505858447 01/10/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5905384

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
EUNSOL LHO	09/17/2019
HYELIM JEON	09/17/2019
DONGHUN LEE	09/17/2019
SANG WOOK LEE	09/17/2019
WANG MO JUNG	09/17/2019
MINSUK KANG	09/22/2019
SORA BAEK	09/17/2019

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16615519

CORRESPONDENCE DATA

Fax Number: (908)654-7866

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: (908) 518-6380

Email: assignment@lernerdavid.com

Correspondent Name: LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP

Address Line 1: 20 COMMERCE DRIVE

Address Line 4: CRANFORD, NEW JERSEY 07016

ATTORNEY DOCKET NUMBER: LGCHEM 3.3F-2335		
NAME OF SUBMITTER:	KATHLEEN REYNOLDS	
SIGNATURE:	/Kathleen Reynolds/	

PATENT 505858447 REEL: 051479 FRAME: 0511

DATE SIGNED:	01/10/2020
Total Attachments: 12	
source=ASSIGNMENT#page1.tif	
source=ASSIGNMENT#page2.tif	
source=ASSIGNMENT#page3.tif	
source=ASSIGNMENT#page4.tif	
source=ASSIGNMENT#page5.tif	
source=ASSIGNMENT#page6.tif	
source=ASSIGNMENT#page7.tif	
source=ASSIGNMENT#page8.tif	
source=ASSIGNMENT#page9.tif	
source=ASSIGNMENT#page10.tif	
source=ASSIGNMENT#page11.tif	
source=ASSIGNMENT#page12.tif	

COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM¹

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

The attached U.S. non-provisional patent application, or

LG CHEM Ref No. P2017-2722PCUS (Portfolio: Cathode > Additive)

TITLE: METHOD FOR PREPARING POSITIVE ELECTRODE ADDITIVES OF LITHIUM SECONDARY BATTERY

for which Assignor is about to make or has made United States or International application for patent.

WHEREAS, as a below named inventor(s), I/(we) hereby declare that:

Section I. Declaration

П

This declaration is directed to:

	U.S. non-provisional patent application number	, filed on		
	, or			
	PCT international patent application number <u>PCT/KR2018/014368</u> , filed <u>21, 2018</u> .	on <u>November</u>		
The above-ide	entified application was made or authorized to be made by me (us).			
(we) believe that I am (we are) the original inventor (original joint inventors) of a claimed invention in the above-identified application.				
(we) hereby	y acknowledge that any willful false statement made in this declaration	on is punishable		
This form requires the use of an Application Data Sheet.				

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM

Page 1 of 6

PATENT OLG Chem REEL: 051479 FRAME: 05436

Attorney Ref No.

under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

Section II. Assignment

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the undersigned hereby sell(s) and assign(s) to

LG CHEM, LTD.

having an address at 128, Yeoui-daero, Yeongdeungpo-gu, Seoul 07336, Republic of Korea (hereinafter designated as the Assignee(s)), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee(s), and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee(s) and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee(s) to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of

LG CHEM Ref No. P2017-2722PCUS (Portfolio: Cathode > Additive)

Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM

Page 2 of 6

the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee(s) without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee(s), and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee(s).

The undersigned hereby grant(s) the law firm of LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

LG CHEM Ref No. P2017-2722PCUS (Portfolio: Cathode > Additive)

Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM

Page 3 of 6

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF	Full Name
FIRST INVENTOR/ASSIGNOR	Eunsol LHO
SIGNATURE	M. DATE 19.9.19
LEGAL NAME OF	Full Name
INVENTOR/ASSIGNOR	Hyelim JEON
SIGNATURE	On DATE 19.9.19
LEGAL NAME OF	Full Name
THIRD INVENTOR/ASSIGNOR	Donghun LEE
SIGNATURE	DATE 19. P. 17

LG CHEM Ref No. P2017-2722PCUS (Portfolio: Cathode > Additive)

Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 4 of 6

LEGAL NAME OF	Full Name	
FOURTH INVENTOR/ASSIGNOR	Sang Wook LEE	
SIGNATURE	DATE 2019. 9. 11.	
LEGAL NAME OF	Full Name	
FIFTH INVENTOR/ASSIGNOR	Wang Mo JUNG	
SIGNATURE	DATE 2019, 9.17	
LEGAL NAME OF	Full Name	
INVENTOR/ASSIGNOR	Minsuk KANG	
SIGNATURE	DATE	

LG CHEM Ref No. P2017-2722PCUS (Portfolio: Cathode > Additive)

Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 5 of 6

LEGAL NAME OF SEVENTH		Full Name	
INVENTOR/ASSIGNOR		Sora BAEK	
SIGNATURE	Why	DATE 	19.9.17

LG CHEM Ref No. P2017-2722PCUS (Portfolio: Cathode > Additive)

Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 6 of 6

COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM¹

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

TITLE: METHOD FOR PREPARING POSITIVE ELECTRODE ADDITIVES OF LITHIUM SECONDARY BATTERY

for which Assignor is about to make or has made United States or International application for patent.

WHEREAS, as a below named inventor(s), I/(we) hereby declare that:

Section I. Declaration

This declarat	ion is directed to:
	The attached U.S. non-provisional patent application, or
	U.S. non-provisional patent application number, filed on, or
	PCT international patent application number PCT/KR2018/014368 , filed on November 21, 2018 .
The above-id	entified application was made or authorized to be made by me (us).
	e that I am (we are) the original inventor (original joint inventors) of a claimed invention in entified application.
I (we) hereb	y acknowledge that any willful false statement made in this declaration is punishable
1 This form re	quires the use of an Application Data Sheet.

LG CHEM Ref No. P2017-2722PCUS (Portfolio: Cathode > Additive) Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 1 of 6

under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

Section II. Assignment

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the undersigned hereby sell(s) and assign(s) to

LG CHEM, LTD.

having an address at **128**, **Yeoui-daero**, **Yeongdeungpo-gu**, **Seoul 07336**, **Republic of Korea** (hereinafter designated as the Assignee(s)), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee(s), and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee(s) and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee(s) to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of

LG CHEM Ref No. P2017-2722PCUS (Portfolio: Cathode > Additive)

Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 2 of 6

the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee(s) without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee(s), and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee(s).

The undersigned hereby grant(s) the law firm of LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

LG CHEM Ref No. <u>P2017-2722PCUS</u> (Portfolio: Cathode > Additive)

Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM
Page 3 of 6

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF	Full Name
FIRST INVENTOR/ASSIGNOR	Eunsol LHO
SIGNATURE	DATE
LEGAL NAME OF	Full Name
SECOND INVENTOR/ASSIGNOR	Hyelim JEON
SIGNATURE	DATE
LEGAL NAME OF	Full Name
THIRD INVENTOR/ASSIGNOR	Donghun LEE
SIGNATURE	DATE

LG CHEM Ref No. <u>P2017-2722PCUS</u> (Portfolio: Cathode > Additive)

Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 4 of 6

LEGAL NAME OF	Full Name Sang Wook LEE		
FOURTH INVENTOR/ASSIGNOR			
SIGNATURE	DATE		
LEGAL NAME OF	Full Name		
FIFTH INVENTOR/ASSIGNOR	Wang Mo JUNG		
SIGNATURE	DATE		
LEGAL NAME OF	Full Name		
SIXTH INVENTOR/ASSIGNOR	Minsuk KANG		
SIGNATURE	7/2//\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		

LG CHEM Ref No. P2017-2722PCUS (Portfolio: Cathode > Additive)

Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 5 of $\bf 6$

LEGAL NAME OF SEVENTH INVENTOR/ASSIGNOR	Full Name		
	Sora BAEK		
** ** ** **			
SIGNATURE	DATE		

LG CHEM Ref No. <u>P2017-2722PCUS</u> (Portfolio: Cathode > Additive)

RECORDED: 01/10/2020

Attorney Ref No.

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM Page 6 of 6