

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ZHIXIAN CHEN	05/02/2017
XINPENG WANG	04/27/2017
GUO-QIANG LO	05/11/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH
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<b>City:</b>	CONNEXIS
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<b>Postal Code:</b>	138632
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15404087
<b>CORRESPONDENCE DATA</b>	
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<b>ATTORNEY DOCKET NUMBER:</b>	351913-998881 - AAL
<b>NAME OF SUBMITTER:</b>	ALAN A. LIMBACH
<b>SIGNATURE:</b>	/Alan A. Limbach/
<b>DATE SIGNED:</b>	07/20/2017
This document serves as an Oath/Declaration (37 CFR 1.63).	
<b>Total Attachments: 2</b>	

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ASSIGNMENT

WHEREAS, **ZHIXIAN CHEN, WANG XINPENG, and GUO-QIANG LO** made certain inventions or discoveries (or both) set forth in an Application for Letters Patent of Singapore and the United States of America entitled

**Multi-Step Voltage For Forming Resistive Random Access Memory (RRAM) Cell Filament**

- filed as Singaporean Patent Application No. **10201601703U** on March 4, 2016
- filed as US Patent Application No. **15/404,087** on January 11, 2017

WHEREAS, **Agency for Science, Technology and Research**, whose address is 1, Fusionopolis Way, #20-10 Connexis, Singapore 138632, and who, together with its successors and assigns is hereinafter called "Assignee", is desirous of acquiring the entire right, title and interest together with the benefits and privileges hereinafter recited;

NOW, THEREFORE, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, effective as of the date signed, we hereby, without reservation;

1. Assign, transfer and convey to Assignee the entire right, title and interest together with the benefits and privileges in and to said inventions and discoveries, said Application for Letters Patent or similar forms of protection of Singapore and the United States of America, and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation and convention applications based in whole or in part upon said inventions or discoveries, or upon said application, and any and all Letters Patent, reissues and extensions of Letters Patent or similar forms of protection granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent, including all rights to said inventions, discoveries and said Patents and applications as fully and entirely as the same would have been held and enjoyed by us if this Agreement had not been made, including all claims for damages and/or injunction by reason of past and present infringement and including the collection and retention of such damages for the use and enjoyment of Assignee and its successors and assigns;

2. Authorize Assignee to file patent applications in any or all countries or groups of countries on any or all of said inventions and discoveries in our name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or any other relevant convention or treaty or otherwise;

3. Authorize and request the Commissioner of Patents and Trademarks of Singapore and the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title and interest therein, or otherwise as Assignee may direct;

4. Warrant that we have not knowingly conveyed to others any rights in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything

embodying or utilizing any of said inventions or discoveries; and that we have good right to assign the same to Assignee without encumbrance;

5. Bind our heirs, legal representatives and assigns, as well as ourselves, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to us or them, all acts reasonable serving to assure that said inventions and discoveries, said patent applications and said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by us, our heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to us relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in our control or in the control of our heirs, legal representatives or assigns which may be useful for establishing any facts of our conceptions, disclosures, and reduction to practice of said inventions or discoveries.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

IN WITNESS WHEREOF:

  
\_\_\_\_\_  
ZHIXIAN CHEN

2/5/2017  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
XINFENG WANG

27/4/2017  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
GUO-QIANG LO

11/05/2017  
\_\_\_\_\_  
Date