505827024 12/18/2019

PATENT ASSIGNMENT COVER SHEET

NEW ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE:

EPAS ID: PAT5873854

		1			
NATURE OF CONVEYANCE:			ASSIGNMENT		
CONVEYING PARTY D	ΑΤΑ				
			Name	Execution Da	
FADWA EL-MELLOUH	l			04/21/2019	
NOUAR TABET			04/21/2019		
FAHHAD HUSSAIN AL	HARBI			04/21/2019	
STEFANO SANVITO				04/21/2019	
HEESOO PARK				04/21/2019	
RECEIVING PARTY D	ΔΤΔ				
Name:		FOU	NDATION		
Street Address:	P.O. BC				
City:	DOHA				
State/Country:	QATAR	{			
Name:	-		LEGE DUBLIN		
Street Address:	COLLE				
Internal Address:	DUBLIN				
City:	DUBLIN				
State/Country:	IRELAN				
oute/oountry.					
PROPERTY NUMBERS	S Total: 1				
Property Type			Number		
Application Number: 1616		16165	5495		
		(010)	07 0105		
Fax Number:		• /	327-8185 mail address first; if that is un	neuccessful it will be sent	
			at is unsuccessful, it will be se		
			23721121		
Email: chicag			go.patents@klgates.com		
Correspondent Name: K&L GATES LLP			GATES LLP		
Address Line 1: PO BOX 113		OX 1135			
		CHIC	AGO, ILLINOIS 60690		
Address Line 4:					
Address Line 4:	UMBER:		5600234.00118		

SIGNATURE:	/Matthew S. Dicke/			
DATE SIGNED: 12/18/2019				
This document serves as an Oath/Declaration (37 CFR 1.63).				
Total Attachments: 5				
source=5600234-00118_CombinedDeclarationAssignment#page1.tif				
source=5600234-00118_CombinedDeclarationAssignment#page2.tif				
source=5600234-00118_CombinedDeclarationAssignment#page3.tif				
source=5600234-00118_CombinedDeclarationAssignment#page4.tif				
source=5600234-00118_CombinedDeclarationAssignment#page5.tif				

Title of Invention	PHOTOVOLTAIC PEROVSKITE OXYCHALCOGENIDE MATERIAL AND	Attorney Docket No.			
Invention	OPTOELECTRONIC DEVICES INCLUDING THE SAME	5600234.00118			
As the below na	med inventor, I hereby declare that:	***************************************			
This declaration is directed to:	The attached application, or				
	United States application or PCT international application number	16/165,495			
	filed on October 19, 2018				
The above-ider	tified application was made or authorized to be made by me.				
I believe that I a	m the original inventor or an original joint inventor of a claimed invention in the ap	oplication.			
laws of Qatar a Dublin (hereina	S, Qatar Foundation (hereinafter "ASSIGNEE"), a corporation duly organized and nd having its principal office and place of business at P.O. Box 5825, Doha, Qatar ter "ASSIGNEE"), a corporation duly organized and existing under the laws of Ire and place of business at College Green, Dublin 2, Dublin, IE, desires to acquire the	r, and Trinity College land and having its			
NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I do hereby sell, assign, and transfer, and hereby set over unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest to said invention in the United States of America and all foreign countries, including, without limitation, said invention as described in the aforesaid application, to be held and enjoyed by me, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made, including, without limitation, all rights to the aforesaid application and to any United States Letters Patent therefor, when issued together with all improvements thereon and betterments thereof, all related applications including, but not limited to, divisions, continuations-in-part, reissues and reexaminations thereof and substitutions of or for said application, and all foreign rights including the right to make application for Letters Patent for said inventions in any and all foreign countries and the right to claim priority as to the filing date under the International Convention on the basis for the aforesaid application for United States Letters Patent; and I hereby authorizes and requests the Commissioner of Patents to issue all Letters Patent Issuing therefrom to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives.					
I hereby agree to execute any papers, provide any information and testify in any interference or litigation at the request of ASSIGNEE, its successors, assigns and legal representatives, when deemed essential to ASSIGNEE's, its successors', assigns' and legal representatives' full enjoyment, protection, enforcement and title in and to such invention and rights hereby transferred.					
I furthermore agree upon request of said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, to execute any and all papers desired by said ASSIGNEE, its successors, assigns and legal representatives, for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE, its successors, assigns and legal representatives.					
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.					
LEGAL NAME OF INVENTOR					
Inventor: Fadwa EL-MELLOUHI Date (Optional): 21/04/2019					
Residence Address: OchA, QATAR					
Signature:					

PATENT REEL: 051316 FRAME: 0314

Title of Invention	PHOTOVOLTAIC PEROVSKITE OXYCHALCOGENIDE MATERIAL AND OPTOELECTRONIC DEVICES INCLUDING THE SAME 5600					
As the below n	amed inve	ntor, I hereby declare that:				
	This declaration The attached application, or					
	\boxtimes	United States application or F	PCT international application number	16/165,495		
		filed on October 19, 2018				
The above-ider	ntified app	lication was made or authorize	ed to be made by me.			
I believe that I	am the oriq	ginal inventor or an original joi	nt inventor of a claimed invention in th	e application.		
laws of Qatar a Dublin (hereina	nd having Ifter "ASSI and place	its principal office and place o GNEE"), a corporation duly or	GNEE"), a corporation duly organized If business at P.O. Box 5825, Doha, Q ganized and existing under the laws o , Dublin 2, Dublin, IE,desires to acquire	atar, and Trinity College f Ireland and having its		
NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I do hereby sell, assign, and transfer, and hereby set over unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest to said invention in the United States of America and all foreign countries, including, without limitation, said invention as described in the aforesaid application, to be held and enjoyed by me, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made, including, without limitation, all rights to the aforesaid application and to any United States Letters Patent therefor, when issued together with all improvements thereon and betterments thereof, all related applications including, but not limited to, divisions, continuations, continuations-in-part, reissues and reexaminations thereof and substitutions of or for said application, and all foreign rights including the right to make application for Letters Patent for said inventions in any and all foreign countries and the right to claim priority as to the filing date under the International Convention on the basis for the aforesaid application for United States Letters Patent; and I hereby authorizes and requests the Commissioner of Patents to issue all Letters Patent issuing therefrom to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives.						
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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.						
LEGAL NAME OF INVENTOR						
Inventor: No	uar TABET	r	DateApril 21, 2 (Optional):	2019		
Residence Add	ress:	strate	· · · · · · · · · · · · · · · · · · ·			
Signature:						

PATENT REEL: 051316 FRAME: 0315

Title of Invention	PHOTOVOLTAIC PEROVSKITE OXYCHALCOGENIDE MATERIAL AND OPTOELECTRONIC DEVICES INCLUDING THE SAME				Attorney Docket No.	
	5600234.00					5600234.00118
As the below n	amed inve	ntor, I hereby de	eclare that:			
This declaration is directed to:	י 🗆	The attached a	application, or			
	\boxtimes	United States a	application or PCT in	ternational appl	lication number	16/165,495
		filed on Oct	tober 19, 2018			
The above-ider	ntified app	lication was mad	le or authorized to be	e made by me.		
I believe that I	am the orio	ginal inventor or	an original joint inve	ntor of a claime	d invention in the	e application.
laws of Qatar a Dublin (hereina	nd having fter "ASSI and place	its principal offic GNEE"), a corpo	ce and place of busir oration duly organize	ess at Ρ.Ο. Βο d and existing ι	x 5825, Doha, Q inder the laws of	and existing under the atar, and Trinity College Treland and having its the entire right, title,
NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I do hereby sell, assign, and transfer, and hereby set over unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest to said invention in the United States of America and all foreign countries, including, without limitation, said invention as described in the aforesaid application, to be held and enjoyed by me, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made, including, without limitation, all rights to the aforesaid application and to any United States Letters Patent therefor, when issued together with all improvements thereon and betterments thereof, all related applications including, but not limited to, divisions, continuations, continuations-in-part, reissues and reexaminations thereof and substitutions of or for said application, and all foreign rights including the right to make application for Letters Patent for said inventions in any and all foreign countries and the right to claim priority as to the filing date under the International Convention on the basis for the aforesaid application for United States Letters Patent; and I hereby authorizes and requests the Commissioner of Patents to issue all Letters Patent issuing therefrom to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives.						
I hereby agree to execute any papers, provide any information and testify in any interference or litigation at the request of ASSIGNEE, its successors, assigns and legal representatives, when deemed essential to ASSIGNEE's, its successors', assigns' and legal representatives' full enjoyment, protection, enforcement and title in and to such invention and rights hereby transferred.						
I furthermore agree upon request of said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, to execute any and all papers desired by said ASSIGNEE, its successors, assigns and legal representatives, for the filing and granting of foreign applications and the perfecting of title thereto in said ASSIGNEE, its successors, assigns and legal representatives.						
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.						
LEGAL NAME OF INVENTOR						
Inventor: Fat	ihad Huss	ain ALHARBI		Date (Optional):	April 21,	2019
Residence Address: <u>Home 32, St. 879, Umm Salal Ali, Qatar</u>						
Signature:						

PATENT REEL: 051316 FRAME: 0316

Title of Invention	PHOTOVOLTAIC PEROVSKITE OXYCHALCOGENIDE MATERIAL AND OPTOELECTRONIC DEVICES INCLUDING THE SAME			RIAL AND	Attorney Docket No. 5600234.00118	
As the below named inventor, I hereby declare that:						
As the below h	amed inve	ntor, I hereby d	eclare that:			
This declaration is directed to:	n 🗌	The attached a	application, or			
	\boxtimes	United States	application or PCT in	ernational application	ation number	16/165,495
		filed on Oc	tober 19, 2018			
The above-ider	ntified app	ication was mad	de or authorized to be	e made by me.		
I believe that I	am the oriq	ginal inventor or	r an original joint inve	ntor of a claimed i	invention in the	e application.
laws of Qatar a Dublin (hereina	nd having Ifter "ASSI and place	its principal offi GNEE"), a corp	ice and place of busin	ess at P.O. Box 5 d and existing une	5825, Doha, Qa der the laws of	and existing under the atar, and Trinity College Ireland and having its the entire right, title,
NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I do hereby sell, assign, and transfer, and hereby set over unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest to said invention in the United States of America and all foreign countries, including, without limitation, said invention as described in the aforesaid application, to be held and enjoyed by me, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made, including, without limitation, all rights to the aforesaid application and to any United States Letters Patent therefor, when issued together with all improvements thereon and betterments thereof, all related applications including, but not limited to, divisions, continuations, continuations-in-part, reissues and reexaminations thereof and substitutions of or for said application, and all foreign rights including the right to make application for Letters Patent for said inventions in any and all foreign countries and the right to claim priority as to the filing date under the International Convention on the basis for the aforesaid application for United States Letters Patent; and I hereby authorizes and requests the Commissioner of Patents to issue all Letters Patent issuing therefrom to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives.						
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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.						
LEGAL NAME OF INVENTOR						
Inventor: Stefano SANVITO Date April 21, 2019 (Optional):						
Residence Address: 105 Kimmage Road West, Dublin 12, Dublin, Ireland						
Signature: Sin Sun A						

Title of Invention	2	OLTAIC PEROVSKITE OXYCHALCOGENIDE MATERIAL AND	Attorney Docket No.		
Invention	OFTOEL	5600234.00118			
As the below n	amed invei	ntor, I hereby declare that:			
This declaration is directed to:	n 🗆	The attached application, or			
	\boxtimes	United States application or PCT international application number	16/165,495		
		filed on October 19, 2018			
The above-ider	ntified appl	ication was made or authorized to be made by me.			
I believe that I a	am the orig	inal inventor or an original joint inventor of a claimed invention in the a	pplication.		
laws of Qatar a Dublin (hereina	nd having fter "ASSI and place	oundation (hereinafter "ASSIGNEE"), a corporation duly organized an its principal office and place of business at P.O. Box 5825, Doha, Qata GNEE"), a corporation duly organized and existing under the laws of In of business at College Green, Dublin 2, Dublin, IE, desires to acquire the	r, and Trinity College aland and having its		
NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I do hereby sell, assign, and transfer, and hereby set over unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest to said invention in the United States of America and all foreign countries, including, without limitation, said invention as described in the aforesaid application, to be held and enjoyed by me, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made, including, without limitation, all rights to the aforesaid application and to any United States Letters Patent therefor, when issued together with all improvements thereon and betterments thereof, all related applications including, but not limited to, divisions, continuations, continuations-in-part, reissues and reexaminations thereof and substitutions of or for said application, and all foreign rights including the right to make application for Letters Patent for said inventions in any and all foreign countries and the right to claim priority as to the filing date under the International Convention on the basis for the aforesaid application for United States Letters Patent; and I hereby authorizes and requests the Commissioner of Patents to issue all Letters Patent issuing therefrom to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives.					
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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.					
LEGAL NAME OF INVENTOR					
Inventor: He	esoo PAR	K Date (Optional): April/21/201	9		
Residence Add	iress:	QEERI, Hamad Bin Khalifa University, PO Box 34110, Doha, Qata	7		
Signature:					

PATENT REEL: 051316 FRAME: 0318

RECORDED: 12/18/2019