

## 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>
AMR MOHAMMAD E. A. SHALTOUT	04/16/2023
VLADIMIR M. SHALAEV	04/16/2023
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	PURDUE RESEARCH FOUNDATION
<b>Street Address:</b>	101 FOUNDRY DRIVE
<b>City:</b>	WEST LAFAYETTE
<b>State/Country:</b>	INDIANA
<b>Postal Code:</b>	47906
<b>PROPERTY NUMBERS Total: 2</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	62486433
<b>Application Number:</b>	16605902
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>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.</i>	
<b>Email:</b>	hrpiroozi@gmail.com
<b>Correspondent Name:</b>	PIROOZI-IP, LLC
<b>Address Line 1:</b>	8500 E. 116TH ST., #6388
<b>Address Line 4:</b>	FISHERS, INDIANA 46038
<b>ATTORNEY DOCKET NUMBER:</b>	PRF-67636-03
<b>NAME OF SUBMITTER:</b>	HAMID PIROOZI
<b>SIGNATURE:</b>	/Hamid Piroozi/
<b>DATE SIGNED:</b>	04/21/2023
<b>Total Attachments: 6</b>	
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PATENT



**ASSIGNMENT**

**WHEREAS, *WE,***

**Amr Mohammad E. A. SHALTOUT, and  
Vladimir M. SHALAEV**

(hereinafter “ASSIGNORS”), have made or developed a technology identified in a disclosure to Purdue Research Foundation (PRF) and assigned PRF reference number:

**67636,**

which is further described in a patent application filed in the United States Patent and Trademark Office on *04-17-2017* which was accorded Application No. 62/486,433, in a patent application filed in the United States Patent and Trademark Office on *04-17-2018* which was accorded Application No. PCT/US18/27945, as well as in a patent application filed in the United States Patent and Trademark Office on *10-17-2019* which was accorded Application No. 16/605,902 (collectively “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,

technology, information, know-how, materials and tools relating thereto or to the development, support or maintenance thereof; all copyright, patent rights including the right to claim priority to and from said patents and patent applications, 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 issued 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 regarding 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 application number and date of application, and agree to otherwise aid ASSIGNEE as necessary and desirable to:

1. Obtain, enforce, and maintain 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 ownership, 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 ASSIGNEE 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 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 of the U.S. Patent and Trademark Office or any other proper officer or agency throughout the world to issue any 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 any 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]*

ACCEPTED BY ASSIGNOR:

04/16/2023

Date

*Amr Shaltout*

*Amr Mohammad E. A. SHALTOU*

Residence Address:

41093 Joyce Ave

Address

Fremont, CA 94539

City, State and Zip

Egypt

Citizenship

ACCEPTED BY ASSIGNOR:

04/16/2023

Date

*Vladimir Shalaeu*

*Vladimir M. SHALAEV*

Residence Address:

1301 Ravinia Rd

Address

West Lafayette IN 47906

City, State and Zip

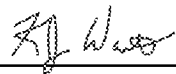
US

Citizenship

ACCEPTED BY ASSIGNEE:

April 14, 2023

Date

By: 

Printed: Kenneth Waite

Title: Chief Patent Counsel

Office of Technology Commercialization

Purdue Research Foundation