

## 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>
THAD DRUFFEL	10/31/2018
BRANDON LAVERY	10/30/2018
KRISHNAMRAJU ANKIREDDY	10/31/2018
AMIR HOSSEIN GHAREMANI	10/31/2018
BLAKE MARTIN	10/31/2018
GAUTAM GUPTA	02/20/2019
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<b>State/Country:</b>	KENTUCKY
<b>Postal Code:</b>	40202
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16165448
<b>CORRESPONDENCE DATA</b>	
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<b>Email:</b>	lminton@wyattfirm.com
<b>Correspondent Name:</b>	MAX E. BRIDGES
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<b>Address Line 2:</b>	500 WEST JEFFERSON STREET, SUITE 2800
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<b>ATTORNEY DOCKET NUMBER:</b>	020088.70
<b>NAME OF SUBMITTER:</b>	MAX E. BRIDGES, REG. NO. 76,099
<b>SIGNATURE:</b>	/Max E. Bridges/
<b>DATE SIGNED:</b>	03/08/2019

PATENT

**Total Attachments: 8**

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**Declaration and Assignment for Utility or Design Patent Application**

Title of invention: **METHODS FOR FORMING A PEROVSKITE SOLAR CELL**

Application No.: 16/165,448, filed on October 19, 2018

**I. Declaration**

As a below named inventor, I hereby declare that this declaration is directed to:

the attached application, or

United States application number 16/165,448 filed on October 19, 2018 or  
PCT international application number \_\_\_\_\_ filed on  
\_\_\_\_\_. The United States application number 16/165,448 filed  
on October 19, 2018 claims priority as a continuation-in-part patent application to  
U.S. Nonprovisional Patent Application No. 15/443,766, filed on February 27,  
2017, which claims the benefit of U.S. Provisional Patent Application No.  
62/299,593, filed February 25, 2016, all rights to which including the right to  
claim priority are also assigned to Assignee

As the below named inventor, I hereby declare that:

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed  
invention in the application.

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.

**II. Assignment**

FOR GOOD AND VALUABLE CONSIDERATION, the receipt of which is hereby acknowledged, the below named inventors (hereinafter called "ASSIGNORS") hereby assign, transfer, and convey ownership unto: **University of Louisville Research Foundation, Inc.**, a corporation organized under the laws of the Commonwealth of Kentucky, with a correspondence address of the 300 East Market Street, Suite 300, Office of Technology Transfer, Louisville, Kentucky 40202 U.S.A., (hereinafter called "ASSIGNEE," which shall include all successors and assigns, if any), the full and exclusive rights, title, and interest in and to the above-named invention and all rights privileges under any Letters Patent that may be granted thereon. Herein, the assignment of full and exclusive rights, title, and interest includes the right to sue for past, present, and future infringement.

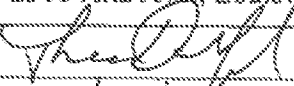
ASSIGNORS also assign full and exclusive rights, title, and interest in and to any substitute, nonprovisional, continuation, continuation-in-part, and/or divisional application(s) which may be based in whole or in part on the above-referenced application, or which otherwise claims priority to such application. ASSIGNORS also assign full and exclusive rights, title, and interests in and to said invention in all foreign countries, and all applications for Patent which may be based in whole or in part on the above-referenced application, including the right to claim International Convention priority. ASSIGNORS HEREBY AUTHORIZE ASSIGNEE to make applications for and to receive Letters Patent or their equivalent for said invention in any of said countries in its own name, or in their respective names, at ASSIGNEE'S election, and to claim any and all priority rights as may exist.

ASSIGNORS agree without charge to said ASSIGNEE but at its expense (a) to execute (i) all necessary papers to be used in connection with the above-identified application and any additional, continuing, or divisional applications, as the ASSIGNEE may deem necessary or expedient, (ii) all papers in connection with any interference or other legal or quasi-legal proceedings relating to the above-identified application or any additional, continuing, or divisional application thereof; (b) to cooperate with ASSIGNEE in every way possible in obtaining testimony or other evidence and going forward in any such proceedings; and (c) to perform all other affirmative acts which may be necessary or desirable to obtain a grant of a valid patent for ASSIGNEE.

ASSIGNORS hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue any and all Letters Patent that may be granted upon the above identified application or any substitute, continuation, continuation-in-part, and/or divisional applications which may be based in whole or in part on the above-referenced application to the ASSIGNEE.

ASSIGNORS hereby covenant and warrant that they have full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.


[ALL SIGNATURES APPEAR ON A SEPARATE PAGES BELOW]

Name:	Thad Druffel
Citizenship:	U.S.
Address:	2306 Alta Ave, Louisville, Kentucky 40205 U.S.A.
Signature	
Date:	10/31/18

COMMONWEALTH OF KENTUCKY )  
) :SS  
COUNTY OF Jefferson )

The foregoing instrument was subscribed, sworn to and acknowledged before me this 31 day of ~~September~~ October, 2018 by Thad Druffel.

My commission expires: July 13 2019

  
NOTARY PUBLIC

Name:	Brandon Lavery
Citizenship:	U.S.
Address:	4701 Southwestern Blvd., Apt. <sup>601</sup> <sub>76</sub> , Hamburg, New York 14075 U.S.A.
Signature	<i>B. Lavery</i>
Date:	10/30/18

STATE OF NEW YORK                    )  
   ) :SS  
 COUNTY OF Erie                    )

30<sup>th</sup> The foregoing instrument was subscribed, sworn to and acknowledged before me this day of ~~September~~, 2018 by Brandon Lavery.  
   <sup>October</sup>

My commission expires: 12/05/2020

*[Signature]*  
 \_\_\_\_\_  
 NOTARY PUBLIC

Name:	Krishnamraju Ankireddy
Citizenship:	India
Address:	784 Frederick Stamm Ct., Apt. 2, Louisville, Kentucky 40217 U.S.A.
Signature	<i>[Handwritten Signature]</i>
Date:	10/31/18

COMMONWEALTH OF KENTUCKY )  
COUNTY OF Jefferson ) :SS

The foregoing instrument was subscribed, sworn to and acknowledged before me this 31 day of ~~September~~ <sup>October</sup>, 2018 by Krishnamraju Ankireddy.

My commission expires: July 13 2019  
*[Handwritten Signature]*  
NOTARY PUBLIC

Name:	Amir Hossein Ghahremani
Citizenship:	Iran
Address:	2108 Unity Place, Louisville, Kentucky 40208 U.S.A.
Signature	<i>Amir Hossein Ghahremani</i>
Date:	10/31/2018

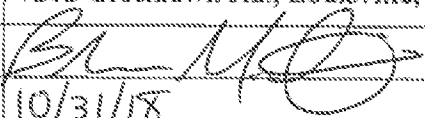
COMMONWEALTH OF KENTUCKY )  
COUNTY OF Jefferson ) :SS

31 The foregoing instrument was subscribed, sworn to and acknowledged before me this day of ~~September~~, 2018 by Amir Hossein Ghahremani.

My commission expires: <sup>October</sup> July 13 2019

*C. O'Hell*  
NOTARY PUBLIC




Name:	Blake Martin
Citizenship:	U.S.
Address:	7202 Greenlawn Rd., Louisville, Kentucky 40222 U.S.A.
Signature	
Date:	10/31/18

COMMONWEALTH OF KENTUCKY )  
COUNTY OF Jefferson ) :SS

The foregoing instrument was subscribed, sworn to and acknowledged before me this 31 day of ~~September~~, 2018 by Blake Martin.

My commission expires: October July 13 2019

C. O'Hair  
NOTARY PUBLIC

Name:	Gautam Gupta
Citizenship:	India
Address:	5909 Worthington Way, Prospect, Kentucky 40059 U.S.A.
Signature	
Date:	2/19/2019

COMMONWEALTH OF KENTUCKY )  
COUNTY OF Jefferson ) :SS

20 The foregoing instrument was subscribed, sworn to and acknowledged before me this day of ~~September, 2018~~ by Gautam Gupta.

February, 2019 - COH

My commission expires:

July 13, 2019

  
NOTARY PUBLIC