

Form PTO-1595 (Rev. 03-09)  
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U.S. DEPARTMENT OF COMMERCE  
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ARL 10-21

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

<b>1. Name of conveying party(ies)</b> General Technical Services, LLC  Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>2. Name and address of receiving party(ies)</b> Name: <u>The United States of America as represented by the</u> Internal Address: <u>Secretary of the Army</u>  Street Address: <u>101 Army Pentagon</u>  City: <u>Washington</u> State: <u>DC</u> Country: <u>USA</u> Zip: <u>20310</u>  Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>3. Nature of conveyance/Execution Date(s):</b> Execution Date(s) <u>1/28/2011</u> <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Joint Research Agreement <input type="checkbox"/> Government Interest Assignment <input type="checkbox"/> Executive Order 9424, Confirmatory License <input type="checkbox"/> Other _____		<b>4. Application or patent number(s):</b> <input type="checkbox"/> This document is being filed together with a new application. A. Patent Application No.(s)  <u>13/471,490</u>  B. Patent No.(s)  Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>5. Name and address to whom correspondence concerning document should be mailed:</b> Name: <u>U.S. Army Research Laboratory</u> Internal Address: <u>Attn: RDRL-LOC-I/Alan I. Kalb</u>  Street Address: <u>2800 Powder Mill Road</u>  City: <u>Adelphi</u> State: <u>Maryland</u> Zip: <u>20783</u> Phone Number: <u>301-394-1774</u> Fax Number: <u>301-394-3972</u> Email Address: <u>nadine.l.loman.civ@mail.mil</u>		<b>6. Total number of applications and patents involved:</b> <u>1</u>  <b>7. Total fee (37 CFR 1.21(h) &amp; 3.41)</b> \$ <u>40.00</u> <input checked="" type="checkbox"/> Authorized to be charged to deposit account <input type="checkbox"/> Enclosed <input type="checkbox"/> None required (government interest not affecting title)	
<b>9. Signature:</b> <u>Alan I. Kalb</u> Signature <u>Alan I. Kalb, 52,486</u> Name of Person Signing		<b>8. Payment Information</b>  Deposit Account Number <u>19-2201</u> Authorized User Name <u>Alan I. Kalb</u>  Total number of pages including cover sheet, attachments, and documents: <span style="border: 1px solid black; padding: 2px;">4</span>	

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

CH \$40.00 192201 13471490

**ASSIGNMENT TO THE GOVERNMENT  
and  
LICENSE TO THE CONTRACTOR**

Contractor / Grantee: General Technical Services, LLC

Incorporated Under the Laws of: New Jersey

Address: 3100 Rte. 138, Wall, NJ 07719

WHEREAS the above named Contractor / Grantee (Hereinafter the Contractor), having elected not to retain title, or hereby elects not to retain title, under the provisions of FAR 52.227-12 "Patent Rights—Retention by the Contractor (Long Form)(Jan 1997)" to a SUBJECT INVENTION made in the performance of work under a contract / grant (Hereinafter the Contract) between the Contractor and the Government of the United States of America (Hereinafter the Government), the SUBJECT INVENTION and contract being identified as:

Title of Invention: FULLY INTEGRATED VOLTAGE TUNABLE OSCILLATORS USING BYLAYER GRAPHENE HETEROGENEOUS WITH LEAD-ZIRCONATE-TITANATE

Inventors:

1.	<u>Dr. Osama M. Nayfeh</u>	Employer	<u>General Technical Services, LLC</u>
2.	<u>Dr. James Wilson</u>	Employer	<u>General Technical Services, LLC</u>
3.	<u>Dr. Stephen Kilpatrick</u>	Employer	<u>Army Research Laboratory</u>
4.	<u>Dr. Madan Dubey</u>	Employer	<u>Army Research Laboratory</u>
5.	<u>Dr. Ronald Polcawich</u>	Employer	<u>Army Research Laboratory</u>

This assignment is applicable to inventors *(Check appropriate)*

(1),       (2),       (3),       (4),       (5):

Contract/P.O. No. \_\_\_\_\_ Contractor Case No. W15P7T-06-D-E402  
 ARL Case No. ARL 10-21 \*Application Serial No. 13/471,490

\*Application Executed on 5/15/2012

*(\*Data not known at execution may be added later for better identification.)*

### **Assignment to the Government**

WHEREAS, the Government as represented by the Secretary of the Army and his successors in office, is desirous of acquiring an assignment of the SUBJECT INVENTION identified above and disclosed in said application and other rights and benefits herein granted;

### **Assignment to the Government (continued)**

NOW THEREFORE, in consideration of the Contract and other benefits attributable to the contractual relationship, the Contractor hereby assigns and transfers to the Government the full and exclusive right in and to said SUBJECT INVENTION within the United States of America, its territories and possessions, and the entire right, title, and interest in and to said patent application, and any applications continuing therefrom and such Letters Patent as may issue therefrom. The Contractor also grants to the Government, an assignment of the foreign rights in and to the SUBJECT INVENTION including the rights of priority under the International Convention of Paris (1883), as amended.

The Contractor hereby covenants that it has the right to grant the foregoing assignments.

### **License to the Contractor**

FUTHER, the Contractor hereby retains, pursuant to FAR 52.227-12, a revocable, nonexclusive, royalty-free license throughout the world in the SUBJECT INVENTION in each patent application filed in any country on the invention and in any resulting patent in which the Government acquires title. The license extends to the Contractor's domestic subsidiaries and affiliates, if any, within the corporate structure of which the Contractor is a part and includes the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of the Army except when transferred to the successor of the part of the Contractor's business to which the invention pertains. The Contractor's domestic license may be revoked or modified by the Army to the extent necessary to achieve the expeditious practical application of the SUBJECT INVENTION pursuant to an application for an exclusive license submitted in accordance with the Department of Commerce Licensing Regulations. This license will not be revoked in that field of use or the geographic areas in which the Contractor has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the Army to the extent the Contractor, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country. Before revocation or modification of the license, the Army will furnish the Contractor with a written notice of its intention to revoke or modify the license, and the Contractor will be allowed 30 days (or such other time as may be authorized by the Army for good cause shown by the Contractor) after the notice to show cause why the license should not be revoked or modified. The Contractor has the right to appeal, in accordance with the procedures set forth in the Department of Commerce Patent Licensing Regulations, from any decision concerning the revocation or modification of its license.

**Assignment to the Government (continued)**

The Contractor hereby executes this instrument by its legally authorized representative:

Name Barbara J. McGivney Signature [Handwritten Signature]  
(Printed or Typed Name)

Title Contracts Admin Date: 7/17/12

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State of: New Jersey )  
County of: Monmouth ) SS

On the above date Barbara J. McGivney known to me to be the individual described in and who executed the foregoing instrument duly appeared before me and acknowledged to me that the same as his own free act and deed.

(SEAL)

[Handwritten Signature]  
(Signature of notary public)

My Commission expires on \_\_\_\_\_

**IRENE F. ANDUJAR**  
A Notary Public of New Jersey  
My Commission Expires 3/27/2017