

Form PTO-1595 (Rev. 03/05)
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To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies) Robert J. Warmack Thomas G. Thundat Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Name and address of receiving party(ies) Name: <u>UT-Battelle, LLC</u> Internal Address: <u>P.O. Box 2008</u> <u>Bldg. 4500N; MS-6258</u> Street Address: <u>One Bethel Valley Road</u> City: <u>Oak Ridge</u> State: <u>Tennessee</u> Country: <u>USA</u> Zip: <u>37831-6258</u> Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Nature of conveyance/Execution Date(s): Execution Date(s) <u>April 5, 2005</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 _____	4. Application or patent number(s): <input type="checkbox"/> This document is being filed together with a new application. A. Patent Application No.(s) <u>11/100,839</u> <u>(Docket No. 1310.1)</u> B. Patent No.(s) Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Name and address to whom correspondence concerning document should be mailed: Name: <u>Kirk A. Wilson</u> Internal Address: <u>P.O. Box 2008</u> <u>Bldg. 4500N; MS-6258</u> Street Address: <u>One Bethel Valley Road</u> City: <u>Oak Ridge</u> State: <u>Tennessee</u> Zip: <u>37831-6258</u> Phone Number: <u>865.574.4179</u> Fax Number: <u>865.574.0381</u> Email Address: <u>wilsonka@ornl.gov</u>	6. Total number of applications and patents involved: <u>1</u> 7. Total fee (37 CFR 1.21(h) & 3.41) \$ <u>40.00</u> <input type="checkbox"/> Authorized to be charged by credit card <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) 8. Payment Information a. Credit Card Last 4 Numbers _____ Expiration Date _____ b. Deposit Account Number <u>13-1958</u> Authorized User Name <u>George L. Craig</u>
9. Signature: <u>Kirk A. Wilson</u> April 21, 2005 <div style="display: flex; justify-content: space-between;"> Signature Date </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> Kirk A. Wilson <div style="border: 1px solid black; padding: 2px;"> Total number of pages including cover sheet, attachments, and documents: 5 </div> </div> <div style="text-align: center; margin-top: 5px;"> Name of Person Signing </div>	

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

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Docket No. 1310.1

ASSIGNMENT

WHEREAS, I, the below-named inventor whose residence and post office box is as stated below, have invented certain new and useful improvements in an

SURFACE WAVE CHEMICAL DETECTOR USING OPTICAL RADIATION

(hereinafter referred to as "Subject Invention") for which an application for United States Letters Patent was executed by me on even date herewith, and

WHEREAS, UT-BATTELLE, LLC, a limited liability company of the State of Tennessee, having an office at One Bethel Valley Road, P.O. Box 2008, Oak Ridge, Tennessee 37831-6258 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the right, title, and interest of the undersigned in the Subject Invention and to any Letters Patent that may be granted therefore in the United States of America and in any and all foreign countries.

NOW, THEREFORE, in accordance with the terms of my employment agreement with ASSIGNEE and for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby assign to ASSIGNEE my entire right, title, and interest in the Subject Invention, to all rights of priority thereto pursuant to the International Convention for the Protection of Industrial Property, and in any Letters Patent on the Subject Invention that may be granted in the United States of America and in any and all foreign countries, including any and all Letters Patent that are divisions, reissues, continuations, substitutions or extensions of any Letters Patent or applications therefore on the Subject Invention.

I hereby authorize and request the Commissioner of the United States Patent and Trademark Office and the officials of any and all foreign countries to issue any and all of said Letters Patent, when granted, to the ASSIGNEE.

Further, I hereby agree to communicate to said ASSIGNEE or its representatives any facts known to me respecting said Subject Invention, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, to execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, and to make all rightful oaths and generally do everything possible to aid said ASSIGNEE and its representatives to obtain and enforce proper protection for said Subject Invention in the United States of America and in any and all foreign countries.

I further agree that the terms, covenants and conditions of this assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding on me, my heirs, legal representatives, and assigns.

PATENT**REEL: 016129 FRAME: 0367**

Docket No. 1310.1

Full name of second inventor: Robert J. Warmack

Inventor's Signature: Robert J. WarmackDate: 4/5/2005Address: 200 Redmont Lane, Knoxville, Tennessee 37922Post Office Address: 200 Redmont Lane, Knoxville, Tennessee 37922State of Tennessee)
County of Anderson)

On this 5th day of April, 2005, before me, a Notary Public in and for the County and State aforesaid, appeared Robert J. Warmack, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.



SEAL

Kirk A. Wilson
Notary PublicMy Commission Expires: March 14, 2009

Full name of first inventor: Thomas G. Thundat

Inventor's Signature: *Thomas G. Thundat* Date: 4/5/05

Address: 616 Plainfield Road, Knoxville, Tennessee 37923

Post Office Address: 616 Plainfield Road, Knoxville, Tennessee 37923

State of Tennessee)
County of Anderson)

On this 5th day of April, 2005, before me, a Notary Public in and for the County and State aforesaid, appeared Thomas G. Thundat, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.



SEAL

Kirk A. Wilson
Notary Public

My Commission Expires: March 14, 2009