. Patent No.(s)	
<ul> <li>5. Name and address of party to whom correspondence concerning document should be mailed:</li> <li>Name: Jacques A. Loock</li> <li>Address: <ul> <li>Schwegman, Lundberg &amp; Woessner, P.A.</li> <li>P.O. Box 2938</li> <li>Minneapolis, MN 554020938</li> </ul> </li> </ul>	<ul> <li>6. Total number of applications and patents involved: <u>1</u></li> <li>7. Total fee (37 CFR 3.41):\$ <u>0.00</u> <ul> <li>[]Enclosed</li> <li>[]Authorized to be charged to deposit account 19-0743</li> </ul> </li> <li>8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743</li> </ul>	
<ul> <li>9. Statement and signature. To the best of my knowledge and belief, the foregoing info. of the original document.</li> <li>Jacques A. Loock/Reg. No. 70,140 Name of Person Signing</li> </ul>	SE THIS SPACE rmation is true and correct and any attached copy is a true copy March 4, 2014 Signature Date Yotal number of pages including cover sheet: 5	
T Mail documents to be recorded with required cover sheet in Commissioner of Patents and Trademarks		

Commissioner of Patents and Trademarks Mail Stop Assignment Recordation Services P.O. Box 1450 Alexandria, VA 22313-1450 Attorney Docket No. 1880.612WO1 Client Ref. No. 2013-IP-080900 PCT/Ebilling:2013-IPRO-080900

#### ASSIGNMENT

WHEREAS, Juan Navarro-Sorroche and Weijun Guo (hereinafter the "Undersigned") have made one or more inventions and other subject matter (hereinafter collectively referred to as the "Invention") which are described in a patent application filed on December 31, 2013, which application was assigned PCT patent application serial number PCT/US2013/078456, and which is titled NANO-EMITTER ION SOURCE NEUTRON GENERATOR.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency, and adequacy of which are hereby acknowledged by the Undersigned, the Undersigned do hereby irrevocably and unconditionally:

CONVEY, ASSIGN, AND TRANSFER to Halliburton Energy Services, Inc. (the "Assignee"), a corporation of the State of Delaware, having a place of business at 10200 Bellaire Blvd, Houston, TX 77072, the Undersigned's entire right, title, and interest for the United States and all foreign countries and jurisdictions in and to:

the Invention which is disclosed in the above-identified application or applications;

such application or applications, and all divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other applications for a patent or patents which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries and jurisdictions based in whole or in part on any of such Invention (including any application for a utility model or an innovation patent application);

all original and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions based in whole or in part on any of such Invention;

including the right to claim priority to the above-identified patent application or applications in relation to subject matter based in whole or in part on the above-identified patent application or applications and any of the foregoing including the right to file foreign applications under the provisions of any convention or treaty;

and including the right to all causes of action, remedies, and other enforcement rights related to the above-identified application or applications, including without limitation the right to sue for past, present, or future infringement, misappropriation, or violation of any and all rights related to the aboveidentified patent application or applications and any of the foregoing, including the right to obtain and collect damages for past, present, or future infringement;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such Invention to the Assignee;

AUTHORIZE AND REQUEST that any attorney associated with U.S. Patent and Trademark Office (USPTO) Customer No. 46042 may (directly or through his/her designee) delete, insert, or alter any

PATENT REEL: 032347 FRAME: 0069 information related to the above-identified patent application or applications or any of the foregoing, after execution of this Assignment;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or shall be made to others by the Undersigned, and that the full right to convey the same as herein expressed is possessed by the Undersigned;

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the Undersigned shall (1) execute all provisional, non-provisional, divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other patent applications for the Invention; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers for the Invention; (3) communicate to the Assignee all facts known to the Undersigned relating to the Invention and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for the Invention; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such Invention in the Assignee, or for securing, maintaining and enforcing proper patent protection for the Invention;

COVENANT, that should any provision of this agreement be held unenforceable by an authority of competent jurisdiction, such a ruling shall not affect the validity and enforceability of the remaining provisions. To the extent that any such provision is found to be unenforceable, the Undersigned, when requested and without compensation shall act in good faith to substitute for such provision a new provision with content and purpose as close as possible to the provision deemed unenforceable.

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives, and successors of the Undersigned, and is to extend to the benefit of the successors, assigns, and nominees of the Assignee.

AGREED as of the date of my signature below:

Assignor:

(Signature):

013333

Name: Juan Navarro-Sorroche City/State: Plano, TX

F26/11/2014

Date:

Assignor:

(Signature):

Name: Weijun Guo City/State: Houston, TX 11



Date: