505497872 05/29/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5544676

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JAE-UK RYU	12/11/2018
DAL-MO KANG	12/11/2018
SU-CHANG KIM	10/05/2018
JEONG-O MUN	12/11/2018
JI-SU YOON	12/11/2018

RECEIVING PARTY DATA

Name:	LG CHEM, LTD.
Street Address:	128, YEOUI-DAERO, YEONGDEUNGPO-GU
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	07336

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16464781

CORRESPONDENCE DATA

Fax Number: (202)739-3001

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2027393000

Email: patents@morganlewis.com, kathy.casavecchia@morganlewis.com

COLLIN W. PARK **Correspondent Name:**

MORGAN, LEWIS & BOCKIUS LLP Address Line 1: 1111 PENNSYLVANIA AVENUE NW Address Line 2:

Address Line 4: WASHINGTON, D.C. 20004

ATTORNEY DOCKET NUMBER:	121594-5053
NAME OF SUBMITTER:	ROBERT J. GOODELL
SIGNATURE:	/Robert J. Goodell/
DATE SIGNED:	05/29/2019

Total Attachments: 4

PATENT REEL: 049305 FRAME: 0722

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> PATENT REEL: 049305 FRAME: 0723

COMBINED DECLARATION & ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION	
Title	BATTERY MODULE WITH IMPROVED SAFETY
DECLARATIO	N.
As a below r	amed inventor, I hereby declare that:
This declara	tion is directed to:
	The attached application, or
∑ 201	U.S. application or PCT international application number <u>PCT/KR2018/000139</u> filed on <u>January 3.</u> 8.
The above-io	lentified application was made or authorized to be made by me.
I believe tha	t I am the original inventor or an original joint inventor of a claimed invention in the application.
	nowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by sonment of not more than five (5) years, or both.
unless that p	ntor: 37 C.F.R. § 1.63(c) states: A person may not execute an oath or declaration for an application erson has reviewed and understands the contents of the application, including the claims, and is duty to disclose to the Office all information known to the person to be material to patentability as 1.56.
ASSIGNMEN	Ţ
WHEREAS, I	have made an invention described and/or claimed in the above-identified application; and
Yeongdeung securing the	G CHEM, LTD., a corporation of the Republic of Korea whose post office address is 128, Yeoul-daero, po-gu, Seoul-si, 07336, Republic of Korea (hereinafter referred to as the "Assignee"), is desirous of entire right, title, and interest in and to this invention in all countries throughout the world, and in and ation of United States Letters Patent on this invention and the Letters Patent to be issued upon this
hereby ackn over unto th invention an which may b applications	FORE, be it known that, for good and valuable consideration the receipt of which from the Assignee is owledged, I have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set e Assignee, and its lawful successors and assigns, my entire right, title, and interest in and to this d this application, and all divisions, and continuations thereof, and all Letters Patent of the United States e granted thereon, and all reissues thereof, and all rights to claim priority on the basis of such and all applications for Letters Patent which may hereafter be filed for this invention in any foreign all Letters Patent which may be granted on this invention in any foreign country, and all extensions,

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renewals, and reissues thereof; and I hereby authorize and request the Director of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent of this invention to the Assignee, and its successors and assigns, in accordance with

the terms of this Assignment;

COMBINED DECLARATION & ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION

AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will, without further consideration, communicate with the Assignee, and its successors and assigns, any facts known to me respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, and its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid the Assignee, and its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, and its successors and assigns.

IN TESTIMONY WHEREOF, I have hereunto set my hands.	
First Inventor (Full Legal Name): RYU, Jae-Uk Signature:	Date: 2018. 12. 11
Second Inventor (Full Legal Name): KANG, Dal-Mo Signature:	Date: 2018.12.11
Third inventor (Full Legal Name): KIM, Su-Chang Signature:	Date:
Fourth Inventor (Full Legal Name): MUN, Jeong-O Signature:	Date: 2018.12.11
Fifth Inventor (Full Legal Name): YOON, Ji-Su Signature:	Date: 2018, 12.11
Sixth Inventor (Full Legal Name): Signature:	Date:
Seventh Inventor (Full Legal Name): Signature:	Date:

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COMBINED DECLARATION & ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION	
Title	BATTERY MODULE WITH IMPROVED SAFETY
DECLARATI	ON
As a below	named inventor, I hereby declare that:
This declara	ition is directed to:
	The attached application, or
	U.S. application or PCT international application number <u>PCT/KR2018/000139</u> filed on <u>January 3.</u>
The above-	dentified application was made or authorized to be made by me.
I believe tha	at I am the original inventor or an original joint inventor of a claimed invention in the application.
	cnowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by isonment of not more than five (5) years, or both.
unless that	entor: 37 C.F.R. § 1.63(c) states: A person may not execute an oath or declaration for an application person has reviewed and understands the contents of the application, including the cloims, and is a duty to disclose to the Office all information known to the person to be material to patentability as 1.56.
ASSIGNME	VT
WHEREAS,	have made an invention described and/or claimed in the above-identified application; and
WHEREAS, LG CHEM, LTD., a corporation of the Republic of Korea whose post office address is 128, Yeoul-daero, Yeongdeungpo-gu, Seoul-si, 07336, Republic of Korea (hereinafter referred to as the "Assignee"), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application of United States Letters Patent on this invention and the Letters Patent to be issued upon this application;	
NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from the Assignee is hereby acknowledged, I have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, and its lawful successors and assigns, my entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority on the basis of such applications, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions,	

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renewals, and reissues thereof; and I hereby authorize and request the Director of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent of this invention to the Assignee, and its successors and assigns, in accordance with

the terms of this Assignment;

COMBINED DECLARATION & ASSIGNMENT FOR UTILITY OR DESIGN APPLICATION

AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will, without further consideration, communicate with the Assignee, and its successors and assigns, any facts known to me respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, and its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid the Assignee, and its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, and its successors and assigns.

IN TESTIMONY WHEREOF, I have hereunto set my hands.	
First Inventor (Full Legal Name): RYU, Jae-Uk Signature:	Date:
Second Inventor (Full Legal Name): KANG, Dal-Mo	
Circatura	Date:
Signature:	Date.
Third Inventor (Full Legal Name): KIM, Su-Chang	
	18 to =
Signature: KTM, Su-Chany \$9	Date:
Fourth Inventor (Full Legal Name): MUN, Jeong-O	
Signature:	Date:
Fifth Inventor (Full Legal Name): YOON, Ji-Su	
Signature:	Date:
Jigrature,	Date.
Sixth Inventor (Full Legal Name):	
Signature:	Date:
Seventh Inventor (Full Legal Name):	
Signature:	Date:

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