

Form PTO-1595 (Rev. 09/04)  
OMB No. 0651-0027 (exp. 6/30/2005)

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)/Execution Date(s):**

**BYUNGJIN CHOI (11/27/2008), HYANG  
MOK LEE (11/27/2008), CHANG BUM AHN  
(11/27/2008), WOYONG LEE (11/27/2008).**

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. YEQUIDO-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)

**12/225,982**

☐ 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.: **LG-CHEM 3.3-038**

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****

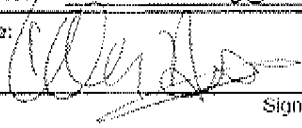
- ☐ Authorized to be charged by credit card  
☒ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting fee)

**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

**November 24, 2009**

Date

**Kelly Y. Hwang - 51,831**

Name of Person Signing

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

**8**

CH \$40.00 121095 12225982

11/24/2009 18:14 FAX

RECORDATION FORM COVER SHEET (continued)	
<b>Additional Conveying Party(ies)/Execution Date(s) (1. Continued):</b>  Sung-Min Hwang (11/27/2008), and OhYoung Hyun (11/27/2008)	
<b>Additional Assignees (2. Continued):</b>	
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: _____	
<b>Additional Applications and/or Patents (4. Continued):</b>	
Additional Patent Application Numbers 4A. Continued.	Additional Patent Numbers 4B. Continued.
Additional numbers attached? <input type="checkbox"/> Yes <input type="checkbox"/> No	

former PTO/SB/15 (8-00) Modified LDLKM

## ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)

Whereas, I, Byungjin Choi of101-504, Expo Apt., Jeonmin-dong, Yuseong-gu, Daejeon, REPUBLIC OF KOREA 305-761

hereafter referred to as assignor, have with others invented certain new and useful improvements in

LITHIUM SECONDARY BATTERY IMPROVED SAFETY AND CAPACITY☒ for which an application for a United States Letters Patent was filed on 9/30/08Application Number 12/225/982☐ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_☒ for which an International Application was filed on March 28, 2007, asPCT/KR2007/001510, designating the United States.

And

Whereas, LG CHEM, LTD.a corporation of Korea, Republic of herein referred to as "assignee" whose mailing address isLG 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;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), 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.

2008. 11. 27

Date

Byungjin Choi

Byungjin Choi

[Signature]

Witness

Young Tae Kim

Typed Name of Witness

☒ \*Total of 6 forms are submitted.

FD-505

PATENT

REEL: 023568 FRAME: 0915



former PTO/SB/15 (8-00) Modified LDI K&amp;M

<b>ASSIGNMENT OF UTILITY APPLICATION</b>	Docket Number (Optional)
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Whereas, I, Hyang Mok Lee of  
720-4, Suyu 2-dong, Gangbuk-gu, Seoul, REPUBLIC OF KOREA 142-888  
hereafter referred to as assignor, have with others invented certain new and useful improvements in  
LITHIUM SECONDARY BATTERY IMPROVED SAFETY AND CAPACITY

☒ for which an application for a United States Letters Patent was filed on 9/30/08  
Application Number 12/225,982

☐ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_

☒ for which an International Application was filed on March 28, 2007, as  
PCT/KR2007/001510, designating the United States.

And

Whereas, LG CHEM, LTD.  
a corporation of Korea, Republic of herein referred to as "assignee" 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;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), 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.

108. 11. 27  
Date

[Signature]  
Witness

Young Tae KIM  
Typed Name of Witness

[Signature]  
Hyang Mok Lee

<input checked="" type="checkbox"/>	*Total of <u>6</u> forms are submitted.
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LD-515

former PTO/SB/15 (8-00) Modified LDLKM

## ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)

Whereas, I, Chang bum Ahn of  
6-401, LG Chem Sawon Apt., 381-42, Doryong-dong, Yuseong-gu, Daejeon, REPUBLIC OF  
KOREA 305-340

hereafter referred to as assignor, have with others invented certain new and useful improvements in

LITHIUM SECONDARY BATTERY IMPROVED SAFETY AND CAPACITY

- ☒ for which an application for a United States Letters Patent was filed on 9/30/08  
 Application Number 12/225,982
- ☐ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_
- ☒ for which an International Application was filed on March 28, 2007, as  
PCT/KR2007/001510, designating the United States.

And

Whereas, LG CHEM, LTD.  
 a corporation of Korea, Republic of herein referred to as "assignee" 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;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), 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.

2008. 11. 27  
 Date

  
 Chang bum Ahn

  
 Witness

YOUNG TAE KIM  
 Typed Name of Witness

☒ Total of 6 forms are submitted.



Former PTO/SB/15 (8-00) Modified LDLKM

## ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)

Whereas, I, Wooyong Lee of  
202, Sinyeollip, LG Chem Sawon Apt., 388-11, Doryong-dong, Yuseong-gu, Daejeon, REPUBLIC  
OF KOREA 305-340

hereafter referred to as assignor, have with others invented certain new and useful improvements in

LITHIUM SECONDARY BATTERY IMPROVED SAFETY AND CAPACITY

- ☒ for which an application for a United States Letters Patent was filed on 9/30/08  
 Application Number 12/225,982
- ☐ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_
- ☒ for which an International Application was filed on March 28, 2007, as  
PCT/KR2007/001510, designating the United States.

And

Whereas, LG CHEM, LTD.

a corporation of Korea Republic of herein referred to as "assignee" 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;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), 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.

2008. 11. 27  
 Date

[Signature]  
 Wooyong Lee

[Signature]  
 Witness

Young Tae Kim  
 Typed Name of Witness

☒ Total of 6 forms are submitted.

LD-515

former PTO/SD/15 (8-00) Modified LDLKM

<b>ASSIGNMENT OF UTILITY APPLICATION</b>	Docket Number (Optional)
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Whereas, I, Sung-Min Hwang of A-5F, Yeongseong Juteak, 437-4, Hapjeong-dong, Mapo-gu, Seoul, REPUBLIC OF KOREA 121-887

hereafter referred to as assignor, have with others invented certain new and useful improvements in LITHIUM SECONDARY BATTERY IMPROVED SAFETY AND CAPACITY

☒ for which an application for a United States Letters Patent was filed on 9/30/08  
 Application Number 12/225,982

☐ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_

☒ for which an International Application was filed on March 28, 2007, as PCT/KR2007/001510, designating the United States.

And

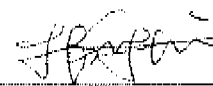
Whereas, LG CHEM, LTD. is a corporation of Korea, Republic of herein referred to as "assignee" whose mailing address is LG Twin Towers; 20, Yeouido-dong; Yeongdeungpo-gu; Seoul; REPUBLIC OF KOREA 150-721 is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), 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.

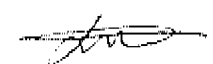
And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

2008 11 27

Date



Sung-Min Hwang



Witness

Young Tae K.L.Y

Typed Name of Witness

<input checked="" type="checkbox"/>	Total of 6 forms are submitted.
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10-515



former PTO/SB/15 (5-00) Modified LDLKM

<b>ASSIGNMENT OF UTILITY APPLICATION</b>	Docket Number (Optional)
------------------------------------------	--------------------------

Whereas, I, OhYoung Hyun of  
128-304, Hanvit Apt., Eoeun-dong, Yuseong-qu, Daejeon, REPUBLIC OF KOREA 305-755  
 hereafter referred to as assignor, have with others invented certain new and useful improvements in  
LITHIUM SECONDARY BATTERY IMPROVED SAFETY AND CAPACITY  
☒ for which an application for a United States Letters Patent was filed on 9/30/08  
 Application Number 12/225,982  
☐ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_  
☒ for which an International Application was filed on March 28, 2007, as  
PCT/KR2007/001510, designating the United States.

And

Whereas, LG CHEM, LTD.  
 a corporation of Korea, Republic of herein referred to as "assignee" 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;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00), 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.

2008 11.27  
Date

[Signature]  
Witness

Young Tae KIM  
Typed Name of Witness

[Signature]  
OhYoung Hyun

<input checked="" type="checkbox"/>	*Total of <u>6</u> forms are submitted.
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FD-251

