## 506317041 10/22/2020

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6363791

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
YOUN JOON SUNG	10/15/2020
MIN SUNG KIM	10/14/2020

#### **RECEIVING PARTY DATA**

Name:	LG INNOTEK CO., LTD.
Street Address:	30, MAGOKJUNGANG 10-RO, GANGSEO-GU
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	07796

### **PROPERTY NUMBERS Total: 1**

Property Type	Number		
Application Number:	17045297		

#### **CORRESPONDENCE DATA**

**Fax Number:** (703)205-8050

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:** (703) 205-8000

**Email:** mailroom@bskb.com, anh-vu.dao@bskb.com **Correspondent Name:** BIRCH, STEWART, KOLASCH & BIRCH, LLP.

Address Line 1: 8110 GATEHOUSE ROAD, SUITE 100E

Address Line 4: FALLS CHURCH, VIRGINIA 22042

ATTORNEY DOCKET NUMBER:	5934-0269PUS1
NAME OF SUBMITTER:	ANH-VU DAO
SIGNATURE:	/anh-vu dao/
DATE SIGNED:	10/21/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).

### **Total Attachments: 5**

source=2020-10-22\_DecAssignment\_5934-0269PUS1#page1.tif source=2020-10-22\_DecAssignment\_5934-0269PUS1#page2.tif source=2020-10-22\_DecAssignment\_5934-0269PUS1#page3.tif source=2020-10-22\_DecAssignment\_5934-0269PUS1#page4.tif

PATENT 506317041 REEL: 054141 FRAME: 0690

source=2020-10-22\_DecAssignment\_5934-0269PUS1#page5.tif

PATENT REEL: 054141 FRAME: 0691

Attorney Docket No. 5934-0269PUS1

### BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. Box 747 • Falls Church, Virginia 22040-0747

Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

## DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

Title of Invention 

⇒ SEMICONDUCTOR DEVICE

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:

Enter Appln. No. 

□ United States Application Number or PCT International Appln. No. PCT/KR2019/004081

Enter Filing Date ⇒ filed on April 5, 2019

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.

I acknowledge 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.

Insert Name of Assignee

➡ WHEREAS, LG INNOTEK CO., LTD.

Insert Address of Assignee

→ of 30, Magokjungang 10-ro, Gangseo-gu, Seoul 07796, 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.

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.

Page 1

BSKB-DECASSIGN(09-12)

REEL: 054141 FRAME: 0692

## Application No. 17/045,297 filed on October 5, 2020 Attorney Docket No. 5934-0269PUS1

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 necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

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.

LECAL NAME OF INVENTOR

Additional inventors are being named on the 1 supplemental sheet(s) attached hereto.

		DEGNETA	AME OF INVENTOR			
Inventor's Name	⇔	Inventor:	Youn Joon SUNG	Date:		
Inventor's Signature	e⇒	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.						

Page 2

BSKB-DECASSIGN-SINGLE (09-12)

# Application No. 17/045,297 filed on October 5, 2020 Attorney Docket No. 5934-0269PUS1

## SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name	→ Inventor:	Min Sung KIM	Date:	2020. 10.14	
Inventor's Signature	<sup>e ⇔</sup> Signature:	2			

BSKB-DECASSIGN\(09-12)

REEL: 054141 FRAME: 0694

Attorney Docket No. 5934-0269PUS1

Doc code: Oath

Document Description: Oath or declaration filed

PTO/AIA/02 (07-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## 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	SEMICONDUCTOR DEVICE				
This stateme	ent is directed to:				
▼ The atta	ached application,				
OR					
United 8	States application or PCT international	application number		filed on _	
LEGAL NA	ME of inventor to whom this sub	stitute statement appli	es:		
(E.g., Given	Name (first and middle (if any)) and Fa	amily Name or Surname)			
Youn Joon S	JUNG				
Residence (e	except for a deceased or legally incapa	icitated inventor):			
City Seoul		State	Cau	ntry KR	
	ss (except for a deceased or legally incapac		Cour	ritry	
•	gang 10-ro, Gangseo-gu	maled inventory.			
ou Sooul		! <b>}_</b>		07706	. KB
City Seoul		State		Zip 07796	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-i	dentified application was made or auth	orized 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.					
Relationship to the inventor to whom this substitute statement applies:					
Legal Representative (for deceased or legally incapacitated inventor only),					
✓ Assignee,					
Person to whom the inventor is under an obligation to assign,					
Person who otherwise shows a sufficient proprietary interest in the matter (petition under 37 CFR 1.46 is required), or					
Joint Inventor.					

[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 SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

## Application No. 17/045,297 filed on October 5, 2020 Attorney Docket No. 5934-0269PUS1

PTO/SB/AIA02 (07-13) Approved for use through 01/31/2014. QMB 0651-0032 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

SUBSTITUTE STATEMENT

## Circumstances permitting execution of this substitute statement: Inventor is deceased, Inventor is under legal incapacity, Inventor cannot be found or reached after diligent effort, or Inventor has refused to execute the oath or declaration under 37 CFR 1.63. If there are joint inventors, please check the appropriate box below: An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) naming the entire inventive entity has been or is currently submitted. OR 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: 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. PERSON EXECUTING THIS SUBSTITUTE STATEMENT: 2020, 10 , 15 Date (Optional): MYOUNG HWA Name: Signature: APPLICANT NAME AND TITLE OF PERSON EXECUTING THIS SUBSTITUTE STATEMENT: If the applicant is a juristic entity, list the applicant name and the title of the signer: Applicant Name: LG Innotek Co., Ltd Title of Person Executing This Substitute Statement: Senior manager

Note: Use an additional PTO/AIA/02 form for each inventor who is deceased, legally incapacitated, cannot be found or reached after diligent effort, or has refused to execute the oath or declaration under 37 CFR 1.63.

Country KR

Zip 07796

[Page 2 of 2]

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):

State

State

Mailing Address of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent)

**RECORDED: 10/22/2020** 

City Seoul

City Seoul

LG INNOTEK CO., LTD.

30, Magokjungang 10-ro, Gangseo-gu

Country KR