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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5110054

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MIN WOO JUNG	06/28/2018
JUNG HA LEE	06/28/2018
DONG HOON LEE	06/28/2018
TAE YOON PARK	06/28/2018
BOON JAE JANG	06/28/2018
SEONG MI CHO	06/28/2018
DONG UK HEO	06/28/2018

RECEIVING PARTY DATA

Name:	LG CHEM, LTD.
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City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	07336

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16079962	

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ATTORNEY DOCKET NUMBER:	29137.02693.US00
NAME OF SUBMITTER:	SONG K. JUNG
SIGNATURE:	/Song K. Jung/
DATE SIGNED:	08/24/2018

PATENT REEL: 046701 FRAME: 0626

Total Attachments: 6 source=29137_02693_US00_Assignment#page1.tif source=29137_02693_US00_Assignment#page2.tif source=29137_02693_US00_Assignment#page3.tif source=29137_02693_US00_Assignment#page4.tif source=29137_02693_US00_Assignment#page5.tif

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PATENT REEL: 046701 FRAME: 0627

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

TITLE: NOVEL HETEROCYCLIC COMPOUND AND ORGANIC LIGHT EMITTING DEVICE COMPRISING THE SAME

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 declaration is directed to:

بنسنو	The second secon
	U.S. non-provisional patent application number, filed on, or
	PCT international patent application number PCT/KR2017/010057 , filed on September 13">13">13" , 2017.
The above-id	lentified 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.

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LG CHEM Ref No. P2016-2294PCUS (Portfolio: OLED material)

PATENT OLG Chem REEL: 046701 FRAME: *0628

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

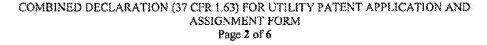
LG CHEM, LTD.

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. P2016-2294PCUS (Portfolio: OLED material)

Attorney Ref No.





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 **Dentons US 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.

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Attorney Ref No.



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

LEGAL NAME OF	Fuil Name		
FIRST INVENTOR/ASSIGNOR	Min Woo JUNG		
SIGNATURE	Minubo Jung DATE 2018, 6, 28		
LEGAL NAME OF	Full Name		
INVENTOR/ASSIGNOR	Jung Ha LEE		
SIGNATURE	Jungha Lee 2018.06.28		
LEGAL NAME OF	Full Name		
THIRD INVENTOR/ASSIGNOR	Dong Hoon LEE		
S IGN ATURE	Dorf Hom Lee 2019. 6.28		

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LEGAL NAME OF		Full Name	
FOURTH INVENTOR/ASSIGNOR	Tae Yoon PARK		
	Tae Youn PARK	DATE	2018-06-28
LEGAL NAME OF		Full Name	
FIFTH INVENTOR/ASSIGNOR	Boon Jae JANG		
SIGNATURE	Boonjae Janz	DATE	24.96.3m
LEGAL NAME OF	Full Name		
SIXTH INVENTOR/ASSIGNOR		Seong Mi CHO	
CICMATURE	Scong Mi CHO	DATE	2018, 06, 28

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LEGAL NAME OF SEVENTH	Full Name		
INVENTOR/ASSIGNOR	Dong Uk HEO		
*	Dangruk Heo	DATE	2018. b6-18

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RECORDED: 08/24/2018

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