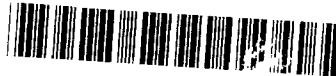


09-21-2005

Form PTO-1595 (Rev. 07/05)  
OMB No. 0651-0027 (exp. 6/30/2008)U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office103085935  
PATENT

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

## 1. Name of conveying party(ies):

Zhifeng Ren (09/12/2005), Gang Chen  
(07/26/2005), Bed Poudel (09/12/2005), Shankar  
Kumar (09/12/2005),Additional name(s) of conveying party(ies) attached? ☒ Yes ☐ No

## 2. Name and address of receiving party(ies)

MASS INSTITUTE OF TECHNOLOGY

Name: (MIT)

Internal Address:

Street Address:

77 Massachusetts Avenue

City: Cambridge

State: Massachusetts

Country: United States of America Zip: 02139

Additional name(s) & address(es) attached: ☒ Yes ☐ No

## 3. Nature of conveyance/Execution Date(s):

Execution Date(s): in parentheses after inventor name

- ☒ Assignment ☐ Merger ☐ Change of Name  
☐ Security Agreement ☐ Joint Research Agreement  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other

## 4. Application or patent number(s):

☒ This document is being filed together with a new application.

A. Patent Application No.(s)

11/120,725

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address to whom correspondence concerning document should be mailed:

Name: Reza Mollaaghababa  
NUTTER MCCLENNEN & FISH LLP

Internal Address: Atty. Dkt.: 101328-0200

Street Address: World Trade Center West  
155 Seaport Boulevard

City: Boston

State: MA Zip: 02210-2604

Phone Number: (617) 439-2000

Fax Number: (617) 310-9000

Email Address:

## 6. Total number of applications and patents involved:

1

## 7. Total fee (37 CFR 1.21(h) &amp; 3.41) \$ 40.00

- ☐ Authorized to be charged by credit card  
☐ Authorized to be charged to deposit account  
☒ Enclosed  
☐ None required (government interest not affecting title)

## 8. Payment Information

a. Credit Card Last 4 Numbers  
Expiration Dateb. Deposit Account Number  
Authorized User Name

## 9. Signature:

Signature

September 14, 2005

Date

Reza Mollaaghababa - 43,810

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

14

**Recordation Form Cover Sheet**  
 I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: MS Assignment Recordation Services, Director of the US Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: September 14, 2005

Signature: (Thomas J. Engellener)

PATENT  
REEL: 016998 FRAME: 0701

RECORDATION FORM COVER SHEET  
(continued)

## Additional Conveying Party(ies)/Execution Date(s) (1. Continued):

Wenzhong Wang (09/12/2005), and Mildred Dresselhaus (07/26/2005)

## Additional Assignees (2. Continued):

Assignee Name: The Trustees of Boston College

Internal Address:

Street Address: 21 Campanella WayCity: Chestnut Hill State: Massachusetts Country: United States of America Zip: 02467

Assignee Name: \_\_\_\_\_

Internal Address:

Street Address:

City: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_ Zip: \_\_\_\_\_

Assignee Name: \_\_\_\_\_

Internal Address:

Street Address:

City: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_ Zip: \_\_\_\_\_

## Additional Applications and/or Patents (4. Continued):

Additional Patent Application Numbers

4A. Continued:

Additional Patent Numbers

4B. Continued:

Additional numbers attached?

☐

Yes

☐

No

<b>Assignment</b>	
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Dated: <u>Sept. 14, 2005</u>	Signature: <u>[Signature]</u> (Reza Mollaaghababa)

### ASSIGNMENT BY INVENTORS

THIS ASSIGNMENT, made this 26<sup>th</sup> day of July, 2005, by Gang Chen; and Mildred Dresselhaus (hereinafter referred to as Assignors), residing at 128 Skelton Road, Carlisle, Massachusetts 01741; and 147 Jason Street, Arlington, Massachusetts 02476, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in METHODS FOR SYNTHESIS OF SEMICONDUCTOR NANOCRYSTALS AND THERMOELECTRIC COMPOSITIONS, set forth in a Patent application for Letters Patent of the United States, already filed on May 3, 2005 as U.S. application No. 11/120,725; and

WHEREAS, MASS INSTITUTE OF TECHNOLOGY (MIT), a College 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 of Patent 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 021125

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



Gang Chen

Date: July 26, 2005

On this 26th day of July, 2005 before me, the undersigned notary public, personally appeared Gang Chen, proved to me through satisfactory evidence of identification, which were PIC# 398607190, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

Margaret Anne Udden (official signature and seal of notary)

Margaret Anne Udden  
NOTARY PUBLIC  
My commission expires April 4, 2008

Mildred Dresselhaus  
Mildred Dresselhaus

Date: July 26, 2005

On this 26th day of July, 2005 before me, the undersigned notary public, personally appeared Mildred Dresselhaus (name of document signer), proved to me through satisfactory evidence of identification, which were Lic # 107223411, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that she signed it voluntarily for its stated purpose.

Margaret Anne Udden (official signature and seal of notary)

Margaret Anne Udden  
NOTARY PUBLIC  
My commission expires April 4, 2008

1433442.1

<b>Assignment</b>	
I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: MS Assignment Recordation Services, Director of the US Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.	
Dated: <u>Sept 14, 2005</u>	Signature: <u>[Signature]</u> (Reza Mollaaghababa)

### ASSIGNMENT BY INVENTORS

THIS ASSIGNMENT, made this 12<sup>th</sup> day of September, 2005, by Zhifeng Ren; Bed Poudel; Shankar Kumar; and Wenzhong Wang (hereinafter referred to as Assignors), residing at 19 Carter Street, Newton, Massachusetts 02460; 8 Berkeley Street, Watertown, Massachusetts 02472; 8 Berkeley Street, Watertown, Massachusetts 02472; and 134 North Street, Newton, Massachusetts 02460, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in METHODS FOR SYNTHESIS OF SEMICONDUCTOR NANOCRYSTALS AND THERMOELECTRIC COMPOSITIONS, set forth in a Patent application for Letters Patent of the United States, already filed on May 3, 2005 as U.S. application No. 11/120,725; and

WHEREAS, The Trustees of Boston College, a College organized under and pursuant to the laws of Massachusetts having its principal place of business at 21 Campanella Way, Chestnut Hill, Massachusetts 02467; (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 of Patent 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 021125**

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

Zhifeng Ren

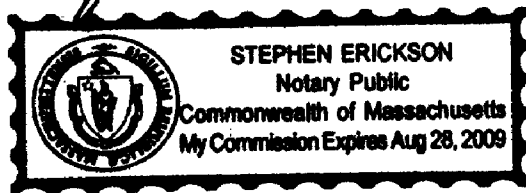
Zhifeng Ren

Date: 9/12/05

On this 12<sup>th</sup> day of September, 2005 before me, the undersigned notary public, personally appeared Zhifeng Ren, proved to me through satisfactory evidence of identification, which were driver's license, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

[Signature]

(official signature and seal of notary)



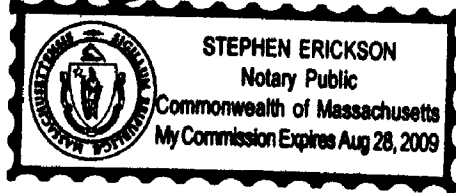
2151

Bed Poudel

Date: 09/12/05

On this 12<sup>th</sup> day of September, 2005 before me, the undersigned notary public, personally appeared Bed Poudel, proved to me through satisfactory evidence of identification, which were driver's license, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

[Signature] (official signature and seal of notary)



Shankar

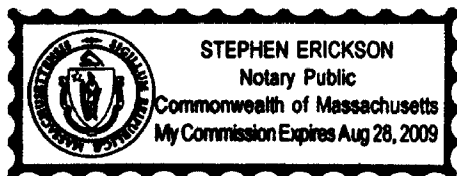
Shankar Kumar

Date: 09/12/2005

On this 12<sup>th</sup> day of September, 2005 before me, the undersigned notary public, personally appeared Shankar Kumar, proved to me through satisfactory evidence of identification, which were Boston College ID, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

[Signature]

(official signature and seal of notary)



Wenzhong Wang

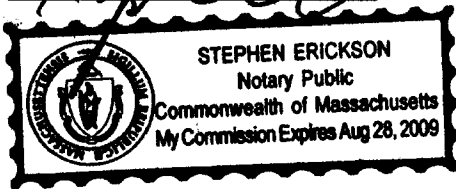
Wenzhong Wang

Date: 9/12/05

On this 12<sup>th</sup> day of September, 2005 before me, the undersigned notary public, personally appeared Wenzhong Wang (name of document signer), proved to me through satisfactory evidence of identification, which were Boston College ID, to be the person whose name is signed on the preceding or attached document, and Acknowledged to me that he signed it voluntarily for its stated purpose.

Stephen Erickson

(official signature and seal of notary)



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