PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MICHAEL S. STRANO	09/28/2018
ANTON LEE COTTRILL	10/27/2018
SAYALEE GIRISH MAHAJAN	11/15/2018
TIANXIANG LIU	09/27/2018
VOLODYMYR B. KOMAN	09/27/2018

RECEIVING PARTY DATA

Name:	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Street Address:	77 MASSACHUSETTS AVENUE
City:	CAMBRIDGE
State/Country:	MASSACHUSETTS
Postal Code:	02139

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16120125

CORRESPONDENCE DATA

Fax Number: (617)310-9000

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.

Correspondent Name: NUTTER MCCLENNEN & FISH LLP

Address Line 1: SEAPORT WEST, 155 SEAPORT BOULEVARD BOSTON, MASSACHUSETTS 02210-2604

ATTORNEY DOCKET NUMBER: 101328-442 (MIT20330)

NAME OF SUBMITTER: RORY P. PHEIFFER

SIGNATURE: /Rory P. Pheiffer/

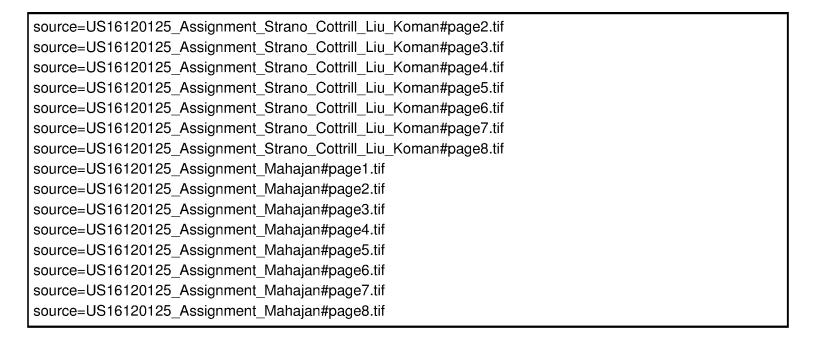
DATE SIGNED: 12/12/2018

Total Attachments: 16

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PATENT REEL: 047754 FRAME: 0585

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ASSIGNMENT BY INVENTORS

THIS ASSIGNMENT, made by Michael S. Strano; Anton Lee Cottrill; Sayalee Girish Mahajan; Tianxiang Liu; and Volodymyr B. Koman (hereinafter referred to as Assignors), residing at 4 Paul Revere Rd., Lexington, Massachusetts 02421; 129 Franklin Street, Apt. 422, Cambridge, Massachusetts 02139; 550 Memorial Drive, Apt. 15D-2, Cambridge, Massachusetts 02139; 143 Albany St., Apt. 241-A, Cambridge, Massachusetts 02139, and 72 School St, Apt. 1, Cambridge, Massachusetts 02139, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in MATERIALS, DEVICES, AND METHODS FOR RESONANT AMBIENT THERMAL ENERGY HARVESTING USING THERMAL DIODES, set forth in a Patent application for Letters Patent of the United States, already filed on August 31, 2018 as U.S. Application No. 16/120,125; and

WHEREAS, Massachusetts Institute of Technology, a university organized under and pursuant to the laws of Massachusetts having its principal place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefore and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or

terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors hereby request the Commissioner for Patents and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

AND Assignors hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply

with the rules of the United States Patent and Trademark Office for recordation of this document:

NUTTER MCCLENNEN & FISH LLP

All practitioners at Customer Number 21125

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

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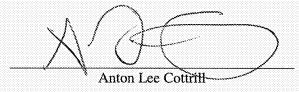
Mron	
Michael S. Strano	

Date: 03/28/2018

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Yunga Zeng (name of witness)



Date:	leha/18		
Velodz	ght jung kouren	(signature of witness)(name of witness)	
	Ge Zhang Ge Zhang	(signature of witness) (name of witness)	

Date:		Sayalee Girish Mahajan
c	(signature of witness)	
	(signature of witness)	

		Ammo L'	
		Tianxiang Liu	
Date:	<u>09/27/2018</u>		
	Junen zerf (signature of witness)		
·	Yewen Zeng (name of witness)		
	Ge Zhang (signature of witness) Ge Zhang (name of witness)		
	Ge Zhana (name of witness)		

	Jan
	Volodymyr B. Koman
Date: 09/27/2018	
(signature of witness)	
Tianxiang Liu (name of witness)	
(signature of witness)	
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ASSIGNMENT BY INVENTORS

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terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors hereby request the Commissioner for Patents and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

AND Assignors hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply

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with the rules of the United States Patent and Trademark Office for recordation of this document:

NUTTER MCCLENNEN & FISH LLP

All practitioners at Customer Number 21125

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

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	Michael S. Strano
Date:	
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(name of witness)	

	,	Anton Lee Cottrill	
Date:			
	(signature of witness)		
	(name of witness)		
wiw.	(signature of witness)		
	(name of witness)		

	Sgnahajan
	Sayalee Girish Mahajar
Date: 15 ⁺⁴ Nov, 2018	
(signature of witness) NINU MURPHY (name of witness)	
(signature of witness) RI VENKATA TAPOVAN (name of witness) LOLLA.	

		Tianxiang Liu	
Date:	······································		
	(signature of witness)		
	(name of witness)		
	(signature of witness)		
	(nome of witness)		

		Volodymyr B. Koman
Date:		
	(signature of witness)	
	(name of witness)	
	(signature of witness)	
	(name of witness)	

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RECORDED: 12/12/2018