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Atty Ref/Docket No.: 2413.064US1

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Daniel Attinger, Jie Xu	Name: The Trustees of Columbia University in the City of New York
Additional name(s) of conveying party(les) attached?	Street Address: 535 West 116th Street 412 Low Memorial Library
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Execution Date: January 15, 2010, January 15, 2010	
Application number(s) or patent number(s):	
If this document is being filed together with a new application	n, the execution date of the application is:
A. Patent Application No.(s)	B. Patent No.(s)
Serial No. 12/642,434, filed December 18, 2009	
Additional numbers attached? []Yes [X]No	
5. Name and address of party to whom comes and and	6. Total number of applications and patents involved: \underline{I}
 Name and address of party to whom correspondence concerning document should be mailed: 	7. Total fee (37 CFR 3.41):\$ 40.00
Name: Suneel Arora	[]Enclosed
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PATENT REEL: 024102 FRAME: 0357

Attorney Docket No. 2413.064UST Client Ref. No. M07-100/2413.064US1/JS/JA

ASSIGNMENT

WHEREAS, We, <u>Daniel Attinger</u>, residing at 90 Morningside Drive #3F, New York, New York 10027, and <u>Jie Xu</u>, residing at 503 West 121st Street #32E, New York, New York 10027, made certain new and useful inventions and improvements which are described in an application for U.S. Letters Patent on <u>December 18, 2009</u>, which application was assigned U.S. patent application serial number <u>12/642,434</u>, and is entitled <u>ON-DEMAND MICROFLUIDIC DROPLET OR BUBBLE GENERATION</u>;

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned do hereby:

SELL, ASSIGN AND TRANSFER to The Trustees of Columbia University in the City of New York (the "Assignee"), a corporation of the State of New York, having a place of business at 535 West 116th Street, 412 Low Memorial Library, New York, New York 10027, the entire right, title and interest for the United States and all foreign countries in and to: any and all inventions and improvements which are disclosed in the identified application for U.S. Letters Patent, and which may be further identified below; such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries on any of such inventions and/or improvements (including any applications for utility models); all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions and/or improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and to claim priority based on the identified application;

AUTHORIZE AND REQUEST that any attorney associated with U.S. PTO Customer No. <u>68836</u> may (directly or through his/her designee) delete, insert, or alter any information identifying this application, or any related application, below, after execution of this Assignment;

Additional Application Information

- U.S. Provisional Application Serial No. 60/936,428, filed on June 20, 2007.
- U.S. Provisional Application Serial No. 60/969,037, filed on August 30, 2007.
- U.S. Provisional Application Serial No. 61/032,401, filed on February 28, 2008.
- U.S. Provisional Application Serial No. 61/042,194, filed on April 3, 2008.
- U.S. Provisional Application Serial No. 61/047,034, filed on April 22, 2008.

International Application Serial No. PCT/US2008/007711, filed on June 20, 2008.

PATENT REEL: 024102 FRAME: 0358 ASSIGNMENT

Client Ref. No. M07-100/2413.064US1/JS/JA.

Assignors: Daniel Aninger et al.

Title: ON-DEMAND MICROFLUIDIC DROPLET OR BUBBLE GENERATION

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Serjal Number: 12/642,434

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and/or property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the undersigned will (1) execute all provisional, non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers; (3) communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for such improvements; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such improvements in the Assignee, or for securing, maintaining and enforcing proper patent protection for such improvements;

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned, and is to extend to the benefit of the successors, assigns and nominees of the Assignee.

AGREED as of the date of my signature below:

PATENT

REEL: 024102 FRAME: 0359

ASSIGNMENT

Docket No: 2413.064US1 Client Ref. No. M07-100/2413.064US1/JS/JA Assignors: Daniel Attinger et al.
Title: ON-DEMAND MICROFLUIDIC DROPLET OR BUBBLE GENERATION Serial Number: 12/642,434 IN TESTIMONY WHEREOF, I have hereunto set my hand this // Daniel Attinger , 20 10 before me personally appeared Daniel Attinger, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth. Xiao [SEAL] Notary Public

PATENT

REEL: 024102 FRAME: 0360

RECORDED: 03/18/2010

ASSIGNMENT
Client Ref. No. MOT-100/2413.064US1/38/1A
Assignors: Daniel Attinger et al.
Title: CN-DEMAND MICROFLUIDIC DROPLET OR BUBBLE GENERATION

Fage 4 of 4

IN TESTIMONY WHEREOF, I have hereunto set my hand this

Is a Xu

STATE OF

On this 15 day of

On this 15 day of

Xu, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

[SEAL]

Motary Public

Notary Public

PATENT REEL: 024102 FRAME: 0361