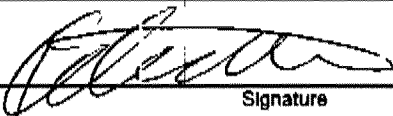


Form PTO-1595 (Rev. 03-11)
OMB No. 0651-0027 (exp. 03/31/2015)

U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

| 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): Byeong-Gyu Cho (07/02/2013), Jeong-Min Ha (07/02/2013), Su-Jin Yoon (07/02/2013), Jong-Hun Kim (07/02/2013), and Additional name(s) of conveying party(ies) attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 2. Name and address of receiving party(ies) Name: <u>LG Chem, Ltd.</u> Internal Address: _____ Street Address: <u>LG Twin Towers</u> <u>20, Yeouido-dong</u> <u>Yeongdeungpo-gu</u> City: <u>Seoul</u> State: _____ Country: <u>Republic of Korea</u> Zip: <u>150-721</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): In parentheses after inventor name <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 _____ | 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>13/903,195</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>Kelly Y. Hwang</u> <u>LERNER, DAVID, LITTENBERG,</u> <u>KRUMHOLZ & MENTLIK, LLP</u> Internal Address: <u>Atty. Dkt.:</u> Street Address: <u>600 South Avenue West</u> City: <u>Westfield</u> State: <u>NJ</u> Zip: <u>07090</u> Phone Number: <u>908-654-5000</u> Fax Number: <u>908-654-7866</u> Email Address: <u>mcormier@ldlkm.com</u> | 6. Total number of applications and patents involved: 1 7. Total fee (37 CFR 1.21(h) & 3.41) \$ <u>40.00</u> <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 Deposit Account Number <u>12-1095</u> Authorized User Name <u>Kelly Y. Hwang</u> | |
| 9. Signature: <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">  Signature <u>Kelly Y. Hwang - 51,831</u> Name of Person Signing </div> <div style="text-align: right;"> <u>July 17, 2013</u> Date Total number of pages including cover sheet, attachments, and documents: 4 </div> </div> | |

CH \$40.00 121095 13903195

| RECORDATION FORM COVER SHEET (PTO-1595) (supplemental sheet) | |
|--|---|
| Additional Conveying Party(ies)/Execution Date(s) (1. Continued): Byoung-Jin Shin (07/02/2013) | |
| Additional Assignees (2. Continued): | |
| Assignee Name: _____ | |
| Internal Address: _____ | |
| Street Address: _____ | |
| City: _____ State: _____ Country: _____ Zip: _____ | |
| Assignee Name: _____ | |
| Internal Address: _____ | |
| Street Address: _____ | |
| City: _____ State: _____ Country: _____ Zip: _____ | |
| Assignee Name: _____ | |
| Internal Address: _____ | |
| Street Address: _____ | |
| City: _____ State: _____ Country: _____ Zip: _____ | |
| Additional Applications and/or Patents (4. Continued): | |
| Additional Patent Application Numbers 4A. Continued: | Additional Patent Numbers 4B. Continued: |
| Additional numbers attached? <input type="checkbox"/> Yes <input type="checkbox"/> No | |

| DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATIONS | | Attorney Docket Number: LGCHEM 3.9-316 CON |
|--|--|--|
| Title of Invention | SEPARATOR AND ELECTROCHEMICAL DEVICE HAVING THE SAME | |
| <p>As the below named inventor(s) (hereinafter designated as the undersigned), I/We hereby declare that: This declaration is directed to:</p> <p><input type="checkbox"/> The attached application, or <input checked="" type="checkbox"/> United States application or PCT International application number <u>13/903,195</u> filed on <u>May 28, 2013</u></p> <p>The above-identified application was made or authorized to be made by me/us.</p> <p>I/We believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</p> <p>I/We hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.</p> <p>WHEREAS, the undersigned as a sole inventor (if only one name is listed below) or as a joint inventor (if plural names are listed below) has invented certain new and useful improvements in the application identified above.</p> <p>AND, WHEREAS LG Chem, Ltd., (hereinafter referred to as assignee), a corporation of Korea whose mailing address is LG Twin Towers; 20, Yeouido-dong; Yeongdeungpo-gu; Seoul; REPUBLIC OF KOREA 150-721 is desirous of acquiring the entire right, title and interest in the same.</p> <p>NOW, THEREFORE, in consideration of the sum of one dollar, the receipt whereof is acknowledged, and other good and valuable consideration, the undersigned hereby sell(s), assign(s) and set(s) over to said assignee my/our entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including all claims for damages by reason of past infringement with the right to sue for and collect the same for its own use and the use of its successors, assigns and legal representatives, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me/us and my/our legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.</p> <p>And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.</p> | | |
| FULL NAME OF INVENTOR(S) | | |
| Inventor one: <u>CHO, Byeong-Gyu</u> Date: <u>July 2, 2013</u> | | |
| Signature: <u>[Signature]</u> | | |
| <input checked="" type="checkbox"/> Additional inventors or a legal representative are being named on <u>1</u> additional form(s) attached hereto. | | |
| PLEASE SEE THE WARNINGS ON THE LAST PAGE OF THIS FORM. | | |

SUPPLEMENTAL SHEET

LGCHEM 3.9-316 CON

| DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATIONS | ADDITIONAL INVENTOR(S) Supplemental Sheet |
|---|--|
| Inventor two: <u>HA, Jeong-Min</u> Signature: <u>[Signature]</u> | Date: <u>July 2, 2013</u> |
| Inventor three: <u>YOON, Su-Jin</u> Signature: <u>[Signature]</u> | Date: <u>July 2, 2013</u> |
| Inventor four: <u>KIM, Jong-Hun</u> Signature: <u>[Signature]</u> | Date: <u>July 2, 2013</u> |
| Inventor five: <u>SHIN, Byoung-Jin</u> Signature: <u>[Signature]</u> | Date: <u>July 2, 2013</u> |
| Inventor six: _____ Signature: _____ | Date: _____ |
| Inventor seven: _____ Signature: _____ | Date: _____ |
| Inventor eight: _____ Signature: _____ | Date: _____ |
| Inventor nine: _____ Signature: _____ | Date: _____ |
| Inventor ten: _____ Signature: _____ | Date: _____ |
| WARNING: According to 37 C.F.R. 1.63 (c), "[a] person may not execute an oath or declaration unless the person has reviewed and understands the contents of the application, including the claims and is aware of the duty to disclose to the Office all information known to be material to patentability as defined in 1.66." Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. | |