Form PTO-1595 (Res. 180-04) OMB No. 060 (-0027 (exp. 6/30/2005)	U.S. DEPARTMENT OF COMMERCE United States Patent and Triggmark Office
RECORDATION FOR	
PATENTS	ONLY
To the Director of the U.S. Patent and Trademark Office: Please	receid the attached documents or the new address(bs) below.
Name of conveying party(les)/Execution Date(s):	2. Name and address of receiving party(ies)
CHAE HO CHUNG (02/16/2009), DAL MOH	
KANG (02/16/2009), YE HOON IM (02/16/2009), AND JONGMOON YOON	
(02/16/2009); AND JOINGINGOON TOOM (02/16/2009)	Name: LG CHEM, UTD.
(tv. 2)	Internal Address:
Execution Date(s): in parentheses after inventor name	Street Address:
Additional name(s) of conveying party(ies) attached? Yes X No	LG TWIN TOWERS
3. Nature of Conveyance:	20, YEOUIDO-DONG
X Assignment Merger	YEONGDEUNGPO-GU
Security Agreement Change of Name	Gry: SEOUL
Government Interest Assignment	State:
Executive Order 2424, Confirmatory Liconse	Gountry: Republic of Korea Zip: 150-721
Other	Additional name(s) & address(os) Yes X No
Otto:	atrached:
A Patent Application No (s) 12/321,486	U. Patent No.(s)
Additional numbers affached?	Yes x No
Name and address to whom correspondence concerning document should be mailed:	6. Fotal number of applications and patents involved:
Name: Kelly Y, Hwang LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP	7. Fotal fee (37 CFR 1.21(h) & 3.41) \$ 40.00
Internal Address: Alty. Dkt.: LGCHEM 3.0-062	Authorized to be charged by credit card
Street Address: 800 South Avenue West	X Authorized to be charged to deposit account Enclosed None required (government interest out affecting title)
City: Westfield	8. Payment Information
State: NJ Zip: 07090	a. Gredit Card Last 4 Numbers
Phono Number (908) 518-6320	Expiration Date 12-1095
Fax Number (908) 654-0415 Email Address: khwang@ldlkm.com	Deposit Account Number 12-1095 Authorized User Name Kelly Y. Hwang
The second secon	A AND SERVICE AND
9. Signature:	April 2, 2009 Date
Kelly Y, Hwang - 51,831	Total number of poises excluding cover 5
Name of Person Signing	sheet, attachments, and documents:

 $(x,y) \leftarrow (x,y) (y) (y)^{1/2}$

PATENT REEL: 022488 FRAME: 0102 2009-03-06 14:42 FROM:COMET PATENT OFFICE 025558598

ASSIGN		former PTO/SR/15 (6-00) Modified (√
	NMENT OF UTILITY APPLICATION	Docket Number (Optional)
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X for v	which an application for a United States Letters Pate	ent was filed on January 21, 2009
	lication Number <u>12/321,488</u>	
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for v	which an international Application was filed on	. 88
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	of Kares. Republic of herein referred to as "assign	The second secon
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REEL: 022488 FRAME: 0103

LD-5150

	former PTCVSR/16 (6-00) Mindfield LOLMAN
ASSIGNMENT OF UTILITY APPLICATION	Docket Number (Oplionel)
Addition of others Affector long	LGCHEM 3.0-062
Whereas, I, Dal Moh Kang	of
110-902, Chonggy Narae Apt.: Jeonmin-dong, Yuseong	gu: Deeleon; REPUBLIC OF KOREA
305-729	·
hereafter referred to as #23/gnor, have with others invented certs MIDDLE- OR LARGE-SIZED BATTERY PACK CASE DISTRIBUTION UNIFORMITY IN COOLANT FLUX	in new and useful improvements in PRC:VIDING IMPROVED
X for which an application for a United States Letters Pate	of the States Service 21, 2000
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for which an international Application was filed on	
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, designating the United	States.
And	
Whereas, LG Chem. Ltd. a corporation of <u>Kores, Republic of</u> herein referred to as "assign-	
LG Twin Towers; 20, Yeauto-dong, Yeangdeungpo-gu; Sec	## W10## MBRING #DGNM## IS NOT REPUBLIC OF KOREA (150-72)
is desirous of acquiring the entire right, title and interest in the sa	
is acknowledged, and other good and valuable consideration. I assignee my entire right, title and interest for the United State Invention and the aforesaid utility patent applications and all of applications and patents applied for or granted therefor in the trapilitations and patents applied for or granted therefor in the trapilitations and patents applied for or granted therefor in the trapilitation, including without limitation all applications and patents and aforesaid utility application pursuant to any law or treaty, an infingement with the right to sue for and collect the same for its legal representatives, and including the right to claim such prior Tradomarks is hereby authorized and requested to issue all patent assignee herein, as assignee of the entire interest the representatives, here and assignee or the entire interest the representatives, hereby actions, release and other application all original, divisional, continuation, release and other applications assignments thereof to said assignee or its assigns, to communicate the undersigned respecting said improvements, whene legal proceedings in which any of said applications or patents multi rightful oaths, and to do generally everything necessary to allo obtain patent protection for said improvements in all countries, the and local trapers and the patent protection for said improvements in all countries, the and local trapers and the patent protection for said improvements in all countries, the and local trapers and the patent protection for said improvements in all countries, the and local trapers and the patent protection for said improvements in all countries, the and local trapers and the patent protection for said improvements in all countries.	is of America and all other countries in and to said riginal, divisional, continuation, substitute or release United States of America and all other countries, for states for said invention claiming priority or benefit of dincluding all claims for damages by reason of past own use and the use of its auccessors, assigns and rifty or benefit and the Commissioner of Patents and tents on said improvements or resuring therefrom to erain, and the undersigned for me and my legal to without further remuneration, to execute and deliver has for Letters Patent on said improvements and all illuste to said assignee or its representatives all facts over requested, to testify in any interferences or other lay become involved, to again all lawful papers, make dissignee, its successors, assigns and nominees to be expenses incident to said applications to be borned.
And I do hereby authorize my attorneys to insert on this deed the when known,	filing date and application number of said application
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⊜ate	Dal Mon Kang
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Witness	
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x Total of 4 forms are submitted.	

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140-5450

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

	former PT Cutifuts (6-00) ModRes LOLK
ASSIGNMENT OF UTILITY APPLICATION	Docket Number (Optional)
	LGCHEM 3.0-062
	11
Whereas, I. Ye Hoon Im	of
705-15. Geurnseono baekio Yemili Apt.: Gwanpyeono-de KOREA 305-509	ona Yuseono-au Daeieon REPUBLIC OF
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X for which an application for a United States Letters Pater	nt was filed on January 21, 2009
Application Number 12/321,486	
for which an application for a United States Letters Patent	was executed by me on
for which an international Application was filed on	. 85
, designating the United :	
And	
Whoreas, <u>L.G.</u> Chem, Ltd.	
e corporation of Korea. Sepublic of herein referred to as "assigne	e whose meling scores (s
LG Twin Towers; 20, Yeouldo-dong; Yeongdeunggo-gu: Seoi	IN SEPTIBLIC OF KOREA 150 721
is desirous of acquiring the entire right, title and interest in the san	no;
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Witness	
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2009-03-06 14:44 FROM:COME: PATENT OFFICE 029552598

TO:00119086547866

8:10:10

ASSIGNMENT OF UTILITY APPLICATION	former P10/Shos (6:00) Modified up Docket Number (Optional)
ACCIONATION TO THE TAPPEICATION	LGCHEM 3.0-062
Whereas, I,Jongmoon Yoon	
2-4, Yongdu-dong, Jung-gu: Daojeon; REPUBLIC OF KOR	of REA 301-830
hereafter referred to an analgrici, have with others invented certain MIDDLE- OR LARGE-SIZED BATTERY PACK CASE PLOSTRIBUTION UNIFORMITY IN COOLANT FLUX	MAN BOOK HEAT IN THE CONTRACT OF THE CONTRACT
for which an application for a United States Letters Petent Application Number 12/321,486	was filed on Jenuary 21, 2009
for which an application for a United States Letters Patent v	vas executed by me on
for which an International Application was filed on	. 83
, designating the United St	lates,
Mhoreas, LG Chem, ttd.	
corporation of Korna, Republic of herein referred to as "assignee	Whose making address is
LG Twin Towers, 29, Yeouido-dong; Yeongdeungpo-gu; Seout	REPUBLIC OF KOREA 150-721
a desirous of acquiring the entire right, title and interest in the same	1 100 00000 00 000000000000000000000000
and invantion, including without limitation all applications and pate a storeasid utility application pursuant to any law or treaty, and is fringement with the right to ave for and collect the same for its owner representatives, and including the right to claim such professional representatives, and including the right to claim such professionality authorized and requirements is hereby suthorized and requirements in the content of the co	inal, divisional, continuation, substitute or rela- tived States of America and all other countries, rits for said invention claiming provity or benefit actualing all claims for damages by reason of p which and the use of its successors, assigns a or banefit and the Commissioner of Patents a
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