

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
SHASHANK PRIYA	02/04/2019
YONGKE YAN	02/06/2019
JIN S. SEO	12/11/2017
KYUNGHOON CHO	12/11/2017
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Postal Code:	16677
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Street Address:	301 BURRUSS HALL
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PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15804105
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ATTORNEY DOCKET NUMBER:	YPL1821US
NAME OF SUBMITTER:	GRANT M. EHRlich

SIGNATURE:	/Grant M. Ehrlich/
DATE SIGNED:	12/04/2019
Total Attachments: 5 source=86F4359#page1.tif source=86F4359#page2.tif source=88H5186#page1.tif source=88H5186#page2.tif source=88H5186#page3.tif	

YPL1821US
SI-50853-US
RF2015100051US0

DECLARATION AND ASSIGNMENT

Title of Invention: **PIEZOELECTRIC MATERIAL, PIEZOELECTRIC DEVICE INCLUDING THE PIEZOELECTRIC MATERIAL, AND METHOD OF MANUFACTURING THE PIEZOELECTRIC MATERIAL**

As a below named inventor, I hereby declare that:

This declaration is directed to:

☒ the attached application (Attorney Docket Number YPL1821US), or

☒ United States application or PCT international application number
15/804,105 filed on Nov.06, 2017

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 application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.

Whereas, each undersigned inventor has made certain inventions, improvements, and discoveries (herein referred to as the "INVENTION") disclosed in the above-identified patent application (herein referred to as the ("APPLICATION");

Whereas, SAMSUNG ELECTRONICS CO., LTD., a corporation of the Republic of Korea having a place of business at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea (herein referred to as "ASSIGNEE"), desires to acquire, and each undersigned inventor desires to grant to ASSIGNEE, the entire worldwide right, title, and interest in and to the INVENTION and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor (herein referred to ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to the ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the INVENTION, the APPLICATION, and any and all other patent applications and patents for the INVENTION which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, continuations-in-part, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the INVENTION, to ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such


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patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the INVENTION, the APPLICATION, and all related patents and applications, in ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by ASSIGNEE, its successors, legal representatives, and assigns.

I 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.

The undersigned hereby grant(s) the law firm of **Cantor Colburn 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.

Legal Name of Inventor: **Jin S. Heo**

Signature:  Date: 2017.12.11

Legal Name of Inventor: **Kyunghoon Cho**

Signature:  Date: 2017.12.11

06377271

ASSIGNMENT

WHEREAS, I/we, the below-named inventor(s) (hereinafter referred to as ASSIGNORS) whose residence address is stated below, have invented certain new and useful improvements in an invention entitled;

Piezoelectric Material, Piezoelectric Device Including the Piezoelectric Material, and Method of Manufacturing the Piezoelectric Material

for which an application for United States Letters Patent Serial No. 15/804,105 has been filed on 11/6/2017; and

WHEREAS, Virginia Polytechnic Institute and State University, (hereinafter referred to as ASSIGNEE), an institute of higher education organized under the laws of the Commonwealth of Virginia, having an office and principal place of business at 301 Burruss Hall, Blacksburg, Virginia, 24061, is desirous of acquiring the entire right, title and interest in, to and under said application and said invention and in, to and under Letters Patent or similar legal protection to be obtained therefore in the United States and in any and all foreign countries.

NOW, THEREFORE, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign and transfer to ASSIGNEE, its lawful successors and assigns, the full and exclusive right, title and interest, including right to priority claim, to said invention in the United States and its territorial possessions and in all foreign countries and to all Letters Patent or similar legal protection in the United States and its territorial possessions and in any and all foreign countries and any non-provisional applications claiming the benefit of and to be obtained for said invention by said application or any continuation, division, continuation-in-part, reexamination, renewal, substitute, extension or reissue thereof or any legal equivalent thereof in a foreign country for the full term or terms for which the same may be granted; and authorize and request the Commissioner of Patents of the United States and any official of any foreign country whose duty it is to issue patents or legal equivalents thereto, to issue same for this invention to ASSIGNEE, its lawful successors and assigns.

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

ASSIGNORS further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or litigation


VTIP 17-067

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related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue, enforce and defend said application, said invention and said Letters Patent and said equivalents thereof in any foreign country which may be necessary or desirable to carry out the purposes thereof.

Full Name of Inventor: Shashank Priya

Residence: 952 Greenbriar Dr., State College, PA 16801.

Signature:  Date: 2/4/19

Full Name of Inventor: Yongke Yan

Residence: 503 Essex Court, Apt 1, Blacksburg, VA 24060

Signature: _____ Date: _____

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Serial Number: 15/804,105

related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue, enforce and defend said application, said invention and said Letters Patent and said equivalents thereof in any foreign country which may be necessary or desirable to carry out the purposes thereof.

Full Name of Inventor: Shashank Priya

Residence: 2004 Birch Leaf Lane, Blacksburg, VA 24060

Signature: _____ Date: _____

Full Name of Inventor: Yongke Yan

Residence: 503 Essex Court, Apt 1, Blacksburg, VA 24060

Signature: Yongke Yan Date: 2/4/19