

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4198098

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
<b>Name</b>		<b>Execution Date</b>
LG HAUSYS, LTD.		12/07/2016
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	LG CHEM, LTD.	
<b>Street Address:</b>	128, YEOUNI-DAERO, YEONGDEUNGPO-GU	
<b>City:</b>	SEOUL	
<b>State/Country:</b>	KOREA, REPUBLIC OF	
<b>Postal Code:</b>	07336	
<b>PROPERTY NUMBERS Total: 29</b>		
<b>Property Type</b>	<b>Number</b>	
Application Number:	15025887	
Application Number:	14406314	
Application Number:	14782329	
Application Number:	14782330	
Application Number:	14899122	
Application Number:	14421010	
Application Number:	14917269	
Application Number:	14386980	
Application Number:	14402267	
Application Number:	14421023	
Application Number:	13510066	
Application Number:	13988126	
Application Number:	15023657	
Application Number:	15025542	
Application Number:	14395356	
Application Number:	14413892	
Application Number:	14650368	
Application Number:	14786531	
Application Number:	14400570	
Application Number:	14401675	

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Property Type	Number
Application Number:	14359862
Application Number:	15025543
Application Number:	14912602
Application Number:	14350445
Application Number:	15022926
Patent Number:	9153471
Patent Number:	9139757
Patent Number:	9315699
Patent Number:	9312490

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<b>ATTORNEY DOCKET NUMBER:</b>	5949-M0602
<b>NAME OF SUBMITTER:</b>	YOON S. HAM
<b>SIGNATURE:</b>	/Yoon S. Ham/
<b>DATE SIGNED:</b>	12/22/2016

#### Total Attachments: 3

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## ASSIGNMENT

WHEREAS, **LG HAUSYS, LTD.**, a corporation of Republic of Korea, doing business at One IFC, 10 Gukjegeumyung-ro, Yeongdeungpo-gu, Seoul 150-721, Republic of Korea, owns Patents and Patent Applications shown in the attached Appendix A.

WHEREAS, **LG CHEM, LTD.**, a corporation of Republic of Korea, doing business at 128, Yeoui-daero, Yeongdeungpo-gu, Seoul 07336, Republic of Korea, is desirous of acquiring complete title and interest in said Patent Applications and Letters Patents;

NOW, THEREFORE, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, Assignor by these presents do sell, assign and transfers unto said each Assignee, its successors, legal representatives, heirs and assigns the entire right, title and interest in the United States to said invention as described in U.S. Letters Patent Nos. **9,153,471; 9,139,757; 9,315,699; and 9,312,490** and U.S. Patent Application Nos. **15/025,887; 14/406,314; 14/782,329; 14/782,330; 14/899,122; 14/421,010; 14/917,269; 14/386,980; 14/402,267; 14/421,023; 13/510,066; 13/988,126; 15/023,657; 15/025,542; 14/395,356; 14/413,892; 14/650,368; 14/786,531; 14/400,570; 14/401,675; 14/359,862; 15/025,543; 14/912,602; 14/350,445; and 15/022,926** shown in the attached Appendix A, and all re-issues, or extensions of said Letters Patents to be held and enjoyed by said each Assignee for its own use, or for its legal representatives, successors, heirs, and assigns to the full end of the term for which said Letters Patents and Patent Applications are granted, and any extensions thereof, as fully and entirely as the same would have been held by said Assignor had this assignment and sale not been made, and for the same consideration said Assignor hereby covenants and agrees that at the time of execution and delivery of this instrument it is the lawful owner of the complete right, title and interest in and to said invention and said Letters Patents and Patent Applications above mentioned, and its interest is unencumbered and that it has good and full right and lawful authority to sell and convey its interest in the manner set forth herein; and for the same consideration Assignor hereby covenants and agrees that it will, when ever counsel for said each Assignee, or counsel for their legal successors, legal representatives, heirs or assigns shall advise that any proceedings in connection

with said Letters Patents and Patent Applications or any re-issue or extension of said Letters Patents and Patent Applications to be obtained thereon, is lawful and desirable, sign all papers and documents, make all lawful oaths, and do all acts necessary as required to be done for the procurement, maintenance, enforcement and defense of said Letters Patents, without charge to said Assignor, its successors, legal representatives, heirs and assigns, but at the expense of said each Assignee, their successors, legal representatives, heirs and assigns.

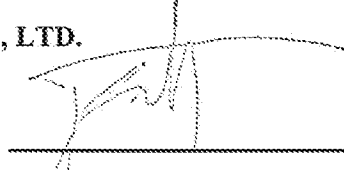
Assignor hereby further assigns to each Assignee all claims and causes of action for infringement of the patent rights assigned herein, including the right to sue for, and collect damages for, any and all acts of past and future infringement.

Assignor hereby grants Hauptman Ham, LLP, 2318 Mill Road, Suite 1400, Alexandria, VA 22314, the power to insert on this assignment any further identification 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.

Assignor:

LG HAUSYS, LTD.

Date: 7, Dec, 2016

Signature: 

Name: Oh Jang Soo

Title: CEO

# Appendix A

	U.S. Application No.	U.S. Patent No.	Reel No.	Frame No.	Recorded
1	15/025,887		038128	0930	03/29/2016
2	14/406,314		034423	0895	12/08/2014
3	14/782,329		036721	0899	10/05/2015
4	14/782,330		036721	0905	10/05/2015
5	14/899,122		037310	0767	12/17/2015
6	14/421,010		034939	0102	02/11/2015
7	14/917,269		037914	0643	03/07/2016
8	14/386,980		033787	0874	09/22/2014
9	14/402,267		034212	0255	11/19/2014
10	14/421,023		034939	0414	02/11/2015
11	13/510,066		028216	0606	05/16/2012
12	13/988,126		030451	0699	05/17/2013
13	15/023,657		038055	0604	03/21/2016
14	15/025,542		038117	0208	03/28/2016
15	14/395,356		034014	0601	10/17/2014
16	14/413,892		034674	0275	01/09/2015
17	14/650,368		035802	0268	06/08/2015
18	14/786,531		036861	0752	10/22/2015
19	14/400,570		034151	0249	11/12/2014
20	14/401,675		034187	0711	11/17/2014
21	14/359,862		032982	0406	05/21/2014
22	15/025,543		038117	0234	03/28/2016
23	14/912,602		037758	0976	02/18/2016
24	13/980,170	9,153,471	030816	0617	07/17/2013
25	14/350,445		032626	0695	04/08/2014
26	15/022,926		038019	0787	03/17/2016
27	14/349,242	9,139,757	032585	0452	04/02/2014
28	14/424,715	9,315,699	035052	0198	02/27/2015
29	14/413,601	9,312,490	034666	0212	01/08/2015