505260542 01/03/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5307314

SUBMISSION TYPE:		NEW ASSIGNMENT	
NATURE OF CONVEYAN	ICE:	ASSIGNMENT	
CONVEYING PARTY DA	ATA		
		Name	Execution Date
CHANG-BEOM EOM			03/09/2017
DAESU LEE			03/09/2017
ZHENQIANG MA			03/14/2017
DONG LIU			03/14/2017
SANG JUNE CHO			10/20/2017
JAESEONG LEE			10/20/2017
RECEIVING PARTY DA	ГА		
Name:	Wiscons	sin Alumni Research Foundation	
Street Address:	614 Wa	Inut Street	
City:	Madison		
State/Country:	WISCONSIN		
Postal Code:	53726		
PROPERTY NUMBERS Property Type	Total: 1	Number	
Application Number:		16237804	
CORRESPONDENCE D			
		608)263-1064	
Correspondence will be	e sent to	the e-mail address first; if that is unsu; ; if that is unsuccessful, it will be sent	
Correspondence will be	e sent to provided	the e-mail address first; if that is unsu	
<i>Correspondence will be using a fax number, if p</i> Phone: Email:	e sent to provided	<i>the e-mail address first; if that is unsu</i> ; <i>if that is unsuccessful, it will be sent</i> 608-265-7938 mnoriega@warf.org	
Correspondence will be using a fax number, if p Phone: Email: Correspondent Name:	e sent to provided ((<i>the e-mail address first; if that is unsu; ; if that is unsuccessful, it will be sent</i> 608-265-7938 mnoriega@warf.org MEREDITH NORIEGA	
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Total Attachments: 7

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ASSIGNMENT

(Joint Inventors)

I am one of the persons identified as an inventor and who has contributed to a new and useful invention (the "Invention") described in the provisional, utility, or design United States patent application and/or the patent application filed under the Patent Cooperation Treaty, as identified below. These patent application(s) are identified as follows:

Filing Type	Filing Country	Serial Number	Filing Date		
VANADIUM DIOXIDE-BASED OPTICAL AND RADIOFREQUENCY SWITCHES					
PAT	UNITED STATES	15/451745	March 7, 2017		

VANADIUM DIOXIDE-BASED OPTICAL AND RADIOFREQUENCY SWITCHES				
PCT	W.I.P.O. (IS PCT)	PCT/US2018/019397	February 23, 2018	

VANADIUM DIOXIDE-BASED OPTICAL AND RADIOFREQUENCY SWITCHES					
DIV	UNITED STATES	16/237804	January 2, 2019		

For good and valuable consideration, the receipt of which I hereby acknowledge, I do hereby sell, assign, and transfer to the Wisconsin Alumni Research Foundation ("WARF"), a non-stock, non-profit, Wisconsin corporation, and to its legal representatives, successors and assigns, my entire right, title and interest in and to the Invention and to all United States provisional, utility, and design applications as well as foreign patents or patent applications any of which cover all or part of the Invention. WARF shall hold such right, title and interest as fully and completely as they would have been held by me had this assignment and sale not been made.

I further agree, upon WARF's request, to execute any documents, including any separate assignments, declarations or other legal documents, that WARF may find necessary or desirable in its exercise of the right, title and interest assigned above. I further agree to communicate to WARF any facts relating either to the Invention or to any of the patent or patent applications based on the Invention that might be useful to WARF and to testify about any such facts in any interferences or litigation, if requested by WARF to do so. I shall do the above acts without additional compensation but at no expense to me.

Should the application number of any of the patent applications referenced above be unavailable the date that I execute this document, WARF is authorized by me to insert the application number and filing dates of these patent applications into this document. WARF is also specifically authorized to record this document as evidence of my assignment to WARF of any subsequent United States patent application claiming priority from any of the above identified patent applications.

Ref: P170207US02 Wisconsin Alumni Research Foundation

Inventor:

Chang-Beom Eom 830 Hidden Cave Road Madison, WI 53717

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State of Wisconsin)

County of Dane

On this \underline{Q} day of \underline{March} , $20\underline{1}$ before me personally appeared Chang-Beom Eom, known to me to be the person identified above as the "Inventor," who executed the above instrument and acknowledged to me that he or she executed the same for the uses and purposes therein set forth.

SEAL

Vana Christenson Notary Public My Commission expires: <u>April 09, 2020</u>

Date: 3/9/2017

Valsu ll. Inventor:

Date: 3/9/2019

Daesu Lee 906 Eagle Heights, Apt E Madison, WI 53705

>))ss.

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State of Wisconsin

County of Dane

On this \underline{q} day of \underline{March} , $20\underline{7}$ before me personally appeared Daesu Lee, known to me to be the person identified above as the "Inventor," who executed the above instrument and acknowledged to me that he or she executed the same for the uses and purposes therein set forth.

SEAL

Vana Christenson Notary Public My Commission expires: <u>April 03</u>, 2020

Inventor:

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Zhenqiang Ma 5520 Sandhill Dr. Middleton, WI 53562

State of Wisconsin

County of Dane

On this \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M} day of \underline{M}



Notary Public

My Commission expires: 10-19-18

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PATENT REEL: 047891 FRAME: 0484

02/14/2em

Date:

103 Inventor:

Dong Liu 931 Eagle Heights, Apt D, Madison, WI 53705

>))ss. }

Date: _____3/14/2017

State of Wisconsin

County of Dane

On this $\underline{14}$ day of $\underline{16}$ day of \underline{16} day of $\underline{16}$ day of $\underline{16}$ day of $\underline{16}$ day of \underline{16} day of $\underline{16}$ day of $\underline{16}$ day of \underline{16} day of \underline{16} day of $\underline{16}$ day of \underline{16} d



PATENT REEL: 047891 FRAME: 0485

Inventor:

19/20/2011 Date:

Sang June Cho 82 S Gardens Way Fitchburg, WI 53711

State of Wisconsin))ss. County of Dane)

On this 10th day of 0000, 2017 before me personally appeared Sang June Cho, known to me to be the person identified above as the "Inventor," who executed the above instrument and acknowledged to me that he or she executed the same for the uses and purposes therein set forth.

SEAL

Varaanet WII Notary Publ



My Commission expires: 11720

med Inventor:

Date: 10/20/2017

Jaeseong Lee 385 River Oaks Pkwy Apt 2122, San Jose, CA 95134

Califirnia State of Wisconsin) Santa Clara)ss. County of Dane)

On this 20^{4} day of 20^{4} , 20/7 before me personally appeared Jaeseong Lee, known to me to be the person identified above as the "Inventor," who executed the above instrument and acknowledged to me that he or she executed the same for the uses and purposes therein set forth.

SEAL

John

Notary Public

My Commission expires: June, 24th, 2021

G. SAHOTA COMM. # 2199567 NOTARY PUBLIC-CALIFORNIA SANTA CLARA COUNTY My Comm. Exp. June 24, 2021 **CSN**3