Form PTO-1595 (Rev. 03-11) OMB No. 0651-0027 (exp. 03/31/2015)		U.S. DEPARTMENT OF COMMERC! United <u>States Patent and Trademark Offic</u>
RECORD		M COVER SHEET
l P	ATENTS	ONLY
To the Director of the U.S. Patent and Trademan	Office: Please	record the attached documents or the new address(es) below.
Name of conveying party(les):		2. Name and address of receiving party(les)
Hong Kyu Park (11/17/2010), Sun sik S (11/17/2010), Sin young Park (11/17/20		Name: LG Chem, Ltd.
suk Shin (11/17/2010), and	10), 110	Internal Address:
Additional numbe(s) of conveying perty(les) attached?	Yes No	Street Address:
3. Nature of conveyance/Execution Date(s):		LG Twin Towers
Execution Date(s): In parentheses after invento	r name	20, Yeouido-dong
x Assignment Merger Change		Yeongdeungpo-gu
Security Agreement Joint Research A		City: Seoul
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Government Interest Assignment		State:
Executive Order 9424, Confirmatory License		Country: Republic of Korea Zip: 150-721  Additional name(s) & address(es) Yes X No
Other		Additional name(s) & address(es) Yes X No attached?
4. Application or patent number(s):	ГПт	This document is being filed together with a new application.
A. Patent Application No.(s)	اسسا	B. Patent No.(s)
13/973,269		
,		
Additional nu	nbers attached?	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, LITTEN	REPG	
KRUMHOLZ & MENTLIN		7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00
Internal Address: Atty. Dkt.:		
Street Address: 600 South Avenue West		X Authorized to be charged to deposit account
		Enclosed
		None required (government interest not affecting title)
		Motio radiated (Bosentilliant linetest not anactual time
City: Westfield		8. Payment information
State: NJ Zip:	07090	
Phone Number: 908-654-5000 Fax Number: 908-654-7866		Deposit Account Number 12-1095
Fax Number: 908-654-7866 Email Address: mcormier@ldlkm	com	Deposit Account Number 12-1095 Authorized User Name Kelly Y. Hwang
9. Signature:		
	15	Contambas 44, 2012
Signatur		September 11, 2013  Date
Kelly Y. Hwang - 5		Total number of pages including cover 7
	L_	sheet, attachments, and documents:

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RECORDAT	ON FORM COVER SHEET (PTO-1595) (supplemental sheet)	A
Additional Conveying Party(ies)/E	xecution Date(s) (1. Continued):	
Jens M. Paulsen (10/18/2010)		
Additional Assignees (2. Continue	d):	
Assignee Name: Internal Address: Street Address:		
City: State:	Country:	Zip:
Assignee Name: Internal Address: Street Address:		-
City: State:	Country:	
Assignee Name: Internal Address: Street Address:		-
City: State:	Country:	Zlp:
Additional Applications and/or Pa	tents (4. Continued):	
Additional Patent Application Numbers 4A. Continued:	Additional Patent Numbers 4B. Continued:	
,		
Additional nu	nbers attached? Yes No	• • •

Docket No.: LGCHEM 3.0-017 CIP II CON CON

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		Docket Number (Optional)			
ASSIGNMENT OF UTILITY AF	PLICATION	, , , , , , , , , , , , , , , , ,			
Accional to the state of the st		LGCHEM 3.0-017 CIP II			
1					
Whereas, I, Hong-Kyu Park		. of			
301-1306, Songrimmaeul 3-danji Apt	; Noeun, dong, Yu	seong-gu; Daejeon; REPUBLIC OF			
KOREA 305-325					
hereafter referred to as assignor, have with METHOD OF PREPARING MATER PERFORMANCE	others invented certain new and useful improvements in IAL FOR LITHIUM SECONDARY BATTERY OF HIGH				
x for which an application for a Unite	d States Letters Pate	ent was filed on Uuly 31, 2007			
Application Number 11/831,52					
	States Letters Pater	nt was executed by me on ,			
for which an International Applic	ation was filed on	, as			
, des	gnating the United	States.			
And	,				
Whereas, LG Chem. Ltd.					
a corporation of Korea, Republic of herein	referred to as "assigr	nee" whose mailing address is			
LG Twin Towers; 20, Yeouldo-dong; Ye	ongdeungpo-gu; Se	oul; REPUBLIC OF KOREA 150-721			
is desirous of acquiring the entire right, title	and interest in the sa	ame;			
assigned my entire right, title and interest invention and the aforesaid utility patent applications and patents applied for or grasaid invention, including without limitation at the aforesaid utility application pursuant to infringement with the right to sue for and or legal representatives, and including the right trademarks is hereby authorized and requisaid assignee herein, as assignee of the representatives, heirs and assignee of the representatives, heirs and assignee or its known to the undersigned respecting said in legal proceedings in which any of said applied in the patent protection for said improvement and paid by said assignee.	able consideration, for the United Stat application and all of the Inted Inted Inted Inted Interest in the Interest in the claim such priested to issue all parties and other applications or palents mand necessary to aim in all countries,	dollars (\$ 1.00 ), the receipt whereof as assignor hereby sell, assign and set over to said es of America and all other countries in and to said original, divisional, continuation, substitute or reissue United States of America and all other countries, for eatents for said invention claiming priority or benefit of administration and the use of its successors, assigns and ority or benefit and the Commissioner of Patents and attents on said improvements or resulting therefrom to herein; and the undersigned for me and my legal not without further remuneration, to execute and deliverions for Letters Patent on said improvements and all nicate to said assignee or its representatives all facts ever requested, to testify in any interferences or other ay become involved, to sign all lawful papers, make all diassignee, its successors, assigns and nominees to the expenses incident to said applications to be borne.			
And I do hereby authorize my attorneys to i when known.	sert on this deed th	e filing date and application number of said application			
2010/11/1 <b>n</b>		Myratt			
Date	Hong-Kyu Park				
x Total of 5 forms are subm	itted.				
LD-515\					

LGCHEM \$,0-017 CIP II (all inventors) ASSIGNMENT OF UTILITY APPLICATION DOC

		former PTO/SS/15 (8-00) Modified LDLK			
		Docket Number (Optional)			
ASSIGNMENT OF UTILITY A	PPLICATION	LGCHEM 3.0-017 CIP II			
Whereas, I. Sun sik Shin	,	of			
602-504, Songrimmaeul 6-danji Apt	Hagi-dong, Yuseoi	ng-qu; Daejeon; REPUBLIC OF KOREA			
<u>305-358</u>	_at ?				
hereafter referred to as assignor, have with METHOD OF PREPARING MATE PERFORMANCE	RIAL FOR LITHIUN	A SECONDARY BATTERY OF HIGH			
X for which an application for a Unit	d States Letters Pate	ent was filed onJuly 31, 2007			
Application Number11/831,5	2				
for which an application for a Unite	d States Letters Pater	it was executed by me on			
for which an International Appli	ation was filed on	, as			
, de:	ignating the United	States.			
And					
Whereas, LG Chem, Ltd.					
a corporation of Korea, Republic of herein					
LG Twin Towers; 20, Yeouido-dong; Y					
Is desirous of acquiring the entire right, title	and interest in the sa	me;			
assignee my entire right, title and interes invention and the aforesaid utility patent applications and patents applied for or grasaid invention, including without limitation the aforesaid utility application pursuant to infringement with the right to sue for and of legal representatives, and including the right to sue for and of legal representatives, and including the right assignee hereby authorized and requisid assignee hereby authorized and requisid assignee hereln, as assigns of hereful original, divisional, continuation, reissur assignments thereof to said assignee or it known to the undersigned respecting said legal proceedings in which any of said applicitly deths, and to do generally everythobtain patent protection for said improvement paid by said assignee.	able consideration, I for the United State application and all onted therefor in the all applications and plany law or treaty, arollect the same for its ht to claim such pricested to issue all pane entire interest they agree and covenare and other applications assigns, to communications or patents maing necessary to aid ents in all countries, the applications or patents mains and countries, the all countries, the applications or patents and and countries, the applications or patents and countries, the applications are patents and countries, the applications are patents and countries, the applications are patents and all countries, the applications are particularly applications are patents and all countries.	dollars (\$ 1.00 ), the receipt whereof as assignor hereby sell, assign and set over to said as assignor hereby sell, assign and set over to said as of America and all other countries in and to said riginal, divisional, continuation, substitute or reissue United States of America and all other countries, for atents for said invention claiming priority or benefit of ad including all claims for damages by reason of past is own use and the use of its successors, assigns and tents on said improvements or resulting therefrom to tents on said improvements or resulting therefrom to tents, and the undersigned for me and my legal at without further remuneration, to execute and deliver ons for Letters Patent on said improvements and all nicate to said assignee or its representatives all facts aver requested, to testify in any interferences or other assignee, its successors, assigns and nominees to the expenses incident to said applications to be borned.			
And I do hereby authorize my attorneys to i when knipwn.	hsert on this deed the	filing date and application number of said application			
1/a./7th 2010		12 ~ /			
Date	Date Sun sik Shin				
Total of 5 forms are subm	tted.				
LD-515\					

LDLKM

**PATENT** 

**REEL: 031265 FRAME: 0035** 

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r		Tooket Number (Optional)			
ASSIGNMENT OF UTILITY A	PPLICATION	LGCHEM 3.0-017 CIP II			
Whereas, I, Sin young Park	ng, Yuşeong-qu; Da	of ejeon; REPUBLIC OF KOREA 305-728			
hereafter referred to as assignor, have with	others invented certa				
for which an application for a Unit Application Number 11/831,5	22				
for which an application for a Unite		•			
,	ignating the United				
Whereas, LG Chern, Ltd.	referred to be "seein-	on" where mailing address is			
	ein referred to as "assignee" whose mailing address is : Yeongdeungpo-gu; Seoul; REPUBLIC OF KOREA 150-721				
assigned my entire right, title and interes invention and the aforesaid utility patent applications and patents applied for or grassid invention, including without limitation the aforesaid utility application pursuant to infringement with the right to sue for and olegal representatives, and including the right to sue for and olegal representatives, and including the right assignee herein, as assignee of the representatives, heirs and assignee of the representatives, heirs and assignee or it known to the undersigned respecting said legal probeedings in which any of said application patent protection for said improvement and paid by said assignee.	able consideration, I for the United State application and all onted therefor in the all applications and plant and all or any law or treaty, arollect the same for its ht to claim such pricested to Issue all pane entire interest they agree and covenaries and other applications assigns, to communications or patents maining necessary to aid ints in all countries, the	dollars (\$ 1.00 ), the receipt whereof as assignor hereby sell, assign and set over to said as assignor hereby sell, assign and set over to said as of America and all other countries in and to said riginal, divisional, continuation, substitute or reissue United States of America and all other countries, for atents for said invention claiming priority or benefit of dincluding all claims for damages by reason of past own use and the use of its successors, assigns and rity or benefit and the Commissioner of Patents and tents on said improvements or resulting therefrom to terein; and the undersigned for me and my legal at without further remuneration, to execute and deliver ons for Letters Patent on said improvements and all facts over requested, to testify In any interferences or other by become involved, to sign all lawful papers, make all assignee, its successors, assigns and nominees to the expenses incident to said applications to be borne.			
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2010.11.17	h. Millianni de constante	12000			
Date	······································	Sin young Park			
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ID-SIGN					

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ASSIGNMENT OF UTILITY A	PPLICATION	Dockel Number (Optional)		
ASSIGNMENT OF CHEFT A	FLIOATION	LGCHEM 3.0-017 CIP II		
	•			
Whereas, I, Ho suk Shin		of		
3-3 15, LG Chem Sawon Apt.; Doryo	ng-dong, Yuseong-d	ju; Daeleon; REPUBLIC OF KOREA 305-		
<u>340</u>				
hereafter referred to as assignor, have with METHOD OF PREPARING MATE PERFORMANCE	others invented certs RIAL FOR LITHIUM	in new and useful improvements in I SECONDARY BATTERY OF HIGH		
x for which an application for a Unite	d States Letters Pale	nt was filed onJuly 31, 2007		
Application Number 11/831,53	2			
for which an application for a Unite	i Siales Letters Paten	t was executed by me on,		
for which an International Applic	ation was filed on	, as		
, des	ignating the United	States.		
And ,				
Whereas, LG Chem, Ltd.				
a corporation of Korea, Republic of herein	· ·	•		
LG Twin Towers; 20, Yeouido-dong; Ye				
is desirous of acquiring the entire right, title	and interest in the sa	me;		
assigned my entire right, title and interest invention and the aforesaid utility petent applications and patents applied for or grasaid invention, including without limitation at the aforesaid utility application pursuant to infringement with the right to sue for and collegal representatives, and including the right trademarks is hereby authorized and requisaid assignee herein, as assigned of the representatives, heirs and assigned to hereball original, divisional, continuation, reissue assignments thereof to said assignee or its known to the undersigned respecting said it legal probeedings in which any of said appliting daths, and to do generally everyth obtain patent protection for said improveme and paid by said assignee.	able consideration, I for the United State application and all or need therefor in the I applications and particularly any law or treaty, any law or treaty, any law or treaty, any law or treaty any law or treaty all particularly agree and covenant and other application assigns, to community or patents mang necessary to aid into in all countries, the	dollars (\$ 1.00 ), the receipt whereof as assignor hereby sell, assign and set over to said as assignor hereby sell, assign and set over to said as of America and all other countries in and to said riginal, divisional, continuation, substitute or reissue United States of America and all other countries, for attents for said invention claiming priority or benefit of dincluding all claims for damages by reason of past own use and the use of its successors, assigns and rity or benefit and the Commissioner of Patents and tents on said improvements or resulting therefrom to exercin; and the undersigned for me and my legal attents on the undersigned for me and my legal attents of the tenth o		
And I do hereby authorize my attorneys to it when known.	isen on this deed the	filing date and application number of said application		
Novamber 17, 2010		and or		
Date	Ho suk Shiri			
x *Total of 5 forms are subm	tted.	· · · · · · · · · · · · · · · · · · ·		
.D-51 <b>5</b> \	· · · · · · · · · · · · · · · · · · ·			

		former PTO/\$9/15 (8-00) Modified LDLN&		
		Docket Number (Optional)		
ASSIGNMENT OF UTILITY A	PPLICATION	LGCHEM 3.0-017 CIP II		
Whereas, I, Jens M. Paulsen		of		
	<u>Cheonan-Shi, Chun</u>	gcheongлаm-do; REPUBLIC OF KOREA		
PERFORMANCE	RIAL FOR LITHIUN	A SECONDARY BATTERY OF HIGH		
for which an application for a United Application Number 11/831,52		ent was filed on July 31, 2007		
for which an application for a United	······································	t was executed by me on		
for which an International Applic				
	ignating the United	States.		
And				
Whereas, LG Chem, Ltd.				
a corporation of <u>Korea, Republic of</u> herein LG Twin Towers; 20, Yeouido-dong; Ye				
is desirous of acquiring the entire right, title		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		
ta destropa of adjusting the artale right, and	and mioroot in the ad	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
assigned my entire right, title and interest invention and the aforesaid utility patent applications and patents applied for or grasaid invention, including without limitation at the aforesaid utility application pursuant to infringement with the right to sue for and collegal representatives, and including the right trademarks is hereby authorized and requisaid assignee herein, as assignee of the representatives, heirs and assigns do hereball original, divisional, continuation, reissue assignments thereof to said assignee or its known to the undersigned respecting said it legal proceedings in which any of said applierightful oaths, and to do generally everythic obtain patent protection for said improvement and paid by said assignee.	able consideration, I for the United State application and all onted therefor in the II applications and planty law or treaty, and lect the same for its or to claim such prioested to issue all pale entire interest they agree and covenariand other applications or community of the community of the community of the countries, the countries of the countries, II is in all countries, II for the countries and the countries, II for the countries and the countries, II for the countries and the countries are considered and the countries are considered and the countries and the countries are considered and the countries are considered and the countries and the countries are considered and the countries ar	dollars (\$ 1.00 ), the receipt whereof as assignor hereby sell, assign and set over to said as of America and all other countries in and to said riginal, divisional, continuation, substitute or reissue United States of America and all other countries, for atents for said invention claiming priority or benefit of dincluding all claims for damages by reason of past own use and the use of its successors, assigns and rity or benefit and the Commissioner of Patents and lents on said improvements or resulting therefrom to erein; and the undersigned for me and my legal at without further remuneration, to execute and deliver this for Letters Patent on said improvements and all sicate to said assignee or its representatives all facts ever requested, to testify in any interferences or other by become involved, to sign all lawful papers, make all assignee, its successors, assigns and nominees to be expenses incident to said applications to be borne		
And I do hereby authorize my attorneys to in when known.	sert on this deed the	filing date and application number of said application		
OCt. 18, 2010	31 100	10.0		
Date	10	Jens M. Paulsen		
x Total of 5 forms are submi	iled.			
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