

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2611294

| SUBMISSION TYPE:   | NEW ASSIGNMENT                            |               |   |                     |                   |                   |            |       |           |                |            |              |       |
|--|---|---------------|---|---------------------|-------------------|-------------------|------------|-------|-----------|----------------|------------|--------------|-------|
| NATURE OF CONVEYANCE:  | ASSIGNMENT                                |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| CONVEYING PARTY DATA   |   |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>NEIL REGINALD BEER</td> <td>12/01/2008</td> </tr> <tr> <td>IAN KENNEDY</td> <td>12/02/2008</td> </tr> </tbody> </table>  |   | Name          | Execution Date                            | NEIL REGINALD BEER  | 12/01/2008        | IAN KENNEDY       | 12/02/2008 |       |           |                |            |              |       |
| Name   | Execution Date                            |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| NEIL REGINALD BEER   | 12/01/2008                                |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| IAN KENNEDY  | 12/02/2008                                |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| RECEIVING PARTY DATA   |   |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| <table border="1"> <tr> <td>Name:</td> <td>LAWRENCE LIVERMORE NATIONAL SECURITY, LLC</td> </tr> <tr> <td>Street Address:</td> <td>2300 FIRST STREET</td> </tr> <tr> <td>Internal Address:</td> <td>SUITE 204</td> </tr> <tr> <td>City:</td> <td>LIVERMORE</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>94550</td> </tr> </table> |   | Name:         | LAWRENCE LIVERMORE NATIONAL SECURITY, LLC | Street Address:     | 2300 FIRST STREET | Internal Address: | SUITE 204  | City: | LIVERMORE | State/Country: | CALIFORNIA | Postal Code: | 94550 |
| Name:  | LAWRENCE LIVERMORE NATIONAL SECURITY, LLC |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| Street Address:  | 2300 FIRST STREET                         |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| Internal Address:  | SUITE 204                                 |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| City:  | LIVERMORE                                 |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| State/Country:   | CALIFORNIA                                |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| Postal Code:   | 94550                                     |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| PROPERTY NUMBERS Total: 1  |   |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13732949</td> </tr> </tbody> </table>  |   | Property Type | Number                                    | Application Number: | 13732949          |                   |            |       |           |                |            |              |       |
| Property Type  | Number                                    |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| Application Number:  | 13732949                                  |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| CORRESPONDENCE DATA  |   |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| Fax Number:<br>Email: yu25@llnl.gov<br><i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i><br>Correspondent Name: MAKK H. LOUGH<br>Address Line 1: 7000 EAST AVE.,<br>Address Line 2: L-703<br>Address Line 4: LIVERMORE, CALIFORNIA 94550  |   |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| ATTORNEY DOCKET NUMBER:  | IL-11719B DIV                             |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| NAME OF SUBMITTER:   | MARK H. LOUGH                             |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| Signature:   | /Mark H. Lough/                           |               |   |                     |                   |                   |            |       |           |                |            |              |       |
| Date:  | 11/12/2013                                |               |   |                     |                   |                   |            |       |           |                |            |              |       |

CH \$40.00 13732949

**Total Attachments: 5**

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**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.

**1. Name of conveying party(ies)**

Neil Reginald Beer (USA)  
Ian Kennedy (USA)

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

**3. Nature of conveyance/Execution Date(s):**

Execution Date(s) 12/02/2008

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Joint Research Agreement  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other \_\_\_\_\_

**2. Name and address of receiving party(ies)**

Name: Lawrence Livermore National Security, LLC

Internal Address: L-703

Street Address: 7000 East Avenue

City: Livermore

State: CA

Country: USA Zip: 94550

Additional name(s) & address(es) attached? ☐ Yes ☒ No

**4. Application or patent number(s):**

☐ This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

12/331487 filed 12/10/2008

Additional numbers attached? ☐ Yes ☒ No

**5. Name and address to whom correspondence concerning document should be mailed:**

Name: Eddie E. Scott/LLNS

Internal Address: L-703

Street Address: 7000 East Avenue

City: Livermore

State: CA Zip 94551

Phone Number: 925-424-6897

Fax Number: 925/423-2231

Email Address: nugent8@llnl.gov

**6. Total number of applications and patents involved: 1**

**7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00**

- ☒ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

**8. Payment Information**

Deposit Account Number 120695

Authorized User Name Wanda Nugent

**9. Signature:**

/Eddie E. Scott #25,220/

02/11/2009

Signature

Date

Eddie E. Scott

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

5

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

**PATENT  
REEL: 031582 FRAME: 0567**

## PATENT ASSIGNMENT

Electronic Version v1.1  
Stylesheet Version v1.1

02/11/2009  
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| SUBMISSION TYPE:   | NEW ASSIGNMENT                            |               |   |                     |                  |                   |            |       |           |                |            |              |       |
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| Ian Kennedy  | 12/02/2008                                |               |   |                     |                  |                   |            |       |           |                |            |              |       |
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| Name:  | Lawrence Livermore National Security, LLC |               |   |                     |                  |                   |            |       |           |                |            |              |       |
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| Application Number:  | 12331487                                  |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| CORRESPONDENCE DATA  |   |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| Fax Number: (925)423-2231<br><i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>  |   |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| Phone: 925/424-6897  |   |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| Email: nugent8@llnl.gov  |   |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| Correspondent Name: Eddie E. Scott/LLNS  |   |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| Address Line 1: 7000 East Avenue   |   |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| Address Line 2: L-703  |   |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| Address Line 4: Livermore, CALIFORNIA 94550  |   |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| ATTORNEY DOCKET NUMBER:  | IL-11719                                  |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| NAME OF SUBMITTER:   | Eddie E. Scott                            |               |   |                     |                  |                   |            |       |           |                |            |              |       |
| Total Attachments: 5<br>source=IL_11719_Recordation_Assignment_filed_02_11_09#page1.tif  |   |               |   |                     |                  |                   |            |       |           |                |            |              |       |

CH \$40.00 12331487

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source=IL\_11719\_Recordation\_Assignment\_filed\_02\_11\_09#page5.tif

## ASSIGNMENT

LLNL Case No.: IL-11719

For good and valuable consideration the receipt of which is hereby acknowledged ASSIGNOR(s)

- |                                    |                             |
|------------------------------------|-----------------------------|
| 1. <u>Neil Reginald Beer (USA)</u> | 2. <u>Ian Kennedy (USA)</u> |
| 3. _____                           | 4. _____                    |
| 5. _____                           | 6. _____                    |
| 7. _____                           | 8. _____                    |
| 9. _____                           | 10. _____                   |

hereby sells, assigns and transfers to ASSIGNEE, Lawrence Livermore National Security, LLC, a Delaware Corporation, having its administrative offices located at Sunset Plaza Building C, 1658 Holmes St., Livermore, CA 94551 and the successors, assigns and legal representative of the ASSIGNEE all of its right, title and interest for the United States and its territorial possessions and in all foreign countries in and to, any and all improvements which are disclosed in the invention entitled:

### LASER HEATING OF AQUEOUS SAMPLES ON A MICRO-OPTICAL-ELECTRO-MECHANICAL SYSTEM

and which is found in

- ☒ U.S. patent application executed on 12/02/2008, entitled as above and listing the above named persons as inventors
- ☒ U.S. patent application serial no. 12/331,487, filed on 12/10/2008
- ☐ U. S. patent no. \_\_\_\_\_, issued \_\_\_\_\_

and any legal equivalent thereof in a foreign country, including the right to claim priority and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuation, division, continuation-in-part, extension or substitute thereof, and any reissue, reexamination or extension of said Letters Patent and all rights under all International Conventions for the Protection of Industrial Property;

ASSIGNOR(S) hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;

ASSIGNOR(S) further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation, or proceeding relating thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue or enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof. An attorney of record is authorized and requested by the execution of this assignment to insert into this assignment the filing date and serial number of said application when officially known.

AND the ASSIGNOR(S) requests the Commissioner of Patents and Trademarks to issue said Letters Patent of the United States and any reissue or extension thereof to the ASSIGNEE, Lawrence Livermore National Security, LLC.

executed this

12/1/2008  
Date

Signature of Inventor(s)

Neil Reginald Beer  
Neil Reginald Beer

executed this

12/2/08

Date

Signature of Inventor(s)

*I. Kennedy*

Ian Kennedy