

Form PTO-1595 (Rev. 09/04)  
OMB No. 0551-0027 (exp. 6/30/2005)

U.S. DEPARTMENT OF COMMERCE  
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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)/Execution Date(s):

CHAE HO CHUNG (02/16/2009), DAL MOH KANG (02/16/2009), YE HOON IM (02/16/2009), AND JONGMOON YOON (02/16/2009)

Execution Date(s) in parentheses after inventor name

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

### 3. Nature of Conveyance:

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

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

Name: LG CHEM, LTD.

Internal Address:

Street Address:

LG TWIN TOWERS  
20, YEOUNGDO-DONG  
YEONGDEUNGPO-GU

City: SEOUL

State:

Country: Republic of Korea Zip: 150-721

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

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

A. Patent Application No. (s)  
12/321,486

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

B. Patent No. (s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Kelly Y. Hwang  
LERNER, DAVID, LITTENBERG,  
KRUMHOLZ & MENTLIK, LLP

Internal Address: Atty. Dkt.: LGCHEM 3.0-062

Street Address: 600 South Avenue West

City: Westfield

State: NJ Zip: 07090

Phone Number: (908) 518-6320

Fax Number: (908) 654-0415

Email Address: khwang@ldlkm.com

### 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 by credit card  
☒ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

### 8. Payment information

a. Credit Card Last 4 Numbers  
Expiration Date

b. Deposit Account Number 12-1095  
Authorized User Name Kelly Y. Hwang

### 9. Signature:

Signature

April 2, 2009

Date

Kelly Y. Hwang - 51.831  
Name of Person Signing

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

5

CH \$40.00 121095 12321486

Form PTO-1595 (Rev. 09/04)

2009-03-06 14:42 FROM:COMET PATENT OFFICE 025552598

TO:00119086547866

P:7/10

ASSIGNMENT OF UTILITY APPLICATION		former PTO/SPT5 (8-00) Modified LDLKM Docket Number (Optional) LGCHEM 3.0-062	
Whereas, I, <u>Chae Ho Chung</u> of <u>504, Seongnam-si Byeoksan Chalseoville Apt., Seongbuk-dong, Sui-gu, Yongin-si, Gyeonggi-do, REPUBLIC OF KOREA 448-530</u> hereafter referred to as assignor, have with others invented certain new and useful improvements in <u>MIDDLE- OR LARGE-SIZED BATTERY PACK CASE PROVIDING IMPROVED DISTRIBUTION UNIFORMITY IN COOLANT FLUX</u> <input checked="" type="checkbox"/> for which an application for a United States Letters Patent was filed on <u>January 21, 2009</u> Application Number <u>12/321,488</u> <input type="checkbox"/> for which an application for a United States Letters Patent was executed by me on _____ <input type="checkbox"/> for which an International Application was filed on _____, AS _____, designating the United States. And Whereas, <u>LG Chem, Ltd.</u> a corporation of <u>Korea, Republic of</u> herein referred to as "assignee" whose mailing address is <u>LG Twin Towers, 20, Yeouido-dong, Yeongdeungpo-gu, Seoul, REPUBLIC OF KOREA 150-721</u> is desirous of acquiring the entire right, title and interest in the same: NOW, THEREFORE, in consideration of the sum of <u>999</u> dollars (\$ <u>1.00</u> ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my 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 release 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 and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, release 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. And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known. <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;"> <u>2009. 2. 18</u>              Date  <u>[Signature]</u>              Witness  <u>Young Tae Kim</u>              Typed Name of Witness           </div> <div style="text-align: center;"> <u>[Signature]</u>              Chae Ho Chung           </div> </div>			
<input checked="" type="checkbox"/> *Total of 4 forms are submitted.			

1.13-515\

2009-03-06 14:43 FROM: COMET PATENT OFFICE 025532598

TO: 0011906547866

P: 0410

<p style="text-align: center;"><b>ASSIGNMENT OF UTILITY APPLICATION</b></p>	<p style="text-align: center; font-size: small;">(former PTO/SB/15 (A-00) Modified LDLKM)</p> <p style="text-align: center;">Docket Number (Optional)</p> <p style="text-align: center;">LGCHEM 3.0-062</p>
<p>Whereas, I, <u>Dal Moh Kang</u> of <u>110-902, Chonggyu Naree Apt., Jeonmin-dong, Yuseong-gu, Daejeon, REPUBLIC OF KOREA 305-729</u></p> <p>hereafter referred to as assignor, have with others invented certain new and useful improvements in <u>MIDDLE- OR LARGE-SIZED BATTERY PACK CASE PROVIDING IMPROVED DISTRIBUTION UNIFORMITY IN COOLANT FLUX</u></p> <p><input checked="" type="checkbox"/> for which an application for a United States Letters Patent was filed on <u>January 21, 2009</u> Application Number <u>12/321,486</u></p> <p><input type="checkbox"/> for which an application for a United States Letters Patent was executed by me on _____</p> <p><input type="checkbox"/> for which an International Application was filed on _____, as _____, designating the United States.</p> <p>And</p> <p>Whereas, <u>LG Chem, Ltd.</u> a corporation of <u>Korea, Republic of</u> herein referred to as "assignee" whose mailing address is <u>LG Twin Towers, 20, Yeouido-dong, Yeongdeungpo-gu, Seoul, REPUBLIC OF KOREA 150-721</u> is desirous of acquiring the entire right, title and interest in the same;</p> <p>NOW, THEREFORE, in consideration of the sum of <u>one</u> dollars (\$ <u>1.00</u> ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my 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 and my 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> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="text-align: center;"> <p><u>Feb. 16th, '09</u></p> <p>Date</p> </div> <div style="text-align: center;"> <p><u><i>Dal Moh Kang</i></u></p> <p>Dal Moh Kang</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="text-align: center;"> <p><u><i>Yongs Tae Kim</i></u></p> <p>Witness</p> <p><u>Yongs Tae Kim</u></p> <p>Typed Name of Witness</p> </div> </div>	
<p><input checked="" type="checkbox"/> *Total of <u>4</u> forms are submitted.</p>	

LD-5151

2009-03-06 14:43 FROM: COME1 PATENT OFFICE 025552598

TO: 001190855-17865

P: 9:10

ASSIGNMENT OF UTILITY APPLICATION Docket Number (Optional) LGCHEM 3.0-062	
Whereas, I, <u>Ye Hoon Im</u> of <u>705-15, Gwangseong beekjo Yemil Apt., Gwanpyeong-dong, Yuseong-gu, Daejeon, REPUBLIC OF KOREA 305-509</u> hereafter referred to as assignor, have with others invented certain new and useful improvements in <u>MIDDLE- OR LARGE-SIZED BATTERY PACK CASE PROVIDING IMPROVED DISTRIBUTION UNIFORMITY IN COOLANT FLUX</u> <input checked="" type="checkbox"/> for which an application for a United States Letters Patent was filed on <u>January 21, 2009</u> Application Number <u>12/321,486</u> <input type="checkbox"/> for which an application for a United States Letters Patent was executed by me on _____ <input type="checkbox"/> for which an International Application was filed on _____, 85 _____, designating the United States. And Whereas, <u>LG Chem, Ltd.</u> a corporation of <u>Korea, Republic of</u> herein referred to as "assignee" whose mailing address is <u>LG Twin Towers, 20, Yeouido-dong, Yeongdeungpo-gu, Seoul, REPUBLIC OF KOREA 150-721</u> is desirous of acquiring the entire right, title and interest in the same; NOW, THEREFORE, in consideration of the sum of <u>one</u> dollars (\$ <u>1.00</u> ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my 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 and my 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. And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known. <div style="display: flex; justify-content: space-between;"> <div> <u>02.16.09</u>            Date  <u>[Signature]</u>            Witness  <u>YOUNG TAE KIM</u>            Typed Name of Witness         </div> <div> <u>[Signature]</u>            Ye Hoon Im         </div> </div>	
<input checked="" type="checkbox"/> Total of <u>4</u> forms are submitted.	

1.0-5151

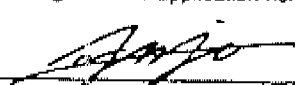

03/06/2009 FRI 00:39 ITX/RX NO 57041 0009

 PATENT  
 REEL: 022488 FRAME: 0105

2009-03-06 14:44 FROM: COME1 PATENT OFFICE 025552500

TO: COM1 19086547868

P: 10/10

<b>ASSIGNMENT OF UTILITY APPLICATION</b>	<small>former PTO Form 1 (5-00) Modified LDLKM</small> Docket Number (Optional) <b>LGCHEM 3.0-062</b>
<p>Whereas, I, <u>Jongmoon Yoon</u> of <u>2-4, Yongdu-dong, Jung-gu, Daegu, REPUBLIC OF KOREA 301-830</u></p> <p>hereafter referred to as assignor, have with others invented certain new and useful improvements in <b>MIDDLE- OR LARGE-SIZED BATTERY PACK CASE PROVIDING IMPROVED DISTRIBUTION UNIFORMITY IN COOLANT FLUX</b></p> <p><input checked="" type="checkbox"/> for which an application for a United States Letters Patent was filed on <u>January 21, 2009</u>          Application Number <u>12/321,488</u></p> <p><input type="checkbox"/> for which an application for a United States Letters Patent was executed by me on _____</p> <p><input type="checkbox"/> for which an International Application was filed on _____, as _____, designating the United States.</p> <p>And</p> <p>Whereas, <u>LG Chem, Ltd.</u> a corporation of <u>Korea, Republic of</u> herein referred to as "assignee" whose mailing address is <u>LG Twin Towers, 20, Yeouido-dong, Yeongdeungpo-gu, Seoul, REPUBLIC OF KOREA 150-721</u> is desirous of acquiring the entire right, title and interest in the same;</p> <p>NOW, THEREFORE, in consideration of the sum of <u>one</u> dollars (\$ <u>1.00</u> ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my 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 release 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 and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, release 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> <p style="text-align: center;"> <u>February 16th, 2009</u>          Date       </p> <p style="text-align: center;">           Jongmoon Yoon       </p> <p style="text-align: center;">           Witness       </p> <p style="text-align: center;"> <u>Young-Tae Kim</u>          Typed Name of Witness       </p>	
<input checked="" type="checkbox"/> Total of <u>4</u> forms are submitted.	

LD-5135

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