# 507767989 02/24/2023

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7815116

		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT		
	ΑΤΑ			
		Name	Execution Date	
SUMEET KUMAR GUP	TA		11/05/2021	
ZHIHONG CHEN			11/05/2021	
SANDEEP KRISHNA THIRUMALA			11/05/2021	
YI-TSE HUNG			12/17/2021	
RECEIVING PARTY DA	ΑΤΑ			
Name:	PURDUE RESEARCH FOUNDATION			
Street Address:	101 FO	101 FOUNDRY DRIVE		
City:	WESTL	WEST LAFAYETTE		
State/Country:	INDIAN	INDIANA		
Postal Code:	47906	47906		
PROPERTY NUMBERS	S Total: 1			
Property Type		Number		
Application Number:	-	17588317		
<i>using a fax number, if</i> Email: Correspondent Name: Address Line 1:	be sent to provided     	<i>the e-mail address first; if that is u</i> <i>; if that is unsuccessful, it will be s</i> nrpiroozi@gmail.com PIROOZI-IP, LLC 3500 E. 116TH ST., #6388		
Fax Number: <i>Correspondence will &amp; using a fax number, if</i> Email: Correspondent Name: Address Line 1: Address Line 4:	be sent to provided	<i>; if that is unsuccessful, it will be s</i> nrpiroozi@gmail.com PIROOZI-IP, LLC 3500 E. 116TH ST., #6388 FISHERS, INDIANA 46038		
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Fax Number: Correspondence will b using a fax number, if Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER:	be sent to provided	<i>; if that is unsuccessful, it will be s</i> nrpiroozi@gmail.com PIROOZI-IP, LLC 3500 E. 116TH ST., #6388 FISHERS, INDIANA 46038 PRF-68622-03 HAMID PIROOZI		
Fax Number: <i>Correspondence will L using a fax number, if</i> Email: Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET N NAME OF SUBMITTER: SIGNATURE:	be sent to provided	; if that is unsuccessful, it will be s nrpiroozi@gmail.com PIROOZI-IP, LLC 3500 E. 116TH ST., #6388 FISHERS, INDIANA 46038 PRF-68622-03 HAMID PIROOZI /Hamid Piroozi/		
Fax Number: <i>Correspondence will &amp; using a fax number, if</i> Email: Correspondent Name: Address Line 1:	be sent to provided	<i>; if that is unsuccessful, it will be s</i> nrpiroozi@gmail.com PIROOZI-IP, LLC 3500 E. 116TH ST., #6388 FISHERS, INDIANA 46038 PRF-68622-03 HAMID PIROOZI		

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#### ASSIGNMENT

#### WHEREAS, WE,

#### Name

Sumeet Kumar Gupta Zhihong Chen Sandeep Krishna Thirumala Yi-Tse Hung

(hereinafter "ASSIGNORs"). Have made or developed a technology identified in a disclosure to Purdue Research Foundation (PRF) and assigned:

generally known as: PRF reference number: 2019-GUPT-68622

#### Valley Spin Hall Effect based Non-Volatile Memory

which is further described in a patent application filed in the United States Patent and Trademark Office on *Jun 23, 2019* and accorded Application No. 62/865,280 ("Technology"); and which is further described in a patent application filed in the United States Patent and Trademark Office on *Jun 23, 2020* and accorded Application No. 16/909,971 ("Technology"); and

WHEREAS, Purdue Research Foundation, a statutory body corporate formed and existing under Indiana Foundation or Holding Companies Act of 1921, having a place of business at *101 Foundry Drive, West Lafayette, IN 47906* (hereinafter "ASSIGNEE"), is desirous of accepting and assuming all such right, title, and interest of the ASSIGNOR.

**NOW, THEREFORE**, for good and valuable consideration, receipt of which is hereby acknowledged, the ASSIGNOR(s) do hereby sell, transfer, convey, assign and deliver into the ASSIGNEE, its successors, assigns and legal representatives, and all intellectual property rights, whether domestic or foreign related to the Technology, including but not limited to: all portions, and works in progress with respect thereto and all inventions, works of authorship, masks works,

#### PATENT REEL: 062801 FRAME: 0672

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technology, information, know-how, materials and tools relating thereto or to the development, support or maintenance thereof; all copyright, patent rights, trade secret rights, trademark rights, mask works rights, and all other intellectual property rights and all business, contract rights and goodwill in, incorporated or embodied in, used to develop, or related to any of the foregoing and any registrations and applications for registrations of the foregoing throughout the United States of America and the world and any and all other applications arising therefrom, including any and all divisional applications, continuation applications, and continuation-in part applications (but only and solely to the extent such continuation-in part applications are described in the priority application to which such continuation-in part applications claim priority and such priority is not denied), of the Technology, and any and all patents to be issues and obtained therefor and thereon, in the United States and throughout the world, including all reissued Patents, and extensions thereof (collectively, the "Intellectual Property");

AND *WE* HEREBY agree to communicate to ASSIGNEE or its representative any facts known to up respecting the Technology whether or not patentable, which we may conceive, develop, make, produce or reduce to practice in whole or in part as a result of any employment, research, or activity involving or relating to the use of Purdue University resources; and agree to sign all lawful documents and make all rightful oaths and declarations relating to said Technology and Intellectual Property; authorize ASSIGNEE to insert herein the date of application, and agree to otherwise aid ASSIGNEE as necessary and desirable to:

1. Obtain, enforce, and maintain and issued letters patent in the United States or throughout world, when reasonably requested to do so by ASSIGNEE such written documents and instruments as ASSIGNEE requests and giving testimony in support of ASSIGNEE's inventorship, as may be necessary in ASSIGNEE's opinion to obtain and maintain patents in the United States of America and throughout the world.

2. Secure or aid in securing and maintain copyright protection in the Intellectual Property and assist ASSIGNEE or its nominees in filing applications to register copyright in the name of SSIGNEE as owner in such Intellectual Property; and

3. Execute, acknowledge, and deliver to ASSIGNEE at its expense, such written documents and instruments and do such other acts as may be necessary in the opinion of ASSIGNEE, to vest

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the entire rights, title, and interests in and to the Intellectual Property to ASSIGNEE and to confirm the complete ownership thereof by ASSIGNEE.

**AND** *WE* **HEREBY** authorize ASSIGNEE to take any and all action necessary to effectuate this Assignment, including but not limited to, the filing of the Assignment with the U.S Patent and Trademark Office and U.S. Copyright Office.

**AND** *WE* **HEREBY** authorize and request the Director if the U.S Patent and Trademark Office or any other proper officer or agency throughout the world to issue and all said letters patent to ASSIGNEE.

**AND** *WE* **HEREBY** warrant and covenant that we have full right to convey the entire right, title and interest herein assigned and that *we* have not executed and will not execute and instrument or assignment in conflict herewith;

This Assignment shall be upon the ASSIGNOR(s) and their heirs, successors, and assigns. Should any term of this Assignment be found invalid or unenforceable, it shall not affect the validity or enforceability of any other term of this Assignment, without regard to the place of making or the place of performance.

This Assignment is hereby made effective as of the conception date of the Technology.

[SIGNATURES ON NEXT PAGE]

11/5/2021

Date

Qumeet

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PATENT REEL: 062801 FRAME: 0676

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> PATENT REEL: 062801 FRAME: 0677

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Citizenship

12/17/21

Date

By: RI Was

Printed: Kenneth Waite Title: Chief Patent Counsel Office of Technology Commercialization Purdue Research Foundation