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## PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

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## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16368149

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PATENT

REEL: 048735 FRAME: 0435 505400660

ATTORNEY DOCKET NUMBER:	6841-0162PUS1	
NAME OF SUBMITTER:	THUY-KIM T. NGUYEN	
SIGNATURE:	/Thuy-Kim T. Nguyen/	
DATE SIGNED:	03/28/2019	
Total Attachments: 5		
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PATENT REEL: 048735 FRAME: 0436 SN: 16/368,149

LGC Ref. P2016-3741PCUS Filing date: March 28, 2019 Atomey Docket No. 6841-0162PUS1

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# DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

United States Patent Rights, or United States Plus all Foreign Patent Rights

Title of Invention >> ELECTRODE AND LITHIUM SECONDARY BATTERY COMPRISING SAME

	As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:
	This declaration is directed to the application attached hereto.
Application not Attached	⇒ If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:
later Appla. No.	⇒United States Application Number or PCT International Appln. PCT/KR2018/003074 No.
inter Filing Date	∜filed on March 16, 2018 .
	The above-identified application was made or authorized to be made by me.
	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
	I have reviewed and understand the contents of the above-identified application, including the claims.
	Lacknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.
	WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.
nsort Name I Assignee	"WHEREAS, 'LG CHEM, LTD.' and 'KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY'
nsert Address d Assignee	of '128, Yeoui-daero, Yeongdeungpo-gu, Seoul 07336, Republic of Korea' and '291, Daehak-ro, Yuseong-gu, Daejeon 34141, Republic of Korea'
	its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and
Check Box if Appropriate	⇒ in any foreign countries.

PATENT REEL: 048735 FRAME: 0437

Atomey Docket No. 6841-0162PUSI

#### LGC Ref. P2016-3741PCUS

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for which the same may be granted.

The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America patent(s) or a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The undersigned hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

LEGAL NAME OF INVENTOR

lmentor's Nesse	* Inventor:	Byoungkuk SON	Date:	February 27, 2019
hvenor's Signatun	' * Signature:	£ 43		
	LEGAL N	AME OF JOINT INVENTOR, IF ANY		
Inventor's Name	* inventor:	Jang Wook CHOI	Date:	February 27, 2019
Inventor's Signatur	° * Signature:			

An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.

X Additional inventors are being named on the 1\_supplemental sheet(s) attached hereto.

# SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

# ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

LEGAL NAME OF JOINT INVENTOR, IF ANY \* Inventor: Byung Con KiM invenor's Signature > Signature: LEGAL NAME OF JOINT INVENTOR, IF ANY Date: <u>February</u> 27, 2019 imenor's Signature - Signature: LEGAL NAME OF JOINT INVENTOR, IF ANY inventor's Name of Inventor: Eurkyung PARK Date: February 27, 2019 Invertor's Signature 🗢 Signature: LEGAL NAME OF JOINT INVENTOR, IF ANY inversor's Name - Stavenbar: Junghun CHOI Date: February 27, 2019 lammar's Squature . Signature: \_ LEGAL NAME OF JOINT INVENTOR, IF ANY incian's Same - \* Inventor - Doughyeon KANGinvenier's lignature - Signature:

PATENT

SN: 16/368,149

Filing date: March 28, 2019

Attorney Docket No.: 6841-0162PUS1

Doc code: Oath

Document Description: Oath or declaration filed

PTO/Ala/02 (07-13)

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## SUBSTITUTE STATEMENT IN LIEU OF AN OATH OR DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (35 U.S.C. 115(d) AND 37 CFR 1.64)

Title of Invention	ELECTRODE AND LITHIU	JM SECONDARY B	ATTERY COMPRISIN	IG SAME
This statement is directed to:  The attached application,  OR  PCT/KR2018/003074 March 16, 2018  United States application or PCT international application number filed on  LEGAL NAME of inventor to whom this substitute statement applies:  (E.g., Given Name (first and middle (if any)) and Family Name or Surname)  Donghyeon KANG  Residence (except for a deceased or legally incapacitated inventor):  City Daejeon  State  Country  KR  Country  LG Chem Research Park, 188, Munji-ro, Yuseong-gu				
	jeon	State	<sub>zio</sub> 34122	Country KR
I believe the above-named inventor or joint inventor to be the original inventor or an original joint inventor of a claimed invention in the application.  The above-identified application was made or authorized to be made by me.  I hereby acknowledge that any willful false statement made in this statement is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.				
Li	ip to the inventor to whom this subsing all Representative (for deceased of ssignee, erson to whom the inventor is under arson who otherwise shows a sufficient inventor.	r legally incapacitated inve		CFR 1.46 is required), or

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450, DO NOT SENIO FEES OR COMPLETED FORMS TO THIS ACORESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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## SUBSTITUTE STATEMENT

<u> </u>						
Circumstances permitting execution of this su	ibslitute statement:					
Inventor is deceased,						
Inventor is under legal incapacity,	Inventor is under legal incapacity,					
Inventor cannot be found or reached	Inventor cannot be found or reached after diligent effort, or					
Inventor has refused to execute the	oath or declaration under 37 CF	R 1.63.				
If there are joint inventors, please check the	appropriate box below:					
An application data sheet under 37 or is currently submitted.	An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) naming the entire inventive entity has been					
<u>OR</u>						
Statement Supplemental Sheet (PT	An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) has not been submitted. Thus, a Substitute Statement Supplemental Sheet (PTO/AIA/11 or equivalent) naming the entire inventive entity and providing inventor information is attached. See 37 CFR 1.64(b).					
***************************************	WARNING:					
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If the applicant is a juristic entity, list the application of the app	ant name and the little of the sign	1 <del>0</del> 5				
LG CHEM, LTD. Applicant Name:						
Title of Person Executing This Substitute Statement: Team Leader/Patent Management Team 1/Intellectual Property Center						
The signer, whose title is supplied above, is authorized to act on behalf of the applicant. Residence of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent):						
<sub>city</sub> Daejeon	State	Country KR				
Mailing Address of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent)						
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