

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

| 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>Yifu Ding</td> <td>09/18/2013</td> </tr> <tr> <td>Sajjad Maruf</td> <td>09/18/2013</td> </tr> <tr> <td>John Pellegrino</td> <td>09/16/2013</td> </tr> <tr> <td>Alan Greenberg</td> <td>09/18/2013</td> </tr> </tbody> </table>  |   | Name          | Execution Date  | Yifu Ding           | 09/18/2013        | Sajjad Maruf      | 09/18/2013 | John Pellegrino | 09/16/2013 | Alan Greenberg | 09/18/2013 |              |       |
| Name  | Execution Date  |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| Yifu Ding   | 09/18/2013  |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| Sajjad Maruf  | 09/18/2013  |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| John Pellegrino   | 09/16/2013  |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| Alan Greenberg  | 09/18/2013  |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| RECEIVING PARTY DATA  |   |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| <table border="1"> <tr> <td>Name:</td> <td>The Regents of the University of Colorado, a body corporate</td> </tr> <tr> <td>Street Address:</td> <td>1800 Grant Street</td> </tr> <tr> <td>Internal Address:</td> <td>8th Floor</td> </tr> <tr> <td>City:</td> <td>Denver</td> </tr> <tr> <td>State/Country:</td> <td>COLORADO</td> </tr> <tr> <td>Postal Code:</td> <td>80203</td> </tr> </table>   |   | Name:         | The Regents of the University of Colorado, a body corporate | Street Address:     | 1800 Grant Street | Internal Address: | 8th Floor  | City:           | Denver     | State/Country: | COLORADO   | Postal Code: | 80203 |
| Name:   | The Regents of the University of Colorado, a body corporate |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| Street Address:   | 1800 Grant Street   |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| Internal Address:   | 8th Floor   |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| City:   | Denver  |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| State/Country:  | COLORADO  |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| Postal Code:  | 80203   |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| PROPERTY NUMBERS Total: 2   |   |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>61697599</td> </tr> <tr> <td>PCT Number:</td> <td>US1358609</td> </tr> </tbody> </table>  |   | Property Type | Number  | Application Number: | 61697599          | PCT Number:       | US1358609  |                 |            |                |            |              |       |
| Property Type   | Number  |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| Application Number:   | 61697599  |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| PCT Number:   | US1358609   |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| CORRESPONDENCE DATA   |   |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| <p>Fax Number: 3035714321<br/> <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 303-571-4000<br/>       Email: jfbrown@kilpatricktownsend.com<br/>       Correspondent Name: Eugene J. Bernard<br/>       Address Line 1: Two Embarcadero Center, Eighth Floor<br/>       Address Line 2: Kilpatrick Townsend &amp; Stockton LLP<br/>       Address Line 4: San Francisco, CALIFORNIA 94111</p> |   |               |   |                     |                   |                   |            |                 |            |                |            |              |       |
| ATTORNEY DOCKET NUMBER:   | N0023-886899  |               |   |                     |                   |                   |            |                 |            |                |            |              |       |

OP \$80.00 61697599

|   |                                 |
|---|---------------------------------|
| NAME OF SUBMITTER:  | Eugene J. Bernard               |
| Signature:  | /Eugene J. Bernard, Reg. 42320/ |
| Date:   | 09/24/2013                      |
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### ASSIGNMENT

We, the undersigned, have invented certain inventions and improvements disclosed in the following U.S. provisional and PCT international patent applications entitled "Enhancing Filtration Performance of Membranes with Nanoscale Patterns:"

U.S. Provisional Patent Application Serial No. 61/697,599, entitled "Enhancing Filtration Performance of Membranes with Nanoscale Patterns," filed with the U.S. Patent & Trademark Office on September 6, 2012; and

PCT international Patent Application Serial No. PCT/US13/58609 entitled "Filtration Membrane with Nanoscale Patterns," filed with the U.S. Patent & Trademark Office as Receiving Office on September 6, 2013.

For one dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which we acknowledge, we:

1. Agree to assign, transfer, convey, and sell, hereby assign, transfer, convey, and sell and have assigned, transferred, conveyed, and sold to The Regents of the University of Colorado, a body corporate, at 1800 Grant Street, 8<sup>th</sup> Floor, Denver, CO 80203 ("Assignee"), the entire right, title, and interest in and to:
  - (a) all intellectual property (including, without limitation, any innovation, information, invention, discovery, product, process, work or design) disclosed, embodied, shown, or claimed in the above-referenced patent application, implicitly or explicitly;
  - (b) the above-referenced patent application, the right to claim priority to the above-referenced patent application, all applications based in whole or in part upon the above-referenced patent application, including, without limitation, all applications that are a provisional, non-provisional, design, divisional, continuation, continuation-in-part, registration, utility model, industrial design, reissue, renewal, substitute, extension, reexamination, post-grant review, inter partes review, supplemental examination or non-U.S. patent application or application for other rights based in whole or in part on the above-referenced patent application;
  - (c) all patents (including, without limitation, all U.S. and non-U.S. patents, registrations, utility models, industrial designs, design patents, counterparts, continuations, continuations-in-part, divisionals, reissues, renewals, substitutes, extensions, reexaminations, post-grant reviews, inter partes reviews and supplemental examinations) that are granted or issued upon, or that claim

ASSIGNMENT

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CU TTO File No. CU3096B-PCT1

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priority to, any and all applications described in (b) of this paragraph or that disclose or claim intellectual property described in (a) of this paragraph, in whole or in part; and

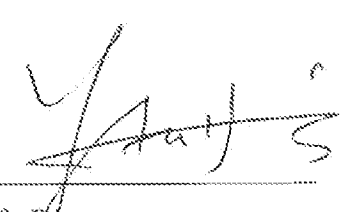
(d) all claims for damages by reason of past infringement of any rights under the applications or patents described in (a), (b) or (c) of this paragraph (including provisional rights to reasonable royalties pursuant to 35 U.S.C. §154(d)) and the right to sue for and collect such damages and royalties for Assignee's own use.

2. Authorize and request the U.S. Patent and Trademark Office or any other U.S. or non-U.S. agency to issue to the Assignee any and all patent(s), or other rights or documents, resulting from the intellectual property, patent application(s) and patents described in paragraph 1 of this Assignment.
3. Agree to sign all papers and documents, including without limitation, applications, declarations, oaths and petitions, and, at the Assignee's expense, perform any other acts that are necessary in connection with prosecution of patent application(s) or intellectual property described in paragraph 1 of this Assignment and the enforcement of patent(s) or other rights resulting from such patent application(s) or intellectual property.
4. Agree that the terms, covenants, and conditions of this Assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon us, as well as our heirs, legal representatives, and assigns.
5. Promise and affirm that we have not entered, and will not enter, into any assignment, contract, or understanding that conflicts with this Assignment.
6. Authorize Kilpatrick Townsend & Stockton to insert above the application number and filing date of the above-described PCT international patent application if said information is not available at the time of the execution of this Assignment.

Signed on the dates indicated beside our signatures.

Dated: \_\_\_\_\_

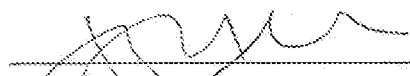
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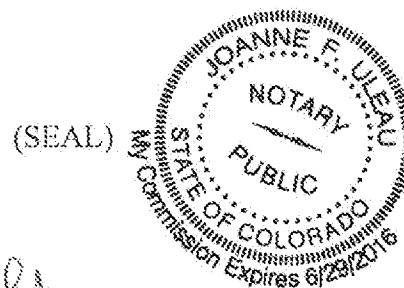
  
\_\_\_\_\_  
Yifu Ding

STATE OF Colorado  
COUNTY OF Boulder

Subscribed and sworn to (or affirmed) before me on the 18 day of 9, 2013, by  
Yifu Ding (name) who personally appeared before me and  
proved to me on the basis of satisfactory evidence to be the person who appeared before me.

WITNESS my hand and official seal.

  
(Signature of Notary Public)



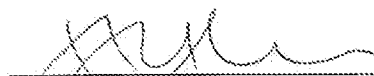
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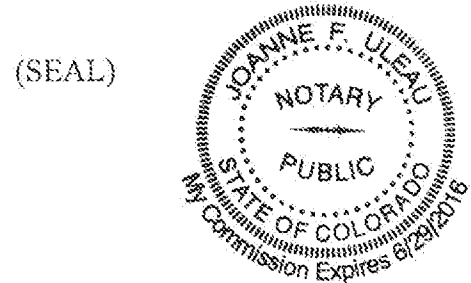
  
Sajjad Maruf

STATE OF Colorado  
COUNTY OF Boulder

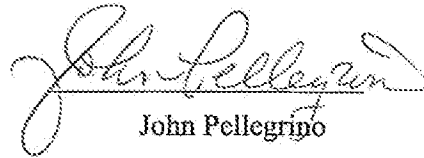
Subscribed and sworn to (or affirmed) before me on the 18 day of 9, 2013, by  
Sajjad Maruf (name) who personally appeared before me and  
proved to me on the basis of satisfactory evidence to be the person who appeared before me.

WITNESS my hand and official seal.

  
(Signature of Notary Public)



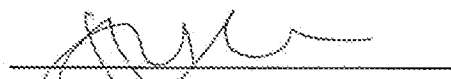
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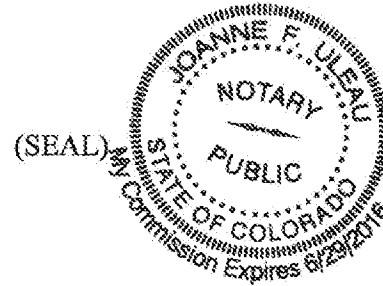
  
John Pellegrino

STATE OF Colorado  
COUNTY OF Boulder

Subscribed and sworn to (or affirmed) before me on the 16 day of 9, 2013, by  
John Pellegrino (name) who personally appeared before me and  
proved to me on the basis of satisfactory evidence to be the person who appeared before me.

WITNESS my hand and official seal.

  
(Signature of Notary Public)



Dated: \_\_\_\_\_

\_\_\_\_\_  
Alan Greenberg

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Subscribed and sworn to (or affirmed) before me on the \_\_\_\_\_ day of \_\_, 20\_\_, by  
Alan Greenberg (name) who personally appeared before me and  
proved to me on the basis of satisfactory evidence to be the person who appeared before me.

WITNESS my hand and official seal.

\_\_\_\_\_  
(Signature of Notary Public)

(SEAL)

ASSIGNMENT

Attorney Docket No. 85256-882453

CU TTO File No. CU3096B-PCT1

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Dated: \_\_\_\_\_

John Pellegrino

STATE OF \_\_\_\_\_ )

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to (or affirmed) before me on the \_\_\_\_\_ day of \_\_, 20\_\_, by  
\_\_\_\_\_ John Pellegrino \_\_\_\_\_ (name) who personally appeared before me and  
proved to me on the basis of satisfactory evidence to be the person who appeared before me.

WITNESS my hand and official seal.

(SEAL)

\_\_\_\_\_  
(Signature of Notary Public)

Dated: 9/18/2013

Alan Greenberg  
Alan Greenberg

STATE OF Colorado )

COUNTY OF Boulder )

Subscribed and sworn to (or affirmed) before me on the 18 day of 9, 2013, by  
\_\_\_\_\_ Alan Greenberg \_\_\_\_\_ (name) who personally appeared before me and  
proved to me on the basis of satisfactory evidence to be the person who appeared before me.

WITNESS my hand and official seal.

(SEAL)

\_\_\_\_\_  
(Signature of Notary Public)

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