

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):

BO-RYEONG HAN (06/08/2009), MOON-SEOK CHUN (06/15/2009), DO-YEON PARK (06/15/2009), SU-KYUNG KIM (06/18/2009),

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, YEOUIDO-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)

12/516,006

☐ 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 3.3-105**

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

Kelly Y. Hwang - 51,831

Name of Person Signing

July 30, 2009

Date

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

9

CH \$40.00 121095 12516006

former PTO/SB/15 (8-00) Modified LDLK&M

ASSIGNMENT OF UTILITY APPLICATION	Docket Number (Optional) LGCHEM 3.3-105
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Whereas, I, Bo-ryeong Han of
6-305 LG Chem, Sawon Apt., 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
POLYMER PARTICLES HAVING POLYMER BRUSH AND METHOD OF PREPARING THE SAME
☒ for which an application for a United States Letters Patent was filed on May 22, 2009
 Application Number 12/516,006
☐ for which an application for a United States Letters Patent was executed by me on _____
☒ for which an International Application was filed on November 19, 2007 as
PCT/KR2007/005802, 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.

06/08/2009
 Date

Bo-ryeong Han
 Bo-ryeong Han

Min-gyeong AHN
 Witness

Min-gyeong AHN
 Typed Name of Witness

<input checked="" type="checkbox"/>	Total of <u>7</u> forms are submitted.
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LD-5151

1022577 1 DDC



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

ASSIGNMENT OF UTILITY APPLICATION	Docket Number (Optional) LGCHEM 3.3-105
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Whereas, I, Moon-seok Chun of
106-101 Daerim-dure Apt.; Sinseong-dong, Yuseong-gu; Daejeon; REPUBLIC OF KOREA 305-720
hereafter referred to as assignor, have with others invented certain new and useful improvements in
POLYMER PARTICLES HAVING POLYMER BRUSH AND METHOD OF PREPARING THE SAME

☒ for which an application for a United States Letters Patent was filed on May 22, 2009
Application Number 12/516,006

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

☒ for which an International Application was filed on November 19, 2007, as
PCT/KR2007/005802, 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.

6-15, 2007 MOON Seok Chun
Date Moon-seok Chun

Min-gyeong AHN
Witness
Min-gyeong AHN
Typed Name of Witness

☒ *Total of 7 forms are submitted.

LD-515\



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

ASSIGNMENT OF UTILITY APPLICATION	Docket Number (Optional) LGCHEM 3.3-105
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Whereas, I, Do-yeon Park of 413 Sunhwa Cityville, 123-2 Sunhwa-dong, Jung-gu, Daejeon, REPUBLIC OF KOREA 301-824 hereafter referred to as assignor, have with others invented certain new and useful improvements in **POLYMER PARTICLES HAVING POLYMER BRUSH AND METHOD OF PREPARING THE SAME**

☒ for which an application for a United States Letters Patent was filed on May 22, 2009
 Application Number 12/516,006
☐ for which an application for a United States Letters Patent was executed by me on _____
☒ for which an International Application was filed on November 19, 2007, as
PCT/KR2007/005802, designating the United States.

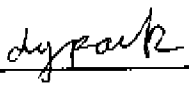
And

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.

June 15, 2009
 Date


 Do-yeon Park

Min-gyeong AHN
 Witness
Min-gyeong AHN
 Typed Name of Witness

☒ *Total of 7 forms are submitted.

LD-515\



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

ASSIGNMENT OF UTILITY APPLICATION	Docket Number (Optional) LGCHEM 3.3-105
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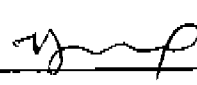
Whereas, I, Su-kyung Kim of
541-7 Namji-ri, Namji-eup, Changnyeong-gun, Gyeongsangnam-do, REPUBLIC OF KOREA 635-903
hereafter referred to as assignor, have with others invented certain new and useful improvements in
POLYMER PARTICLES HAVING POLYMER BRUSH AND METHOD OF PREPARING THE SAME
☒ for which an application for a United States Letters Patent was filed on May 22, 2009
Application Number 12/516,006
☐ for which an application for a United States Letters Patent was executed by me on _____
☒ for which an International Application was filed on November 19, 2007, as
PCT/KR2007/005802, 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.

June 18, 2009
Date
Min-gyeong AHN
Witness
Min-gyeong AHN
Typed Name of Witness



Su-kyung Kim

☒ *Total of 7 forms are submitted.

LD-515



(former PTO/SB/15 (9-00) Modified LDLKM)

ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)

LGCHEM 3.3-105

Whereas, I, Chong-min Koo of
106-1305 Chunggu Narae Apt., Jeonmin-dong, Yuseong-gu, Daejeon; REPUBLIC OF KOREA
305-729

hereafter referred to as assignor, have with others invented certain new and useful improvements in
 POLYMER PARTICLES HAVING POLYMER BRUSH AND METHOD OF PREPARING THE
 SAME

- ☒ for which an application for a United States Letters Patent was filed on May 22, 2009
 Application Number 12/516,006
- ☐ for which an application for a United States Letters Patent was executed by me on _____
- ☒ for which an International Application was filed on November 19, 2007, as
PCT/KR2007/005802, 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.

June 10, 2009
 Date

Chong-min Koo
 Chong-min Koo

Min-gyeong AHN
 Witness

Min-gyeong AHN
 Typed Name of Witness

☒ *Total of 7 forms are submitted.

LD-315

former PTO/SS/15 (8-00) Modified LDLK&M

ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)

LGCHEM 3.3-105

Whereas, I, Bum-jae Lee of
115-806 Nuri Apt., Wolpyeong-dong, Seo-gu, Daejeon, REPUBLIC OF KOREA 302-280

hereafter referred to as assignor, have with others invented certain new and useful improvements in
 POLYMER PARTICLES HAVING POLYMER BRUSH AND METHOD OF PREPARING THE
 SAME

- ☒ for which an application for a United States Letters Patent was filed on May 22, 2009
 Application Number 12/516,006
- ☐ for which an application for a United States Letters Patent was executed by me on _____
- ☒ for which an International Application was filed on November 19, 2007, as
PCT/KR2007/005802, 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.

06/17/2009

Date

BumJae Lee

Bum-jae Lee

Min-gyeong AHN

Witness

Min-gyeong AHN

Typed Name of Witness

☒ Total of 7 forms are submitted.

LD-815

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

ASSIGNMENT OF UTILITY APPLICATION	Docket Number (Optional) LGCHEM 3.3-105
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Whereas, I, Choel-han Gang of 103-1004 Youngjin Royal Apt.; Bup-dong, Daeduk-gu; Daejeon; REPUBLIC OF KOREA 306-060 hereafter referred to as assignor, have with others invented certain new and useful improvements in **POLYMER PARTICLES HAVING POLYMER BRUSH AND METHOD OF PREPARING THE SAME**

☒ for which an application for a United States Letters Patent was filed on May 22, 2009
Application Number 12/516,006

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

☒ for which an International Application was filed on November 19, 2007, as **PCT/KR2007/005802**, 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.

06/17/2009
 Date


 Choel-han Gang

Min-gyeong AHN
 Witness

Min-gyeong AHN
 Typed Name of Witness

<input checked="" type="checkbox"/>	*Total of	7	forms are submitted
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1.12-5135