PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KYUNG YEON KANG	01/08/2014
JIN DO KIM	03/07/2014
SUNG JIN KIM	01/08/2014
JAE KEUN YOON	01/08/2014

RECEIVING PARTY DATA

Name:	LG CHEM, LTD.
Street Address:	20 YOIDO-DONG, YOUNGDUNGPO-GU
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	150-721

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14357141

CORRESPONDENCE DATA

Fax Number: (202)496-7756

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via

US Mail.

Phone: 2024967500

Email: mlaip@mckennalong.com

Correspondent Name: MCKENNA LONG & ALDRIDGE LLP

Address Line 1: 1900 K STREET NW Address Line 2: IP DEPARTMENT

Address Line 4: WASHINGTON, DISTRICT OF COLUMBIA 20006

ATTORNEY DOCKET NUMBER:	29137.01500.US00
NAME OF SUBMITTER:	MARK R. KRESLOFF
SIGNATURE:	/Mark R. Kresloff#42,766/
DATE SIGNED:	05/12/2014

Total Attachments: 4

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> PATENT REEL: 032867 FRAME: 0038

Assignment of Application

WHEREAS,	I (WE)	KANG, Ky YOON, Jae	ung Yeon; KIM Keun	, Jin Do; KIM, S	Sung Jin;
		-		,	, respectively,
have invented certa	ain new a	and useful imp	provements in:	1	<u> </u>
	PORTE	ED CATALY	SACTURING H ST FOR CARB It was executed o	ON NANOTUI	
(Application No.	14/357,1	41	, Filed	May 8, 201), and
WHEREAS,	LG CH	EM, LTD.			
(hereinafter referre 20 Yoido-dong Yo			~ 1		

is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries;

NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I (WE), by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries and the entire right, title and interest in and to any and all Letters patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof.

I (WE) hereby authorize and request the Patent Office Officials in the United States and Its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my (our) entire right, title and interest in and to the same, for the sole use and behalf of said ASSIGNEE, its (his) successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me (us) had this Assignment and sale not been made.

Further, I (WE) agree that I (WE) will communicate to said ASSIGNEE or its (his) representatives any facts known to me (us) respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.

Docket No.:

The undersigned hereby grant(s) the firm of McKenna Long & Aldridge LLP, Attorneys at Law, 1900 K Street, N.W., Washington, D.C. 20006 the power to insert on this assignment any further identification, including the application number and filing date, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Date; 204 to 8	Mon	
	(Signature of Inventor)	
	KANG, Kyung Yeon	
	8	
Date:		
	(Signature of Inventor)	
	KIM, Jin Do	
Date: 2014 1 8	(Signature of Inventor) KIM, Sung Jin	
Date: 2014 . 1. 8	Eoupe (S)	
	(Signature of Inventor)	
	YOON, Jae Keun	

McKenna Long & Aldridge LLP

Attorneys At Law 1900 K Street, N.W. Washington, D.C. 20006

Assignment of Application

WHEREAS, I (WE)	AS, I (WE) KANG, Kyung Yeon; KIM, Jin Do; KIM, Sung Jin; YOON, Jae Keun			Jin;
			, res	spectively,
have invented certain new	and useful im	provements in:	ingan digu aga <u>magada</u> garanga di Africana da Africa	
SUPPOR	ΓED CATAL	UFACTURING HO		S
for which an application for	r Letters Pate	ent was executed on		
(Application No. 14/357	,141	, Filed	May 8, 2014), and
WHEREAS, LG CI	IEM LTD.			

(Application No.	14/357,141	, Filed	May 8, 2014), and
WHEREAS,	LG CHEM, LTD.		**************************************	
	ed to as "ASSIGNEE"			
20 Yoldo-dong Y	oungdungpo-gu, Seo	ul 150-721 Republi	c of Korea	

is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries;

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Date:	
	(Signature of Inventor) KANG, Kyung Yeon
0mc: <u>3/7/2014</u>	Signature of inventors KIM, Jin Do
Date:	
	(Signature of inventor) KIM, Sung Jin
Outr	
	(Signature of Inventor)
	YOON, Jae Keun

McKenna Long & Aldridge LLP

Attorneys At Law 1900 K Street, N.W. Washington, D.C. 20006