504692436 12/18/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4739158

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MIN AH KANG	06/18/2015
YOUNG MIN KIM	06/23/2015
EUN JOO PARK	06/18/2015

RECEIVING PARTY DATA

Name:	LG CHEM, LTD.
Street Address:	128, YEOUI-DAERO YOUNGDUNGPO-GU
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	150-721

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14433281

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

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2024967106

Email: mlaip@dentons.com **DENTONS US LLP Correspondent Name:** 1900 K STREET NW Address Line 1:

Address Line 2: ATTORNEY DOCKET NO. -----

Address Line 4: WASHINGTON, D.C. 20006

ATTORNEY DOCKET NUMBER:	29137.01761.US00
NAME OF SUBMITTER:	SONG K. JUNG
SIGNATURE:	/Song K. Jung#35,210/
DATE SIGNED:	12/18/2017

Total Attachments: 4

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> **PATENT** REEL: 044421 FRAME: 0359 504692436

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PATENT REEL: 044421 FRAME: 0360

29137.01761.US00

DECLARATION AND ASSIGNMENT FOR Attorney Docket Number: 29137.01761.US00 UTILITY OR DESIGN APPLICATIONS Title of invention BINDER HAVING SUPERIOR ADHESIVE STRENGTH FOR SECONDARY BATTERIES (As (habrama As the below named inventor(s) (hereinafter designated as the undersigned), IWe hereby declare that: This declaration is directed to: The attached application, or United States application or PCT International application number 14/433,281 filed on April 2, 2015. The above-identified application was made or authorized to be made by me/us. I/We believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I/We hereby acknowledge 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. WHEREAS, the undersigned as a sole inventor (if only one name is listed below) or as a joint inventor (if plural names are listed below) has invented certain new and useful improvements in the application identified above. AND, WHEREAS LG Chem, Ltd., (hereinafter referred to as assignee), a corporation of Korea whose mailing address is I.G Twin Towers; 20, Yeouldo-dong; Yeongdeungpo-gu, Seoul, REPUBLIC OF KOREA 150-721 is desirous of acquiring the entire right, title and interest in the same 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 paths, 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. 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. FULL NAME OF INVENTOR(S) Date: June 18, 2015 Inventor One: Min Ah KANG Signature: Additional inventors or a legal representative are being named on _____1 additional form(s)

PLEASE SEE THE WARNINGS ON THE LAST PAGE OF THIS FORM. DECLARATION AND ASSIGNMENT FOR ADDITIONAL INVENTOR(S) UTILITY OR DESIGN APPLICATIONS Supplemental Sheet

SUPPLEMENTAL SHEET

29137-01761 US00

Inventor two: Young Min KIM	Date: 06/23/20/5
Signature: 4864 724 C	
Inventor three: <u>Eun Joo PARK</u>	Date:
Signature:	
Inventor four:	Date:
Signature:	
Inventor five:	Date:
Signature:	
Inventor six:	Date:
Signature:	
Inventor sever:	Date:
Signature:	
inventor eight:	Date:
Signature:	
Inventor nine:	Date:
Signature:	
inventor ten:	Date:
Signature:	

WARNING:

According to 37 C.F.R. 1.63 (c), "(a) person may not execute an eath or declaration unless the person has reviewed and understands the contents of the application, including the claims and is aware of the duty to disclose to the Office all information known to be material to patentability as defined in 1.56."

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

30FFLLIVILIVIAL 31	ILL I	29137.01701.0300
DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATIONS Attorney Docket Number: 29137.01761.US00		
Title of Invention	BINDER HAVING SUPER Amended)	RIOR ADHESIVE STRENGTH FOR SECONDARY BATTERIES (As
As the below	w named inventor(s) (hereina	after designated as the undersigned), I/We hereby declare that:
	ation is directed to:	
, , , , , , , , , , , , , , , , , , , ,	he attached application, or	
	United States application or PCT international application number 14/433,281 filed on April 2, 2015.	
The above-identified	application was made or aut	thorized to be made by me/us.
I/We believe that I an	n the original inventor or an o	original joint inventor of a claimed invention in the application.
	edge that any willful false sta sonment of not more than fiv	ratement made in this declaration is punishable under 18 U.S.C. ve (5) years, or both.
WHEREAS, the unde are listed below) has	WHEREAS, the undersigned as a sole inventor (if only one name is listed below) or as a joint inventor (if plural names are listed below) has invented certain new and useful improvements in the application identified above.	
AND, WHEREAS LG Chem, Ltd., (hereinafter referred to as assignee), a corporation of Korea whose mailing address is LG Twin Towers; 20, Yeouido-dong; Yeongdeungpo-gu; Seoul; REPUBLIC OF KOREA 150-721 is desirous of acquiring the entire right, title and interest in the same 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.		
acknowledged, and for unto said ASSIGNEE possessions and in a which may be grante	or other good and valuable c i, the full and exclusive right Ill foreign countries and the e d therefor in the United State	n of FIVE DOLLARS (\$5.00), the receipt whereof is hereby consideration, I (WE), by these presents do sell, assign and transfer to the said invention in the United States and its territorial entire right, title and interest in and to any and all Letters patent es and its territorial possessions and in any and all foreign countries tinuations, 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.		
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.		
FIII NAME	OF INVENTOR(S)	
	` '	_ :
Inventor On	e: Min Ah KANG	Date:
Signature:		
20.000	nal inventors or a legal repre	esentative are being named on 1 additional form(s)
		HE LAST PAGE OF THIS FORM.

DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN APPLICATIONS

ADDITIONAL INVENTOR(S)
Supplemental Sheet

PATENT REEL: 044421 FRAME: 0363

SUPPLEMENTAL SHEET

29137.01781.US00

Inventor two: Young Min KIM	Date:	
Signature:		
Inventor three: Eun Joo PARK	Date: 20/5, 76, 19	
Signature: <u>N. E. W.</u>		
Inventor four:	Date:	
Signature:		
Inventor five:	Date:	
Signature:		
Inventor six:	Date:	
Signature:	***************************************	
Inventor seven:	Date:	
Signature:		
Inventor eight:	Date:	
Signature:		
Inventor nine:	Date:	
Signature:		
Inventor ien:	Date:	
Signature:		
WARNING:		

According to 37 C.F.R. 1.63 (c), "(a) person may not execute an path or declaration unless the person has reviewed and understands the contents of the application, including the claims and is aware of the duty to disclose to the Office all information known to be material to patentability as defined in 1.56."

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PATENT REEL: 044421 FRAME: 0364

RECORDED: 12/18/2017