Form PTO-1595 (Rev. 03-11) OMB No. 0651-0027 (exp. 03/31/2012)	U.S. DEPARTMENT OF COMMERCE United States Petent 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.						
Name of conveying party(ies):	2. Name and address of receiving party(les)					
Jin Woong Ha (09/29/2009), Jeeho Kim (09/28/2009), and Yongshik Shin (09/28/2009)	Name: LG Chem, Ltd.					
	Internal Address:					
Additional name(s) of conveying party(les) attached?	Street Address:					
3. Nature of conveyance/Execution Date(s):	LG Twin Towers					
Execution Date(s): in parentheses after inventor name	20, Yeouido-dong					
x Assignment Merger Change of Name	Yeongdeungpo-gu					
Security Agreement Joint Research Agreement	City: Seoul					
Government Interest Assignment	State:					
Executive Order 9424, Confirmatory License	Country: Republic of Korea Zip: 150-721					
Other	Additional name(s) & address(es)					
	attached?					
4. Application or patent number(s): A. Palent Application No.(s) 13/435,629 Additional numbers attached	This document is being filed together with a new application. B. Patent No.(s) Yes X No					
5. Name and address to whom correspondence	6. Total number of applications and					
concerning document should be mailed:	patente involved:					
Name: Kelly Y. Hwang LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00					
Internal Address: Atty. Dkt.: LGCHEM 3.3-082 CON						
Street Address: 600 South Avenue West	X Authorized to be charged to deposit account Enclosed None required (government interest not affecting title)					
City: Westfield	8. Payment Information					
State: NJ Zip: 07090						
Phone Number: 908-654-5000						
Fax Number: 908-654-7866	Deposit Account Number 12-1095 Authorized User Name Kelly Y. Hwang					
Email Address: ataylor@idlkm.com	Additional Cost Mains Velly 1, Flwaring					
9. Signature: Signature	April 9, 2012					
Harvey L. Cohen - 28,365	Total number of pages including cover					
Name of Person Signing	sheet, attachments, and documents:					

1737330

PATENT REEL: 028024 FRAME: 0314

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	former PTO/SB/15 (8-00) Modified LDLKAN
ASSIGNMENT OF UTILITY APPLICATION	Docket Number (Optional) LGCHEM 3.3-082
	COCHEM 3.3-052
Whereas, I. Jin Woong Ha	of
2F 337-16, Jeonmin-dong: Yuseong-gu; Dasieon: REP	UBLIC OF KOREA 305-810
hereafter referred to as assignor, have with others invented certi-	nio new and useful Improvements in
CONTROL METHOD OF BATTERY-SYSTEM FOR II	MPROVING SAFETY
for which an application for a United States Letters Pate Application Number 12/310,875	ant was filed on 3/9/09
for which an application for a United States Letters Peter	I was executed by me on
x for which an International Application was filed on	09/01/2007 , as
PCT/KR2007/004221 , designating the United	States.
Whereas, LG Chem, Ltd.	
a corporation of Korea, Republic of herein referred to as assaign	iee" whose malling address is
LG Twin Towers; 20, Yeouldo-dong; Yeongdeungpo-gu; Se	out; REPUBLIC OF KOREA 150-721
is desirous of acquiring the entire right, title and interest in the sa	lme;
assignee my entire right, title and interest for the United Stati Invention and the aforeastd utility patent application and all of applications and patents applied for or granted therefor in the said invention, including without limitation all applications and patents applied for or granted therefor in the add invention, including without limitation all applications and the aforeast dutility application pursuant to any law or treaty, all infringement with the right to sue for and collect the same for it legal representatives, and including the right to claim such print read assignee herein, as assignee of the entire factors as assignments thereof to said assignee or the entire factors assignments thereof to said assignee or its assigns, to communicate the to the understigned respecting said improvements, when legal proceedings in which any of said applications or patents of injuliation patent protection for said improvements in all countries, and paid by asid assignee.	original, divisional, confinuation, subatitute or relasue United States of America and all other countries, for steems for said invention claiming priority or benefit of a own use and the use of its successors, assigns and prity or benefit and the Commissioner of Patents and stents on said improvements or resulting therefrom to berein; and the undersigned for me and my legal int without further remuneration, to execute and deliver ions for Letters Patent on axid improvements and all include to said assignee or its representatives all facts ever requested, to testify in any interferences or other may become involved, to algo all lawful papers, make lid assignee, its successore, assigns and nominees to the expenses incident to said applications to be borned
And I do hereby authorize my attorneys to insert on this dead the when known.	e ming date and application monder of said application
09/29/2009 Date	
Date	Jin Woong Ha
Witness	
Su - Jin hIM Typed Name of Witness	
*Total of 3 forms are submitted.	

PATENT

REEL: 028024 FRAME: 0315

	former PTO/SBn15 (8-00) ModRed LDL Docket Number (Optional)
ASSIGNMENT OF UTILITY APPLICATION	LGCHEM 3.3-082
Whereas, I. Jeeho Kim	
103-1503, Harwa Gournegreen Apt.; Yengun-deng, Der 300-752	g-qu: Daeleon; REPUBLIC OF KOREA
hereafter referred to as assignor, have with others invented certa <u>CONTROL METHOD OF BATTERY-SYSTEM FOR IN</u>	ŕ
x for which an application for a United States Letters Pate	ni was filed on
Application Number12/310,875	
for which an application for a United States Letters Patent	t was executed by me on
x for which an International Application was filed on	09/01/2007 , as
PCT/KR2007/004221 , designating the United	States
And	
Whereas, LG Chem, Ltd.	
a corporation of <u>Korea. Republic of</u> herein referred to as "easign	ee" whose mailing address is
1 G Tudo Toware: 20 Vanuido dono Vannadourano eur Sac	
	ud; REPUBLIC OF KOREA 150-721 me;
is desirous of acquiring the entire right, little and interest in the sail	me;
Is desirous of acquiring the entire right, title and interest in the sail NOW, THEREFORE, in consideration of the sum of one of secknowledged, and other good and valuable consideration, it assignes my entire right, title and interest for the United State Invention and the aforesaid utility patent application and all or applications and patents applied for or granted therefor in the lisseld invention, including without limitation all applications and patents are patent to any law or treaty, an infringement with the right to sue for and collect the same for its logal representatives, and including the right to claim such prior Trademarks is hereby authorized and requested to issue all patent askignee herein, as assignee of the entire interest the representatives, here and assigns do hereby agrees and covernan all original, divisional, continuation, reissue and other application acadigments thereof to said assignee or its assigns, to communication the undersigned respecting said improvements, whene legal proceedings in which any of said applications or patents mall rightful oaths, and to do generally everything necessary to all obtain patent protection for said improvements in all countries, the and paid by said assignee.	me: Ideal (\$ 1.00), the receipt where as a sastgnor hereby sell, assign and set over to say a sastgnor hereby sell, assign and set over to say of America and all other countries in and to say ignal, divisional, continuation, substitute or reisal finited States of America and all other countries, indicate for said invention attending providing providing all claims for damages by reason of payown use and the use of its successors, assigns a city of benefit and the Commissioner of Patents all ents on said improvements or resulting therefrom retin; and the underetigned for me and my let twithout further remuneration, to execute and delivers for Letters Patent on said improvements and loate to said assignee or its representatives all factor to said assignee or its representatives all factor to said assignee, its successors, assigns and nominees to expenses incident to said applications to be borned.
is desirous of acquiring the entire right, title and interest in the sail NOW, THEREFORE, in consideration of the sum of one of secknowledged, and other good and valuable consideration, I assignee my entire right, title and interest for the United State invention and the aforessid utility patent application and all or applications and patents applied for or granted therefor in the last invention, including without limitation all application and all or applications and patents application pursuant to any law or treaty, an infringement with the right to sue for and collect the same for its orgal representatives, and including the right to claim such prioritademarks is hereby authorized and requested to laste all patients assignee herein, as assignee of the entire interest the appresentatives, have and assignee or the entire interest the assignments thereof to said assignee or its assigns, to community or undersigned respecting seld improvements, whene apply proceedings in which any of said applications or patents may proceedings in which any of said applications or patents in glatiful ouths, and to do generally everything necessary to all highful ouths, and to do generally everything necessary to all wind patent protection for said improvements in all countries, the and to do hereby authorize my attorneys to insert on this deed the when known.	me: ioliars (\$ 1.00), the receipt when as assignor hereby self, assign and set over to set of America and all other countries in and to set iginal, divisional, continuation, substitute or reisa finited States of America and all other countries, idents for said invention claiming priority or bandfild dincluding all claims for damages by reason of prown use and the use of its successors, assigns a city or benefit and the Commissioner of Patents a cents on said improvements or resulting therefrom remain; and the undersigned for me and my let without further remuneration, to execute and delivers for Letters Patent on said improvements and leate to said assignee or its representatives all favor requested, to issuity in any interference or of ay become involved, to sign all lawfur papers, mail assignee, its successors, assigns and nominees to expenses incident to said applications to be bor filling date and application number of said applications.
is desirous of acquiring the entire right, title and interest in the sail NOW, THEREFORE, in consideration of the sum of one of secknowledged, and other good and valuable consideration, it assignee my entire right, title and interest for the United State invention and the aforessid utility patent application and all orapplications and patents applied for or granted therefor in the last invention, including without limitation all application and patents application pursuant to any law or treaty, an infringement with the right to sue for and collect the same for its eggl representatives, and including the right to claim such priorized and requested to lasue all patents assignee herein, as assignee of the entire interest the appresentatives, having and assignee or the entire interest the appresentatives, having and assignee or its assigns, to communication to the undersigned respecting seld improvements, whene eggs proceedings in which any of said applications or patents and patent protection for said improvements in all countries, the and patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries, the patent protection for said improvements in all countries.	ioliars (\$ 1.00), the receipt when as assignor hereby sell, assign and set over to sell of America and all other countries in and to seliginal, divisional, continuation, substitute or reisa finited States of America and all other countries, idents for said invention ctalming priority or barefit of including all claims for damages by reason of prown use and the use of its successors, assigns a city of benefit and the Commissioner of Patents alents on said improvements or resulting therefrom reinin; and the undersigned for me and my tent without further remuneration, to execute and delivers for Letters Patent on said improvements and loate to said assignee or its representatives all facts to said assignee or its representatives all facts to said assignee, its successors, assigns and nominees to expenses incident to said applications to be bored.
is desirous of acquiring the entire right, title and interest in the sail NOW, THEREFORE, in consideration of the sum of one of secknowledged, and other good and valuable consideration, I assignee my entire right, title and interest for the United State invention and the aforessid utility patent application and all or applications and patents applied for or granted therefor in the last invention, including without limitation all application and all or applications and patents application pursuant to any law or treaty, an infringement with the right to sue for and collect the same for its orgal representatives, and including the right to claim such prioritademarks is hereby authorized and requested to laste all patients assignee herein, as assignee of the entire interest the appresentatives, have and assignee or the entire interest the assignments thereof to said assignee or its assigns, to community or undersigned respecting seld improvements, whene apply proceedings in which any of said applications or patents may proceedings in which any of said applications or patents in glatiful ouths, and to do generally everything necessary to all highful ouths, and to do generally everything necessary to all wind patent protection for said improvements in all countries, the and to do hereby authorize my attorneys to insert on this deed the when known.	me; ioliars (\$ 1.00), the receipt where as assignor hereby self, assign and set over to a a of America and all other countries in and to a iginal, divisional, continuation, substitute or reisa Juited States of America and all other countries, itents for said invention claiming priority or benefit d including all claims for damages by reason of p own use and the use of its successors, assigns a rity or benefit and the Commissioner of Patents a ents on said improvements or resulting therefrom erain; and the undersigned for me and my let the without further remuneration, to execute and deli- ns for Letters Patent on said improvements and leate to said assignee or its representatives all fa- ver requested, to issuity in any interferences or ot ay become involved, to sign all lewful papers, ma- it assignee, its successors, assigns, and nominees to expenses incident to said applications to be bot filling date and application number of said applications.
a desirous of acquiring the entire right, title and interest in the sain NOW, THEREFORE, in consideration of the sum of one of secknowledged, and other good and valuable consideration, I assignee my entire right, title and interest for the United State mention and the aforessid utility patent application and all opplications and patents applied for or granted therefor in the laid invention, including without limitation all application and patents application pursuant to any law or treaty, an infringement with the right to sue for and collect the same for its egal representatives, and including the right to claim such priorizationaries is hereby authorized and requested to lasue all paties and assignee herin, as assignee of the entire interest the appresentatives, having and assignee or its assigna, to communication, divisional, continuation, reissue and other applicational divisional, continuation, reissue and other applicational proceedings in which any of said applications or patents and proceedings in which any of said applications or patents and patent protection for said improvements in all countries, the rightful ouths, and to do generally everything necessary to all highful ouths, and to do generally everything necessary to all rightful ouths, and to do generally everything necessary to all rightful ouths, and to do generally everything necessary to all high patent protection for said improvements in all countries, the rightful ouths are applications or patents and paid by said assignee. **Date** **Dat	ioliars (\$ 1.00), the receipt when as assignor hereby sell, assign and set over to sell of America and all other countries in and to seliginal, divisional, continuation, substitute or reisa finited States of America and all other countries, intents for said invention ctalming priority or benefit of including all claims for damages by reason of prown use and the use of its successors, assigns a city or benefit and the Commissioner of Patents are ents on said improvements or resulting therefrom ents on said improvements and the undersigned for me and my tent without further remuneration, to execute and delives for Letters Patent on said improvements and cate to asid assignee or its representatives all favor requested, to lestify in any interference or othey become involved, to sign all lawful papers, mail assignee, its successors, assigns and nominees are expenses incident to said applications to be bor filling date and application number of said application.
is desirous of acquiring the entire right, title and interest in the asing the serious of acquiring the entire right, title and interest in the asing the serious of the sum of the serious of the serious of the consideration, I assigned my entire right, title and interest for the United State invention and the aforessid utility patent application and all or applications and patents applied for or granted therefor in the Lasid Invention, including without limitation all applications and patents application pursuant to any law or treaty, an infringement with the right to see for and collect the asme for its orgal representatives, and including the right to claim such prioritademarks is hereby authorized and requested to Issue all patients assigned herein, as assigned of the entire interest the appresentatives, hairs and assigned of the entire interest the appresentatives, hairs and assigned to hereby agrees and covernantal original, divisional, continuation, reissue and other applicational or patents in the undersigned respecting seld improvements, whene apply proceedings in which any of said applications or patents will rightful ouths, and to do generally everything necessary to all hightful ouths, and to do generally everything necessary to all wind patent protection for said improvements in all countries, the and to do hereby authorize my attorneys to insert on this deed the	ioliars (\$ 1.00), the receipt when as assignor hereby self, assign and set over to a signal, divisional, continuation, substitute or reiss ignal, divisional, continuation, substitute or reiss ignal of the state of said invention claiming priority or benefit of directions or resulting therefrom ents or and improvements or resulting therefrom erein; and the undersigned for me and my let without further remuneration, to execute and delificate to asid assignee or its representatives all favor requested, to lastify in any interferences or other expenses, its successors, assigns and nominees as expenses incident to said applications to be botted.

LDLKM

x *Total of 3 forms are submitted.

REEL: 028024 FRAME: 0316

	former PTO/SB/(6 (6-00) Modified LOLKAN				
ASSIGNMENT OF UTILITY APPLICATION	Docket Number (Optional)				
ASSIGNMENT OF UTILITY AFFLICATION	LGCHEM 9.3-082				
and the second s					
	_				
Whereas, I, Yongshik Shin	of				
3-306, LG Chem Sawon Apt., 386-1; Doryong-dong, Yu- KOREA 305-340	seono-qu: Daeleon: REPUBLIC OF				
hereafter referred to as assignor, have with others invented cerb	,				
CONTROL METHOD OF BATTERY-SYSTEM FOR II	2/0/00				
for which an application for a United States Letters Pate Application Number 12/310,875	ent was filed on ,				
for which an application for a United States Letters Pater	nt was executed by me on				
x for which an international Application was filed on	09/01/2007, 89				
PCT/KRz007/004221 , designating the United	States,				
And					
Whereas, LG Chem, Ltd.					
a corporation of Korea, Republic of herein referred to as 'assign	ee" whose mailing address is				
LG Twin Towers; 20, Yeouldo-dong; Yeongdeungpo-gu; Se					
Is desirous of acquiring the entire right, title and interest in the sa	une;				
NOW, THEREFORE, in consideration of the sum of <u>one</u> dollars (\$ 1.00), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to add 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 Potents 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 undereigned for me and my legal representatives, heirs and assignee of the entire interest therein; and the undereigned for me and my legal representatives, heirs and 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 caths, 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 when known.	a filing date and application number of said application				
	¥ 1 1 1				
09.28.200	Shin Jany L. Kongohik Shin				
09. 21. 2 v-Q	Kongshik Shin				
Witness — Ji'n KIM Typed Name of Witness	V -				
x Total of 3 forms are submitted.					

PATENT

REEL: 028024 FRAME: 0317

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