

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4754464

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
JUEJUN HU	12/04/2017
TIAN GU	12/04/2017
HONGTAO LIN	12/04/2017
DEREK MATTHEW KITA	12/14/2017
ANURADHA M. AGARWAL	12/05/2017
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State/Country:	MASSACHUSETTS
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PROPERTY NUMBERS Total: 2	
Property Type	Number
Application Number:	15429321
PCT Number:	US1717349
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Address Line 2:	ATTN: PATENT GROUP
Address Line 4:	WASHINGTON, D.C. 20004
ATTORNEY DOCKET NUMBER:	MITX8021/01US 317239-2603
NAME OF SUBMITTER:	CHRISTOPHER MAX COLICE
SIGNATURE:	/Christopher Max Colice/
DATE SIGNED:	12/29/2017

Total Attachments: 6

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ASSIGNMENT

Juejun HU, residing at 292 Nevada St., Newton, MA 02460; Tian GU, residing at 4116 River Forth Drive, Fairfax, VA 22030; Hongtao LIN, residing at 8 Morton Street, Unit 3, Somerville, MA 02145; Derek Matthew KITA, residing at 229 Vassar St., #841, Cambridge, MA 02139; and Anuradha M. AGARWAL, residing at 105 Hickory Road, Weston, MA 02493 (each referred to as "Assignor") have made an invention(s) (the "Invention(s)") set forth in an application for patent entitled **APPARATUS, SYSTEMS, AND METHODS FOR ON-CHIP SPECTROSCOPY USING OPTICAL SWITCHES**, and which is a:

- (1) ☐ provisional application
 - (a) ☐ to be filed herewith; or
 - (b) ☐ bearing Application No. , and filed on ;
- (2) ☒ non-provisional application
 - (a) ☐ to be filed herewith; or
 - (b) ☒ bearing Application No. 15/429,321, and filed on February 10, 2017; and/or
- (3) ☒ PCT application
 - (a) ☐ bearing Application No. PCT/US17/17349, and filed on February 10, 2017.

and/or
- (4) ☐ attached hereto.

WHEREAS, Massachusetts Institute of Technology, a University having its principal place of business at 77 Massachusetts Ave., Cambridge, MA 02139, its successors, legal representatives and assigns, (the "Assignee"), is desirous of acquiring the entire right, title, and interest in: the Invention(s); the application(s) for patent identified above; the right to file applications for patent of the United States or other countries on the Invention(s); any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, these applications; any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of these application(s); and any and all patent(s) of the United States or other countries that may be granted therefor or thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the Assignee, or if the Assignor has already done so via a prior agreement with the Assignee or a predecessor in

MITX-8021/01US 317239-2603

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interest of the Assignee then in confirmation of any obligation to do so in said prior agreement, the Assignor has sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in:

(a) the Invention(s);

(b) the application(s) for patent identified above;

(c) the right to file applications for patent of the United States or other countries on the Invention(s), including all rights under the Hague Convention, the Paris Convention for the Protection of Industrial Property, and under the Patent Cooperation Treaty, and all rights of claiming priority in any country of the world;

(d) any application(s) for patent of the United States or other countries claiming the Invention(s);

(e) any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, at least one of the application(s) for patent identified above or any application(s) for patent claiming the Invention(s), including any priority application(s), substitute application(s), division(s), continuation(s), and continuation(s)-in-part;

(f) any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of any application for patent identified in the preceding paragraphs (b)-(e) and of any and all patent(s) granted based thereon in the United States and in all other countries; and

(g) any patent(s) of the United States or other countries that may be granted for or on any application for patent identified in the preceding paragraphs (b)-(e), including any reissue(s), reexamination(s), revival(s), renewal(s) and extension(s) of said patent(s).

The above-granted rights, titles, and interests are to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made.

The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, or if applicable, at such time said prior agreement was executed, the Assignor is a lawful owner of an undivided interest in the entire right, title, and interest in and to the Invention(s), that the Invention(s) are unencumbered, except, if applicable, by obligation to assign in accordance with said prior agreement, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein, and

that Assignor will not make or enter into any assignment, sale, agreement or encumbrance which would conflict with these presents.

The Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that the Assignor will sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done in connection with any and all proceedings for the procurement, maintenance, enforcement and defense of the invention(s), said application(s), and said patent(s), including interference and derivation proceedings, and any post-grant proceedings (e.g., opposition proceedings, post-grant reviews, *Inter partes* reviews, supplemental examinations, etc.) without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby authorizes and requests the attorneys of COOLEY LLP to insert in the spaces provided above the filing date, the application number, and the attorney docket number of the application(s) identified above when known.

The Assignor hereby requests the Commissioner of Patents to issue said patents of the United States to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

Inventor Signature: Juejun Hu Date: 12/04/2017
Juejun HU

Witness Signature: Di Chen Date: 12/04/2017

Print Witness Name: Di Chen

Inventor Signature: Tian GU Date: 12/04/2017
Tian GU

Witness Signature: Jia Zhao Date: 12/04/2017

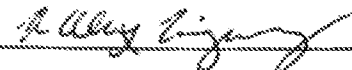
Print Witness Name: Jia Zhao

Inventor Signature: Hongtao LIN Date: 12/04/17
Hongtao LIN

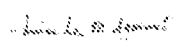
Witness Signature: Lan Li Date: 12/04/17

Print Witness Name: Lan Li

Inventor Signature:  Date: 12/14/2017
Derek Matthew KITA

Witness Signature:  Date: 12/14/2017

Print Witness Name: R. Alex Tinguely

Inventor Signature:  Date: Dec 5th 2017
Digitally signed by Anuradha M. AGARWAL
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ou=MIT, email=anuradha@mit.edu, c=US
Date: 2017.12.05 15:47:10 -0500
Anuradha M. AGARWAL

Witness Signature: _____ Date: Dec 6th 2017

Print Witness Name: Cory James

For and on behalf of ASSIGNEE:

Date: Dec 28, 2017 By: Sherrie Latham
Name: Theresa Latham
Title: Intellectual Property Officer
University: Massachusetts Institute of Technology

Witness Signature: Andy Lozada Date: 12/28/17
Print Witness Name: Andy Lozada