

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4807627

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MAN SOO CHOI	12/28/2017
NAMYOUNG AHN	12/28/2017
NAM-GYU PARK	12/28/2017
DAE-YONG SON	12/07/2017
IN-HYUK JANG	12/28/2017
SEONG MIN KANG	12/06/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	GLOBAL FRONTIER CENTER FOR MULTISCALE ENERGY SYSTEMS
<b>Street Address:</b>	1 GWANAK-RO GWANAK-GU
<b>City:</b>	SEOUL
<b>State/Country:</b>	KOREA, REPUBLIC OF
<b>Postal Code:</b>	08826
<b>Name:</b>	SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION
<b>Street Address:</b>	1 GWANAK-RO GWANAK-GU
<b>City:</b>	SEOUL
<b>State/Country:</b>	KOREA, REPUBLIC OF
<b>Postal Code:</b>	08826
<b>Name:</b>	RESEARCH & BUSINESS FOUNDATION SUNGYUNKWAN
<b>Street Address:</b>	2066 SEBU-RO JANGAN-GU
<b>City:</b>	GYEONGGI-DO
<b>State/Country:</b>	KOREA, REPUBLIC OF
<b>Postal Code:</b>	16419
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15745245
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(612)315-4321
<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>	

PATENT

**Phone:** 404-949-5730  
**Email:** patents@cf-d-ip.com  
**Correspondent Name:** PETER S. DARDI, PH.D.  
**Address Line 1:** CHRISTENSEN, FONDER, DARDI & HERBERT PLLC  
**Address Line 2:** 33 SOUTH SIXTH STREET, SUITE 3950  
**Address Line 4:** MINNEAPOLIS, MINNESOTA 55402

<b>ATTORNEY DOCKET NUMBER:</b>	5107.21US01
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<b>NAME OF SUBMITTER:</b>	PETER S DARDI
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<b>SIGNATURE:</b>	/Peter S. Dardi/
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<b>DATE SIGNED:</b>	02/02/2018
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**Total Attachments: 6**

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ASSIGNMENT

WHEREAS, we, Man Soo CHOI of Seoul, Korea, Namyong AHN of Seoul, Korea, Nam-Gyu PARK of Seoul, Korea, Dae-Yong SON of Gyeonggi-do, Korea, In-Hyuk JANG of Gyeonggi-do, Korea, and Seong Min KANG of Busan, Korea, have invented certain new and useful improvements in LEAD HALIDE ADDUCT COMPOUND AND PEROVSKITE ELEMENT USING SAME, for which an application for Letters Patent of the United States has been made, and which may be identified in the United States Patent Office by Application No. 15/745,245, filed January 16, 2018

WHEREAS, Global Frontier Center for Multiscale Energy Systems ("Assignee"), having its principal offices at 1 Gwanak-ro Gwanak-gu, Seoul 08826, Republic of Korea, is desirous of acquiring, as Tenant-in-Common, an undivided interest in the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefor;

WHEREAS, Seoul National University R&DB Foundation ("Assignee"), having its principal offices at 1 Gwanak-ro Gwanak-gu, Seoul 08826, Republic of Korea, is desirous of acquiring, as Tenant-in-Common, an undivided interest in the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefor;

WHEREAS, Research & Business Foundation Sungyunkwan University ("Assignee"), having its principal offices at 2066 Sebu-ro, Jangan-gu Suwon, Gyeonggi-do, 16419, Republic of Korea, is desirous of acquiring, as Tenant-in-Common, an undivided interest in the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefor;

NOW, THEREFORE, for and in consideration of One Dollar (\$1.00) and other good and valuable consideration to us in hand paid by said Assignees, the receipt of which is hereby acknowledged, we have sold, assigned and transferred, and by these presents do hereby sell, assign and transfer unto the said Assignees, their successors and assigns, our entire right, title and interest in and to said invention, said application, all applications claiming priority to said application including all divisions, continuations or renewals thereof, and the Letters Patent, both foreign and domestic, that may or shall issue, therefrom including all reissues or extensions of such patents including all of our rights under the International Convention, and we do hereby authorize and request the Commissioner of Patents to issue said Letters Patent to the above mentioned Assignees in accordance herewith.

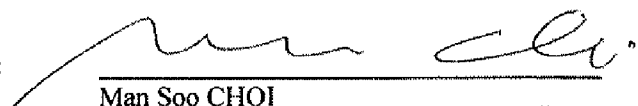
We hereby authorize the above mentioned Assignees, their successors and assigns, or anyone it may properly designate, to insert in this instrument the date of execution and/or filing date and application number of said application when ascertained.

We further authorize said Assignees, their successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in their own name if desired, in any and all foreign countries, and additionally to claim the filing date of said United States application and/or otherwise take advantage of the provisions of the International Convention.

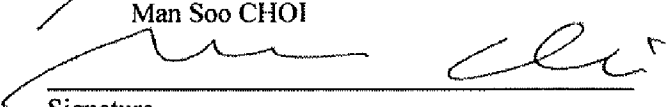
Upon said consideration we do hereby covenant and agree with the said Assignees, their successors and assigns, that we will not execute in writing or do any act whatsoever conflicting with these presents, and that we or our executors or administrators will at any time upon request, without further or additional consideration, but at the expense of the said Assignees, their successors and assigns, execute such additional writings and do such additional acts as said Assignees, their successors and assigns, may deem necessary or desirable to perfect the Assignees' enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, or of any and all foreign countries on said invention, and in enforcing any rights occurring as a result of such applications or patents, by giving testimony in any proceedings or transactions involving such applications or patents.

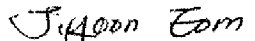
IN WITNESS WHEREOF, we have hereunto set our hands and affixed our seal as dated below.

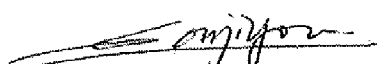
ASSIGNOR:

  
Man Soo CHOI

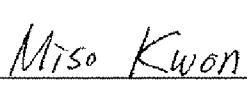
Date: Dec / 28 / 2011

  
Signature

  
Witness One Printed Name

  
Witness One Signature

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Witness Two Printed Name

  
Witness Two Signature

<sup>2</sup> Miso

ASSIGNOR:

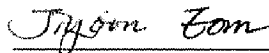


Namyoung AHN

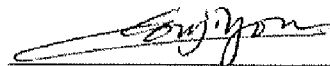
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Signature

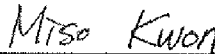


Witness One Printed Name



Witness One Signature

Witness Two Printed Name



Witness Two Signature

ASSIGNOR:

Nam-Gyu PARK

Date: \_\_\_\_\_

Signature

Witness One Printed Name

Witness One Signature

Witness Two Printed Name

Witness Two Signature

ASSIGNOR:

Namyoung AHN

Date: \_\_\_\_\_

Signature

Witness One Printed Name

Witness One Signature

Witness Two Printed Name

Witness Two Signature

ASSIGNOR:

Nam-Gyu PARK

Date: Dec 28 / 17

Signature

Witness One Printed Name

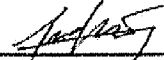
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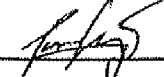
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Attorney Docket No.: 5107.21US01

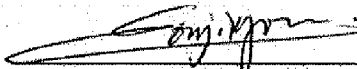
ASSIGNOR:

  
Dae-Yong SON

Date: 7. December, 2017

  
Signature

Jiyoung Tom  
Witness One Printed Name

  
Witness One Signature

\_\_\_\_\_  
Witness Two Printed Name

Miso Kwon  
Witness Two Signature


ASSIGNOR:

In-Hyuk Jang  
In-Hyuk JANG

Date: 28 / Dec / 2017

In-Hyuk Jang  
Signature

Jiyoung Tom  
Witness One Printed Name

  
Witness One Signature

\_\_\_\_\_  
Witness Two Printed Name

Miso Kwon  
Witness Two Signature

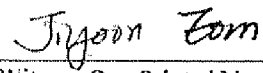
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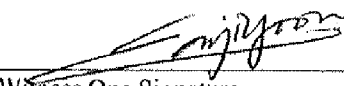
ASSIGNOR:

  
Seong Min KANG

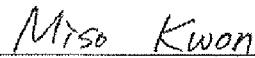
Date: 2017.12.06

Signature

  
Witness One Printed Name

  
Witness One Signature

Witness Two Printed Name

  
Witness Two Signature