

## 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>Patrick Brant</td> <td>05/21/2013</td> </tr> <tr> <td>Takeshi Ishihara</td> <td>05/27/2013</td> </tr> <tr> <td>Satoshi Miyaoka</td> <td>05/31/2013</td> </tr> <tr> <td>Donna J. Crowther</td> <td>05/21/2013</td> </tr> <tr> <td>Koichi Kono</td> <td>05/24/2013</td> </tr> </tbody> </table>                               |  | Name          | Execution Date                         | Patrick Brant       | 05/21/2013     | Takeshi Ishihara | 05/27/2013   | Satoshi Miyaoka | 05/31/2013 | Donna J. Crowther | 05/21/2013 | Koichi Kono | 05/24/2013 |
| Name  | Execution Date                         |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| Patrick Brant   | 05/21/2013                             |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| Takeshi Ishihara  | 05/27/2013                             |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| Satoshi Miyaoka   | 05/31/2013                             |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| Donna J. Crowther   | 05/21/2013                             |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| Koichi Kono   | 05/24/2013                             |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| RECEIVING PARTY DATA  |  |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| <table border="1"> <tr> <td>Name:</td> <td>Toray Battery Separator Film Co., Ltd.</td> </tr> <tr> <td>Street Address:</td> <td>1190-13 Iguchi</td> </tr> <tr> <td>City:</td> <td>Nasushiobara</td> </tr> <tr> <td>State/Country:</td> <td>JAPAN</td> </tr> <tr> <td>Postal Code:</td> <td>329-2763</td> </tr> </table>  |  | Name:         | Toray Battery Separator Film Co., Ltd. | Street Address:     | 1190-13 Iguchi | City:            | Nasushiobara | State/Country:  | JAPAN      | Postal Code:      | 329-2763   |             |            |
| Name:   | Toray Battery Separator Film Co., Ltd. |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| Street Address:   | 1190-13 Iguchi                         |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| City:   | Nasushiobara                           |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| State/Country:  | JAPAN                                  |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| Postal Code:  | 329-2763                               |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| 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>13996028</td> </tr> </tbody> </table>   |  | Property Type | Number                                 | Application Number: | 13996028       |                  |              |                 |            |                   |            |             |            |
| Property Type   | Number                                 |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| Application Number:   | 13996028                               |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| CORRESPONDENCE DATA   |  |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| <p>Fax Number: 2156562498<br/> <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 215-656-3381</p> <p>Email: pto.phil@dlapiper.com, Victorine.Meise@dlapiper.com</p> <p>Correspondent Name: IP GROUP OF DLA PIPER LLP (US)</p> <p>Address Line 1: ONE LIBERTY PLACE</p> <p>Address Line 2: 1650 MARKET ST, SUITE 4900</p> <p>Address Line 4: PHILADELPHIA, PENNSYLVANIA 19103</p> |  |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| ATTORNEY DOCKET NUMBER:   | TTS-13-1151 (308877-409)               |               |  |                     |                |                  |              |                 |            |                   |            |             |            |
| NAME OF SUBMITTER:  | Victorine B. Meise                     |               |  |                     |                |                  |              |                 |            |                   |            |             |            |

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|   |                      |
|---|----------------------|
| Signature:  | /Victorine B. Meise/ |
| Date:   | 06/20/2013           |
| Total Attachments: 1<br>source=Assignment#page1.tif |                      |

ASSIGNMENT

WHEREAS, we, Patrick Brant; Takeshi Ishihara; Satoshi Miyaoka; Donna J. Crowther; and Koichi Kono, citizens of USA; Japan; Japan; USA; and Japan, respectively, residing at 1038 Shorewood Drive, Seabrook, Texas 77586, USA; c/o Nasu Plant, Toray Battery Separator Film Co., Ltd., 1190-13, Iguchi, Nasushiobara-shi, Tochigi 329-2763, Japan; c/o Nasu Plant, Toray Battery Separator Film Co., Ltd., 1190-13, Iguchi, Nasushiobara-shi, Tochigi 329-2763, Japan; 2725 Moss Court, Seabrook, Texas 77586, USA; and c/o Nasu Plant, Toray Battery Separator Film Co., Ltd., 1190-13, Iguchi, Nasushiobara-shi, Tochigi 329-2763, Japan; respectively, (hereinafter referred to as "the undersigned"), having made an invention entitled MICROPOROUS FILM, METHODS FOR MAKING SUCH FILM, AND USE FOR SUCH FILM AS BATTERY SEPARATOR FILM, identified in International Application No. PCT/JP2011/079470, and in US Application No. 13/996,028, (DLA Piper is authorized to insert the Serial No. when known),

WHEREAS, Toray Battery Separator Film Co., Ltd., with offices located at 1190-13, Iguchi, Nasushiobara-shi, Tochigi 329-2763, Japan (hereinafter referred to as "the assignee"), is desirous of acquiring the entire right, title and interest in said invention, said US application and all letters patent issuing for said invention,

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and of other good and valuable consideration, receipt of which is hereby acknowledged, the undersigned, intending to be legally bound, do hereby sell, assign and transfer to the assignee the entire right, title and interest, for the United States of America, its territories and possessions, and for all foreign countries, in said invention, including said US application, all divisions and continuations thereof, all rights to claim priority based thereon, all rights to file foreign applications on said invention, and all letters patent and reissues thereof, issuing for said invention in the United States of America and in any and all foreign countries.

It is agreed that the undersigned shall be legally bound, upon request of the assignee, or its successors or assigns or a legal representative thereof, to supply all information and evidence of which the undersigned has knowledge or possession, relating to the making and practice of said invention, to testify in any legal proceeding relating thereto, to execute all instruments proper to patent the invention in the United States of America and foreign countries in the name of the assignee, and to execute all instruments proper to carry out the intent of this instrument. If the undersigned includes more than one individual, these obligations shall apply to all of the undersigned both individually and collectively.

The rights and property herein conveyed by the undersigned are free and clear of any encumbrance.

**EXECUTED** on the date(s) set forth below.

Patrick Brant May 21, 2013  
Patrick Brant Date

Donna J. Crowther 5-21-13  
Donna J. Crowther Date

Takeshi Ishihara May 27, 2013  
Takeshi Ishihara Date

Koichi Kono May 27, 2013  
Koichi Kono Date

Satoshi Miyaoka May 31, 2013  
Satoshi Miyaoka Date