504603682 10/20/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

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EPAS ID: PAT4650394

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YUANJIN ZHENG	10/10/2017
XIAOHUA FENG	10/19/2017
FEI GAO	08/29/2017

RECEIVING PARTY DATA

Name:	NANYANG TECHNOLOGICAL UNIVERSITY
Street Address:	50 NANYANG AVENUE
City:	SINGAPORE
State/Country:	SINGAPORE
Postal Code:	639798

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15553861

CORRESPONDENCE DATA

Fax Number: (415)576-0300

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.

Phone: 4155760200

Email: dgibby@kilpatricktownsend.com

Correspondent Name: KILPATRICK TOWNSEND & STOCKTON LLP

Address Line 1: 1100 PEACHTREE STREET Address Line 4: ATLANTA, GEORGIA 30309

ATTORNEY DOCKET NUMBER:	103117-1059999
NAME OF SUBMITTER:	DARIN J. GIBBY
SIGNATURE:	/darin j gibby/
DATE SIGNED:	10/20/2017

Total Attachments: 4

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PATENT 504603682 REEL: 043912 FRAME: 0128

Attorney Docket No. 103117-1059999

ASSIGNMENT (Patent Application)

We, the undersigned, have invented certain inventions and improvements disclosed in a utility (provisional or non-provisional) or design patent application entitled

"PHOTO-ACOUSTIC SENSING APPARATUS AND METHODS OF OPERATION THEREOF," filed with the U.S. Patent & Trademark Office on August 25, 2017, and assigned serial no.15/553.861.

For good and valuable consideration, the receipt and sufficiency of which We acknowledge, We:

Agree to assign, transfer, convey, and sell, hereby assign, transfer, convey, and sell and have assigned, transferred, conveyed, and sold to Nanyang Technological University, having a principal place of business at 50 Nanyang Avenue, Singapore 639798 ("Assignee"), the entire right, title, and interest in and to:

- (a) all intellectual property (including, without limitation, any innovation, information, invention, discovery, product, process, work or design) disclosed, embodied, shown, or claimed in the above-referenced patent application, implicitly or explicitly;
- (b) the above-referenced patent application, the right to claim priority to the above-referenced patent application, all applications based in whole or in part upon the above-referenced patent application, including, without limitation, all applications that are a provisional, non-provisional, design, divisional, continuation, continuation-in-part, registration, utility model, industrial design, reissue, renewal, substitute, extension, reexamination, post-grant review, inter partes review, supplemental examination or non-U.S. patent application or application for other rights based in whole or in part on the above-referenced patent application;
- (c) all patents (including, without limitation, all U.S. and non-U.S. patents, registrations, utility models, industrial designs, design patents, counterparts, continuations, continuations-in-part, divisionals, reissues, renewals, substitutes, extensions, reexaminations, post-grant reviews, inter partes reviews and supplemental examinations) that are granted or issued upon, or that claim priority to, any and all applications described in (b) of this paragraph or that disclose or claim intellectual property described in (a) of this paragraph, in whole or in part; and
- (d) all claims for damages by reason of past infringement of any rights under the applications or patents described in (a), (b) or (c) of this paragraph (including provisional rights to reasonable royalties pursuant to 35 U.S.C. §154(d)) and the right to sue for and collect such damages and royalties for Assignee's own use.
- 2. Authorize and request the U.S. Patent and Trademark Office or any other U.S. or non-U.S. agency to issue to the Assignee any and all patent(s), or other rights or documents, resulting from

PATENT REEL: 043912 FRAME: 0129 ASSIGNMENT Attorney Docket No. 103117-1059999

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the intellectual property, patent application(s) and patents described in paragraph 1 of this Assignment.

- 3. Agree to sign all papers and documents, including without limitation, applications, declarations, oaths and petitions, and, at the Assignee's expense, perform any other acts that are necessary in connection with prosecution of patent application(s) or intellectual property described in paragraph 1 of this Assignment and the enforcement of patent(s) or other rights resulting from such patent application(s) or intellectual property.
- 4. Agree that the terms, covenants, and conditions of this Assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon me, as well as my heirs, legal representatives, and assigns.
- Promise and affirm that We have not entered, and will not enter, into any assignment, contract, or understanding that conflicts with this Assignment.
- Authorize Kilpatrick Townsend & Stockton to insert the above application number and filing date of the above-described patent application when known.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 10/10/2017	Yuanjin Zheng
Dated:	Xiaohua Feng
Dated:	Fei Gao

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ASSIGNMENT Attorney Docket No. 103117-1059999

Page 2 of 2

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IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated:	Yuanjin Zheng
Dated: 19/10/2017	Xtarhua Teny
Jaco	Xiaohua Feng
Dated:	Fei Gao

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PATENT REEL: 043912 FRAME: 0131 ASSIGNMENT Attorney Docket No. 103117-1059999

Page 2 of 2

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Dated:	Yuanjin Zheng	
Dated:	Xiaohua Feng	
Dated: 29 Aug. 2017	Bel Gan	

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PATENT REEL: 043912 FRAME: 0132

RECORDED: 10/20/2017