PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YUN HEUB SONG	07/28/2016

RECEIVING PARTY DATA

Name:	INDUSTRY-UNIVERSITY COOPERATION FOUNDATION HANYANG UNIVERSITY
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Internal Address:	SEONGDONG-GU
City:	SEOUL
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Postal Code:	04711

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15115232

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ATTORNEY DOCKET NUMBER:	32298/51041
NAME OF SUBMITTER:	DAVID C. READ
SIGNATURE:	/David C. Read/
DATE SIGNED:	08/02/2016

Total Attachments: 2

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PATENT 503942434 REEL: 039548 FRAME: 0352

ASSIGNMENT

Serial No. 15/115,232

Filed:

July 28, 2016

Title:

THREE DIMENSIONAL FLASH MEMORY USING ELECTRODE LAYERS AND/OR INTERLAYER INSULATION LAYERS HAVING DIFFERENT PROPERTIES, AND

PREPARATION METHOD THEREFOR

For good and valuable consideration, the receipt and sufficiency of which are hereby agreed, each of the undersigned agrees to assign and hereby assigns to INDUSTRY-UNIVERSITY COOPERATION FOUNDATION HANYANG UNIVERSITY, 222 Wangsimni-ro, Seongdong-gu, Seoul, REPUBLIC OF KOREA 04711 and its successors and assigns ("Assignee") the entire right, title, and interest in and to the inventions of such undersigned that are disclosed in the application listed above. Also assigned are (i) all rights in any and all other applications anywhere in the world that the undersigned may file and/or be named as an inventor of, solely or jointly, on said inventions, (ii) all rights in any and all patents that may be obtained on any of said applications, and (iii) all rights in any and all reissues, reexaminations, supplemental examinations, inter partes reviews, oppositions, post-grant reviews, supplementary protection certificates, and/or extensions thereof. The rights assigned include without limitation, the right to bring suit, the right to claim and retain all damages and/or seek other remedies for the past, present, and future infringement of any of the foregoing, and the right of priority (including without limitation the right to claim priority benefit of or to said patent applications.) The undersigned request the Commissioner for Patents in the United States and similar authorities outside the United States to issue said patents to and in the name of Assignee.

Each of the undersigned authorizes the attorneys of record in the application listed above to insert in this assignment the filing date and application number of the application listed above when officially known.

Each of the undersigned states that the application listed above is or was made or authorized to be made by him or her. Each of the undersigned believes himself or herself to be the original inventor or an original joint inventor of a claimed invention in the application listed above. Each of the undersigned acknowledges that any willful false statement made by him or her in this paragraph is punishable under 18 U.S.C. \$1001 by fine or imprisonment of not more than five years, or both.

Except in favor of Assignee, each of the undersigned warrants that: (i) he or she is the owner of all its rights, title and interests herein assigned and has the right to make this unconditional and irrevocable assignment to Assignee without obtaining any approval or permission of a third party; and (ii) there are no outstanding encumbrances, liens, prior assignments, licenses, or other obligations or restrictions on the rights, title and interests herein assigned.

Upon the request of Assignee and at no expense to the undersigned, each of the undersigned hereby agrees to execute any and all applications on said inventions (including without limitation applications or requests for the reissue, reexamination, or extension of the patent or for a supplementary protection certificate) and any

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oath, declaration, or affidavit relating thereto that Assignee may deem necessary or expedient, and to cooperate to the best of the ability of the undersigned with Assignee and perform any and all affirmative acts requested by Assignee to prepare, file, prosecute, maintain, defend, enforce, and vest in Assignee the rights, tifle, and interests assigned herein. These acts include, without limitation, preparing and executing statements and giving and producing evidence in support thereof, whereby said rights, title and interests will be held and enjoyed by Assignee to the full end of the term for which said patents may be granted as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

Date: 2016,07, 28

Signature: Yun Heub
Yun Heub Song

REEL: 039548 FRAME: 0354