

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT5022164

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JOE C CAMPBELL	12/18/2017
MIN REN	06/05/2018
MADISON WOODSON	06/12/2017
YAOJIA CHEN	06/13/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	UNIVERSITY OF VIRGINIA
<b>Street Address:</b>	VARSITY HALL, 136 HOSPITAL DRIVE
<b>City:</b>	CHARLOTTESVILLE
<b>State/Country:</b>	VIRGINIA
<b>Postal Code:</b>	22903
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15438870
<b>CORRESPONDENCE DATA</b>	
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<b>Address Line 1:</b>	722 PRESTON AVENUE, SUITE 107
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<b>ATTORNEY DOCKET NUMBER:</b>	02235-03
<b>NAME OF SUBMITTER:</b>	ROBERT J DECKER
<b>SIGNATURE:</b>	/ROBERT J DECKER/
<b>DATE SIGNED:</b>	06/25/2018
<b>Total Attachments: 5</b>	
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## ASSIGNMENT

WHEREAS, we, Joe C. Campbell, Min Ren, Madison Woodson, and Yaoji Chen, (the "Assignors"), have made an invention entitled

### **"AlInAsSb AVALANCHE PHOTODIODE AND RELATED METHOD THEREOF"**

described in U.S. Provisional Patent Application Serial No. 62/298,327 filed February 22, 2016; U.S. Provisional Patent Application Serial No. 62/461,305 filed February 21, 2017; U.S. Utility Patent Application Serial No. 15/438,870 filed February 22, 2017, and any subsequent patent applications claiming priority thereto; and

WHEREAS, the University of Virginia, Varsity Hall, 136 Hospital Drive, P. O. Box 400301, Charlottesville, Virginia 22904-4301 (the "Assignee"), is desirous of acquiring the entire right, title and interest in and to the aforesaid invention, including any tangible materials embodied in or encompassed by the invention and any trade secrets pertaining to the invention, and any improvements thereon, (the "Invention") and in and to said applications for Letters Patent thereon in the United States, its territories and possessions ("United States") and all foreign countries, including rights to claim priority, to any provisional applications, and in and to any Letters Patent of the United States or any foreign country which may be granted therefor, including any and all reissues, divisions, continuations, continuations-in-part, renewals, substitutes or extensions thereof (the "Rights");

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and conveyed, and does hereby sell, assign, transfer and convey to Assignee, its successors and assigns, the entire right, title and interest in and to the aforesaid Invention and Rights, except that Assignee hereby grants back to the Assignors a royalty free non-transferable license to make and use the Invention under the Rights for educational and research purposes, only. The aforesaid assignment includes the right in and to all income, royalties, damages and payments now or hereafter due or payable with respect to any Letters Patent which may be granted, and in and to all causes of action (either in law or in equity), and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment, as fully and entirely as the same would have been held and enjoyed by Assignor if this sale and assignment had not been made;

AND Assignors hereby authorize and request the appropriate governmental officials to issue any and all such United States or foreign Letters Patent under said invention, or resulting from any of said applications thereof, to the Assignee, as the assignee of the entire right, title and interest in and to the same;

AND Assignors hereby represent, warrant and covenant that they have the full right to convey the entire interest herein assigned, that they have not executed and will not execute any instrument or assignment in conflict herewith, and that the rights assigned herein are not otherwise encumbered by any grant, license or right;

AND Assignors further covenant and agree that Assignors will at any time upon request make, execute and deliver without further compensation, any and all other instruments in writing, including further applications, papers, affidavits, power of attorney, assignments, and other documents, and do all lawful acts and things, which, in the opinion of counsel for said Assignee, its successors and assigns, may in any country be required or necessary more effectively to secure to and vest in said Assignee, its successors and assigns the entire right, title and interest in and to said Invention and Rights hereby sold, assigned, transferred and conveyed, and that Assignors will sign any applications for reissue, division, continuation, continuation-in-part, renewal, substitute or extension of said application for Letters Patent or any resulting Letters Patent;

AND Assignors further covenant and agree that Assignors will at any time upon request communicate to the Assignee, its successors, assigns or other legal representatives any facts relating to the aforesaid invention known to it, and will testify as to the same in any interference, litigation, mediation, arbitration or other proceeding when requested to do so.

IN WITNESS WHEREOF, Assignors have hereunto set their hands and seals.

Signature of Inventor / Date of Execution:

Inventor's Name:

Inventor's Resident Address:

Joe C. Campbell 12/18/17  
Joe C. Campbell, U.S. Citizen

3020 Milton Village Lane

Charlottesville, VA 22902

PLACE OF EXECUTION:

CHARLOTTESVILLE, VIRGINIA

CITY OF CHARLOTTESVILLE )

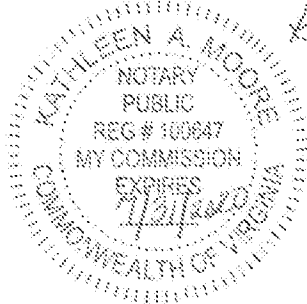
) ss:

COMMONWEALTH OF VIRGINIA )

On this 18th day of December, 2017, before me, a Notary Public in and for the Commonwealth of Virginia, at large, personally appeared Joe C. Campbell, known to me (or proven by evidence of satisfactory identification) to be the person described in and who executed the foregoing instrument and acknowledged the same to be of their free act and deed for the uses and purposes therein set forth.

Kathleen A. Moore (signature, please print name below)

KATHLEEN A. MOORE, Notary Public, my commission expires on 7/31/2020



PATENT

REEL: 046191 FRAME: 0699

Signature of Inventor / Date of Execution: Min Ren 6/4/2018  
Inventor's Name: Min Ren, Citizen of China (People's Republic)  
Inventor's Resident Address: ~~117 Mimosa Drive, Apt. 204~~ 99 Vista Montana, #1503  
~~Charlottesville, VA 22903~~ San Jose, CA 95134  
PLACE OF EXECUTION: CHARLOTTESVILLE, VIRGINIA

state of California  
CITY OF CHARLOTTESVILLE Mk 1 )  
County of Santa Clara ) ss:  
COMMONWEALTH OF VIRGINIA )

Mk 1 On this 05 day of June, 2018, before me, a Notary Public in and for the Commonwealth of Virginia, at large, personally appeared Min Ren, known to me (or proven by evidence of satisfactory identification) to be the person described in and who executed the foregoing instrument and acknowledged the same to be of their free act and deed for the uses and purposes therein set forth.

M.K. Toor [signature, please print name below]  
M.K. Toor, Notary Public, my commission expires on Jan 22, 2021



Signature of Inventor / Date of Execution:

Madison Woodson 6/12/17

Inventor's Name:

Madison Woodson, U.S. Citizen

Inventor's Resident Address:

1377 Stephens Road

Virginia Beach, VA 23454

PLACE OF EXECUTION:

CHARLOTTESVILLE, VIRGINIA

CITY OF CHARLOTTESVILLE

)

) ss:

COMMONWEALTH OF VIRGINIA

)

On this 12th day of JUNE, 2017, before me, a Notary Public in and for the Commonwealth of Virginia, at large, personally appeared Madison Woodson, known to me (or proven by evidence of satisfactory identification) to be the person described in and who executed the foregoing instrument and acknowledged the same to be of their free act and deed for the uses and purposes therein set forth.

Kathleen A Moore

Signature, please print name below

KATHLEEN A MOORENotary Public, my commission expires on 7/31/2020

Signature of Inventor / Date of Execution:

Inventor's Name:

Inventor's Resident Address:

Yaqia Chen / June 13, 2018  
Yaqia Chen Citizen of China (People's Republic)  
 270 Fifth St., Apt. 401  
 Jersey City, NJ 07302

PLACE OF EXECUTION:

STATE OF NJ  
COUNTY OF HUDSON

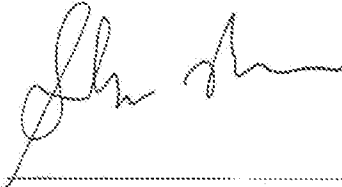
~~CITY OF CHARLOTTESVILLE~~

~~COMMONWEALTH OF VIRGINIA~~

~~CHARLOTTESVILLE, VIRGINIA~~ Jersey City, NJ

State of NJ

On this 15<sup>th</sup> day of June, 2018, before me, a Notary Public in and for the ~~Commonwealth of Virginia~~, at large, personally appeared Yaqia Chen, known to me (or proven by evidence of satisfactory identification) to be the person described in and who executed the foregoing instrument and acknowledged the same to be of their free act and deed for the uses and purposes therein set forth.



[signature, please print name below]

SHYAM NATARAJAN, Notary Public, my commission expires on 02/26/2021

