

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5288727

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| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT   |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT   |
| <b>CONVEYING PARTY DATA</b>   |  |
| <b>Name</b>   | <b>Execution Date</b>                                      |
| STEPHEN W. HOWELL   | 11/28/2018   |
| DAVID W. PETERS   | 12/11/2018   |
| THOMAS EDWIN BEECHEM III  | 12/17/2018   |
| ISAAC RUIZ  | 12/11/2018   |
| RICHARD KARL HARRISON   | 12/11/2018   |
| JEFFREY B. MARTIN   | 12/17/2018   |
| <b>RECEIVING PARTY DATA</b>   |  |
| <b>Name:</b>  | NATIONAL TECHNOLOGY & ENGINEERING SOLUTIONS OF SANDIA, LLC |
| <b>Street Address:</b>  | P.O. BOX 5800, MS-0161                                     |
| <b>City:</b>  | ALBUQUERQUE  |
| <b>State/Country:</b>   | NEW MEXICO   |
| <b>Postal Code:</b>   | 87185  |
| <b>PROPERTY NUMBERS Total: 1</b>  |  |
| <b>Property Type</b>  | <b>Number</b>  |
| Application Number:   | 16162756   |
| <b>CORRESPONDENCE DATA</b>  |  |
| <b>Fax Number:</b>  | (505)844-9955  |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |  |
| <b>Phone:</b>   | 505-844-7283   |
| <b>Email:</b>   | dcates@sandia.gov  |
| <b>Correspondent Name:</b>  | SANDIA NATIONAL LABORATORIES                               |
| <b>Address Line 1:</b>  | P.O. BOX 5800, MS-0161                                     |
| <b>Address Line 4:</b>  | ALBUQUERQUE, NEW MEXICO 87185                              |
| <b>ATTORNEY DOCKET NUMBER:</b>  | SD14080.1/S146073  |
| <b>NAME OF SUBMITTER:</b>   | DIANA SCHANNING  |
| <b>SIGNATURE:</b>   | /Diana Schanning/  |
| <b>DATE SIGNED:</b>   | 12/18/2018   |

**Total Attachments: 5**

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ASSIGNMENT

WHEREAS Stephen W. Howell of Bloomington, IN, David W. Peters, Thomas Edwin Beechem III, Isaac Ruiz, Richard Karl Harrison and Jeffrey B. Martin, of Albuquerque, NM (hereinafter "Inventor(s)") has(have) made an invention relating to **RADIATION DETECTOR USING A GRAPHENE AMPLIFIER LAYER** in the course of the work authorized by Contract DE-NA0003525 between NATIONAL TECHNOLOGY & ENGINEERING SOLUTIONS OF SANDIA, LLC ("NTESS") and the UNITED STATES DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION ("DOE/NNSA"), said invention being disclosed and claimed in **Application Serial No. 16/162,756 for United States patent, filed October 17, 2018** and identified as DOE/NNSA Docket No: **S-146073** duly executed by said inventor(s); and

WHEREAS Inventor(s), in consideration of employment by NTESS, has(have) assigned to NTESS, its successors and assigns, all of Inventor(s) rights to inventions, discoveries, or improvements made or conceived in the course of their employment; and

WHEREAS, title to the above-identified invention vests in the Government of the United States, as represented by DOE/NNSA, as governed by 42 U.S.C. 5908; and

WHEREAS, the Government of the United States, as represented by DOE/NNSA has granted a waiver of Government rights in the above-identified invention to NTESS; and

THEREFORE, Inventor(s) hereby sells, assigns, and transfers unto NTESS their entire right, title, and interest in and to said invention in the United States of America and all foreign countries, including, without limitation, said invention as described in the aforesaid application, and in and to any United States Letters Patent therefor, when issued together with all improvements thereon and betterments thereof, all related applications including, but not limited to, utilities, divisions, continuations, continuations-in-part, reissues and reexaminations thereof and substitutions of or for said application, and all foreign rights including the right to make application for Letters Patent for said invention in any and all foreign countries and the right to claim priority as to the filing date under the International Convention on the basis for the aforesaid application for United States Letters Patent, to the extent that Inventor(s) right, title, and interest in and to said invention has(have) not already been sold, assigned, or transferred to NTESS Corporation by Inventor(s) in consideration of Inventor(s) employment by NTESS. Inventor(s) hereby authorizes and requests the Commissioner of Patents to issue all Letters Patent issuing therefrom to NTESS, for its interest as NTESS, its successors and assigns.

Inventor(s) covenants with NTESS that, except for the rights, if any, of the Government, his/her interest in the rights and property herein conveyed is free and clear of any encumbrance and that they have full right to convey the same as herein expressed. Inventor(s) agrees, at the request of NTESS, to make, execute, and deliver to NTESS, the Government, or other party prosecuting patent applications on

this invention, any and all papers, documents, affidavits, applications, statements or other instruments relating to said invention, take all rightful oaths and do all acts as may reasonably be required of them in or incident to the prosecution of any or all U.S. and foreign applications on said invention or in the adjustment or settlement of any interferences or other actions or proceedings that said applications or patents thereon may encounter or in which they may become involved.

Signed at Albuquerque, New Mexico.

David W. Peters  
David W. Peters

Dec. 11, 2018  
Date

Thomas Edwin Beechem III  
Thomas Edwin Beechem III

Dec. 17, 2018  
Date

Isaac Ruiz  
Isaac Ruiz

Dec 11, 2018  
Date

Richard Karl Harrison  
Richard Karl Harrison

Dec. 11<sup>th</sup> 2018  
Date

Jeffrey B. Martin  
Jeffrey B. Martin

December 17, 2018  
Date

STATE OF NEW MEXICO )  
 ) ss:  
COUNTY OF BERNALILLO)

On the above dates, personally appeared before me, Diana Schanning, Notary Public, **Howell, David W. Peters, Thomas Edwin Beechem III, Isaac Ruiz, Richard Karl Harrison and Jeffrey B. Martin**, to me known to be the individual(s) described in and who executed the foregoing instrument, and who acknowledged to me that they executed the same.

Diana Schanning  
Notary Public



ASSIGNMENT

WHEREAS Stephen W. Howell of Bloomington, IN, David W. Peters, Thomas Edwin Beechem III, Isaac Ruiz, Richard Karl Harrison and Jeffrey B. Martin, of Albuquerque, NM (hereinafter "Inventor(s)") has(have) made an invention relating to **RADIATION DETECTOR USING A GRAPHENE AMPLIFIER LAYER** in the course of the work authorized by Contract DE-NA0003525 between NATIONAL TECHNOLOGY & ENGINEERING SOLUTIONS OF SANDIA, LLC ("NTESS") and the UNITED STATES DEPARTMENT OF ENERGY/NATIONAL NUCLEAR SECURITY ADMINISTRATION ("DOE/NNSA"), said invention being disclosed and claimed in **Application Serial No. 16/162,756 for United States patent, filed October 17, 2018** and identified as DOE/NNSA Docket No: **S-146073** duly executed by said inventor(s); and

WHEREAS Inventor(s), in consideration of employment by NTESS, has(have) assigned to NTESS, its successors and assigns, all of Inventor(s) rights to inventions, discoveries, or improvements made or conceived in the course of their employment; and

WHEREAS, title to the above-identified invention vests in the Government of the United States, as represented by DOE/NNSA, as governed by 42 U.S.C. 5908; and

WHEREAS, the Government of the United States, as represented by DOE/NNSA has granted a waiver of Government rights in the above-identified invention to NTESS; and

THEREFORE, Inventor(s) hereby sells, assigns, and transfers unto NTESS their entire right, title, and interest in and to said invention in the United States of America and all foreign countries, including, without limitation, said invention as described in the aforesaid application, and in and to any United States Letters Patent therefor, when issued together with all improvements thereon and betterments thereof, all related applications including, but not limited to, utilities, divisions, continuations, continuations-in-part, reissues and reexaminations thereof and substitutions of or for said application, and all foreign rights including the right to make application for Letters Patent for said invention in any and all foreign countries and the right to claim priority as to the filing date under the International Convention on the basis for the aforesaid application for United States Letters Patent, to the extent that Inventor(s) right, title, and interest in and to said invention has(have) not already been sold, assigned, or transferred to NTESS Corporation by Inventor(s) in consideration of Inventor(s) employment by NTESS. Inventor(s) hereby authorizes and requests the Commissioner of Patents to issue all Letters Patent issuing therefrom to NTESS, for its interest as NTESS, its successors and assigns.

Inventor(s) covenants with NTESS that, except for the rights, if any, of the Government, his/her interest in the rights and property herein conveyed is free and clear of any encumbrance and that they have full right to convey the same as herein expressed. Inventor(s) agrees, at the request of NTESS, to

make, execute, and deliver to NTESS, the Government, or other party prosecuting patent applications on this invention, any and all papers, documents, affidavits, applications, statements or other instruments relating to said invention, take all rightful oaths and do all acts as may reasonably be required of them in or incident to the prosecution of any or all U.S. and foreign applications on said invention or in the adjustment or settlement of any interferences or other actions or proceedings that said applications or patents thereon may encounter or in which they may become involved.

Signed at Bloomington, Indiana.

Stephen W. Howell  
Stephen W. Howell

Nov. 28<sup>th</sup>, 2018  
Date

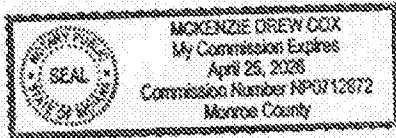
STATE OF INDIANA            )  
  ) ss:  
COUNTY OF Madison        )

On this 28<sup>th</sup> day of November, 2018, before me, the undersigned Notary Public, appeared Stephen W. Howell, who proved to me through satisfactory evidence of identification, that he is the person who signed on the preceding document in my presence.

Mckenzie D Cox  
[Notary signature]

Mckenzie D Cox, Notary Public  
[Notary typed/printed/name]

My Commission Expires: April 25, 2026



[Notary Public Seal]

