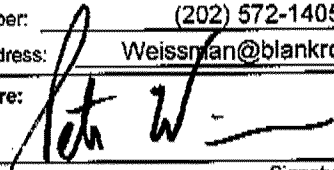


**RECORDATION FORM COVER SHEET  
PATENTS ONLY**

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

<p><b>1. Name of conveying party(ies):</b> Akos VERTES; and Bennett N. WALKER</p> <p>Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p><b>2. Name and address of receiving party(ies)</b> Name: <u>The George Washington University</u> Internal Address: _____ Street Address: _____  Rice Hall, Suite 601 2121 I Street, NW  City: <u>Washington</u> State: <u>District of Columbia</u> Country: <u>United States of America</u> Zip: <u>20052</u> Additional name(s) &amp; address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p><b>3. Nature of conveyance/Execution Date(s):</b> Execution Date(s): <u>April 16, 2010</u></p> <p><input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Change of Name <input type="checkbox"/> Security Agreement <input type="checkbox"/> Joint Research Agreement <input type="checkbox"/> Government Interest Assignment <input type="checkbox"/> Executive Order 9424, Confirmatory License <input type="checkbox"/> Other _____</p>	<p><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>13/348,285</u> B. Patent No.(s)  Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p><b>5. Name and address to whom correspondence concerning document should be mailed:</b> Name: <u>Peter S. Weissman</u> <u>BLANK ROME LLP</u>  Internal Address: <u>Atty. Dkt.: 130761.00320</u> Street Address: <u>600 New Hampshire Ave., NW</u>  City: <u>Washington</u> State: <u>DC</u> Zip: <u>20037</u> Phone Number: <u>(202) 772-5800</u> Fax Number: <u>(202) 572-1405</u> Email Address: <u>Weissman@blankrome.com</u></p>	<p><b>6. Total number of applications and patents involved:</b> <span style="border: 1px solid black; padding: 2px;">1</span></p> <p><b>7. Total fee (37 CFR 1.21(h) &amp; 3.41)</b> \$ <u>40.00</u></p> <p><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)</p>
<p><b>9. Signature:</b>  _____ Signature  <u>Peter S. Weissman - 40,220</u> Name of Person Signing</p>	<p><b>8. Payment Information</b> Deposit Account Number <u>23-2185</u> Authorized User Name <u>Peter S. Weissman</u></p> <p>_____ Date <u>January 18, 2012</u> Date</p> <p>Total number of pages including cover sheet, attachments, and documents: <span style="border: 1px solid black; padding: 2px;">4</span></p>

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## ASSIGNMENT

**THIS ASSIGNMENT**, made on the date set forth below by Akos VERTES and Bennett N. WALKER, residing at 11305 South Shore Road, Reston, Virginia 20190 and 1300 K Street, SE, Apartment 201, Washington, DC 20003, respectively, (hereinafter referred to as "Assignors");

**WHEREAS**, Assignors have invented certain new and useful improvements in NANOPHOTONIC PRODUCTION, MODULATION AND SWITCHING OF IONS BY SILICON MICROCOLUMN ARRAYS, set forth in a Patent application for Letters Patent of the United States, filed on January 19, 2010 as U.S. Application No. 12/689,829; and

**WHEREAS**, The George Washington University, a Congressionally Chartered Not-For-Profit Corporation, having its principal place of business at Rice Hall, Suite 601, 2121 I Street, NW, Washington, DC 20052 (hereinafter referred to as "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

**NOW THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents does sell, assign, transfer and set over, unto Assignee, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect non-provisionals, divisions, renewals, substitutes, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefor and thereon, and reissues, reexaminations, prolongations and extensions of said Letters Patent. Assignors hereby authorize and request the Director of the U.S. Patent and Trademark Office to issue said United States Patent to said assignee, of the entire right, title and interest in and to the same, for his sole use and behoof; and for the use and behoof of his legal representatives, to the full end of the term for which said Patent

may be granted, as fully and entirely as the same would have been held by Assignors had this assignment not been made.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions which are taken at Assignee's expense, without charge to Assignee.


AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

Date: 4/16/2010

  
Akos VERTES

United States of America )  
State of Washington ) ss.:  
County of D.C. )

On this 16<sup>th</sup> day of April, 2010, before me personally came Akos VERTES, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

  
Notary Public

**Kevin R. McCleave**  
Notary Public, District of Columbia  
My Commission Expires 2/14/2015

Date: 4/16/2010

Bennett N. Walker  
Bennett N. WALKER

United States of America  
State of Washington ) ss.:  
County of D.C. )

On this 16<sup>th</sup> day of April, 2010, before me personally came Bennett N. WALKER, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

Kevin R. McCleave  
Notary Public

Kevin R. McCleave  
Notary Public, District of Columbia  
My Commission Expires 2/14/2015