



**ASSIGNMENT**

For good and valuable consideration, the sufficiency of which is hereby acknowledged, we, the undersigned, Charles M. Lieber, 27 Hayes Avenue, Lexington, MA 02173, Xiangfeng Duan, 12 Oxford Street, #47, Cambridge, MA 02138, Yi Cui, 94 Franklin Street, Allston, MA 02134, Yu Huang, 12 Oxford Street, #343, Cambridge, MA 02138, Mark Gudiksen, 40 Cedar Street, Apt. 2L, Somerville, MA 02143, Lincoln J. Lauhon, 104 Queensberry #10, Boston, MA 02215, Jiangfang Wang, Richard Hall, Rm 212, 25 Stone Avenue, #2F, Somerville, MA 02143, Hongkun Park, 31 Ledgelawn Avenue, Lexington, MA 02420, Qingqiao Wei, 2635 NW Garryanna Drive, Apt. 6, Corvallis, OR 97330, Wenjie Liang, 18 School Street, #2, Somerville, MA 02143, David C. Smith, 7 Tedder Road, Midanbury, Southampton SO18 4SH, England and Deli Wang, 402 Rindge Avenue, #8-J, Cambridge, MA 02140; hereby:

Sell, assign and transfer to President and Fellows of Harvard College, a MA corporation having a place of business at 17 Quincy Street, Cambridge, MA 02138, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, the entire right, title and interest for the United States and all foreign countries, in and to any and all inventions which are disclosed in the application for United States Letters Patent filed in the United States Patent and Trademark Office, bearing attorney docket number H00498.70187.US, on July 16, 2002 under Serial No. 10/196,337 and entitled **NANOSCALE WIRES AND RELATED DEVICES**, and in and to said application and all divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said inventions; and in and to all original and reissued patents which have been or shall be issued in the United States and all foreign countries on said inventions including the right to apply for patent rights in each foreign country and all rights to priority.

Agree that said Assignee may apply for and receive Letters Patent for said inventions in its own name; and when requested, without charge to but at the expense of said Assignee, we agree to carry out in good faith the intent and purpose of this assignment, by executing all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to said Assignee all facts known to us relating to said inventions and the history thereof, and generally by doing everything reasonably possible which said Assignee shall consider desirable for aiding in securing and maintaining proper patent protection for said inventions and for vesting title to said inventions and all applications for patents and all patents on said inventions, in said Assignee;

Request the Honorable Commissioner of Patents and Trademarks to issue said Letters Patent to said Assignee; and

Covenant with said Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

10/08/02  
Date  
STATE OF Massachusetts :  
COUNTY OF Middlesex :

Charles M. Lieber  
Charles M. Lieber

Subscribed and sworn to before me this 8th day of October, 2002

SEAL Linda Ross  
Notary Public

My Commission Expires March 13, 2009

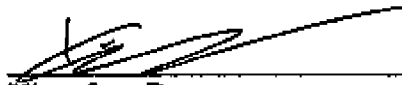
**LINDA ROSS**  
**NOTARY PUBLIC**  
My Commission Expires March 13, 2009

Serial No. 10/196,337  
Assignment

-2-

H00498.70187.US


10/18/02  
Date

  
Xiangfeng Duan

STATE OF Massachusetts :  
COUNTY OF Middlesex :

Subscribed and sworn to before me this 18<sup>th</sup> day of October

SEAL

  
Notary Public

My Commission Expires

**LINDA ROSS**  
NOTARY PUBLIC  
My Commission Expires March 13, 2009

10/09/02  
Date

  
Yi Cui

STATE OF Massachusetts :  
COUNTY OF Middlesex :

Subscribed and sworn to before me this 9<sup>th</sup> day of October 2002

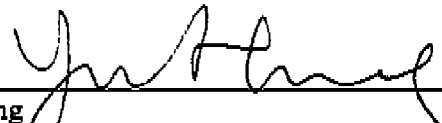
SEAL

  
Notary Public

My Commission Expires

**LINDA ROSS**  
NOTARY PUBLIC  
My Commission Expires March 13, 2009

10/10/02  
Date

  
Yu Huang

STATE OF Massachusetts :  
COUNTY OF Middlesex :

Subscribed and sworn to before me this 10<sup>th</sup> day of October, 2002

SEAL

  
Notary Public

My Commission Expires

**LINDA ROSS**  
NOTARY PUBLIC  
My Commission Expires March 13, 2009

Serial No. 10/196,337  
Assignment

-3-

H00498.70187.US

10/9/02  
Date

Mark Gudiksen  
Mark Gudiksen

STATE OF Massachusetts :  
COUNTY OF Middlesex :

Subscribed and sworn to before me this 9th day of October 2002

SEAL

Linda E. Ross  
Notary Public

My Commission Expires

**LINDA ROSS**  
**NOTARY PUBLIC**  
My Commission Expires March 13, 2009

10-08-02  
Date

Lincoln J. Lauhon  
Lincoln J. Lauhon

STATE OF Massachusetts :  
COUNTY OF Middlesex :

Subscribed and sworn to before me this 8th day of October, 2002

SEAL

Linda E. Ross  
Notary Public

My Commission Expires

March 13, 2009

**LINDA ROSS**  
**NOTARY PUBLIC**  
My Commission Expires March 13, 2009

\_\_\_\_\_  
Date

Jiangfang Wang  
Jiangfang Wang

STATE OF \_\_\_\_\_ :  
COUNTY OF \_\_\_\_\_ :

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_

SEAL

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

Serial No. 10/196,337  
Assignment

-4-

H00498.70187.US

10/8/02  
Date

Hongkun Park  
Hongkun Park

STATE OF Massachusetts :  
COUNTY OF Middlesex :

Subscribed and sworn to before me this 8th day of October, 2002.

SEAL

Linda Ross  
Notary Public

My Commission Expires

**LINDA ROSS**  
**NOTARY PUBLIC**  
My Commission Expires March 13, 2008

\_\_\_\_\_  
Date

\_\_\_\_\_  
Qingqiao Wei

STATE OF \_\_\_\_\_ :  
COUNTY OF \_\_\_\_\_ :

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

Oct 8, 2002  
Date

Wenjie Liang  
Wenjie Liang

STATE OF Massachusetts :  
COUNTY OF Middlesex :

Subscribed and sworn to before me this 8th day of October, 2002.

SEAL

Linda Ross  
Notary Public

My Commission Expires

**LINDA ROSS**  
**NOTARY PUBLIC**  
My Commission Expires March 13, 2008

Serial No. 10/196,337  
Assignment

-5-

H00498.70187.US

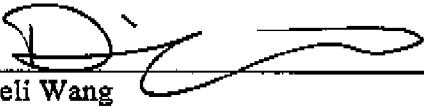
\_\_\_\_\_  
Date

\_\_\_\_\_  
David C. Smith

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

10/09/02  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Deli Wang

STATE OF Massachusetts :  
COUNTY OF Middlesex :

Subscribed and sworn to before me this 9th day of October 2002.

SEAL

  
\_\_\_\_\_  
Notary Public

My Commission Expires

**LINDA ROSS**  
**NOTARY PUBLIC**  
Commission Expires March 18, 2009

**ASSIGNMENT**

For good and valuable consideration, the sufficiency of which is hereby acknowledged, we, the undersigned, Charles M. Lieber, 27 Hayes Avenue, Lexington, MA 02173, Xiangfeng Duan, 12 Oxford Street, #47, Cambridge, MA 02138, Yi Cui, 94 Franklin Street, Allston, MA 02134, Yu Huang, 12 Oxford Street, #343, Cambridge, MA 02138, Mark Gudiksen, 40 Cedar Street, Apt. 2L, Somerville, MA 02143, Lincoln J. Lauhon, 104 Queensberry #10, Boston, MA 02215, Jiangfang Wang, Richard Hall, Rm 212, 25 Stone Avenue, #2F, Somerville, MA 02143, Hongkun Park, 31 Ledge lawn Avenue, Lexington, MA 02420, Qingqiao Wei, 2635 NW Garryanna Drive, Apt. 6, Corvallis, OR 97330, Wenjie Liang, 18 School Street, #2, Somerville, MA 02143, David C. Smith, 7 Tedder Road, Midanbury, Southampton SO18 4SH, England and Deli Wang, 402 Rindge Avenue, #8-J, Cambridge, MA 02140; hereby:

Sell, assign and transfer to President and Fellows of Harvard College, a MA corporation having a place of business at 17 Quincy Street, Cambridge, MA 02138, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, the entire right, title and interest for the United States and all foreign countries, in and to any and all inventions which are disclosed in the application for United States Letters Patent filed in the United States Patent and Trademark Office, bearing attorney docket number H00498.70187.US, on July 16, 2002 under Serial No. 10/196,337 and entitled **NANOSCALE WIRES AND RELATED DEVICES**, and in and to said application and all divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said inventions; and in and to all original and reissued patents which have been or shall be issued in the United States and all foreign countries on said inventions including the right to apply for patent rights in each foreign country and all rights to priority.

Agree that said Assignee may apply for and receive Letters Patent for said inventions in its own name; and when requested, without charge to but at the expense of said Assignee, we agree to carry out in good faith the intent and purpose of this assignment, by executing all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to said Assignee all facts known to us relating to said inventions and the history thereof, and generally by doing everything reasonably possible which said Assignee shall consider desirable for aiding in securing and maintaining proper patent protection for said inventions and for vesting title to said inventions and all applications for patents and all patents on said inventions, in said Assignee;

Request the Honorable Commissioner of Patents and Trademarks to issue said Letters Patent to said Assignee; and

Covenant with said Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

\_\_\_\_\_  
Date  
STATE OF \_\_\_\_\_;  
COUNTY OF \_\_\_\_\_;

Charles M. Lieber

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

Serial No. 10/196,337  
Assignment

-2-

H00498.70187.US

\_\_\_\_\_  
Date Xiangfeng Duan

STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL \_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
Date Yi Cui

STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL \_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
Date Yu Huang

STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL \_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_



Serial No. 10/196,337  
Assignment

-3-

H00498.70187.US

\_\_\_\_\_  
Date **Mark Gudiksen**  
STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:  
Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL  
\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
Date **Lincoln J. Lauhon**  
STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:  
Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL  
\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
Date **Jiangfang Wang**  
STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:  
Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL  
\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

Serial No. 10/196,337  
Assignment

-4-

H00498.70187.US

Date Hongkun Park

STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

10/9/02  
Date

[Signature]  
Qingqiao Wei

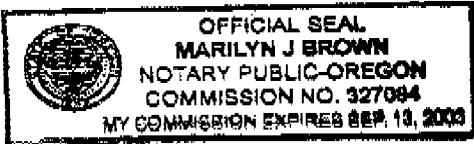
STATE OF OREGON:  
COUNTY OF Benton:

Subscribed and sworn to before me this 9th day of October 2002

SEAL

[Signature]  
Notary Public

My Commission Expires Sept 13, 2003



Date Wenjie Liang

STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

Serial No. 10/196,337  
Assignment

-5-

H00498.70187.US

\_\_\_\_\_  
Date

\_\_\_\_\_  
David C. Smith

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

\_\_\_\_\_  
Deli Wang

STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

Jianjiang Wang,  
23 Magnolia Avenue,  
Apt. #18, Goleta, CA 93117

TW

**ASSIGNMENT**

For good and valuable consideration, the sufficiency of which is hereby acknowledged, we, the undersigned, Charles M. Lieber, 27 Hayes Avenue, Lexington, MA 02173, Xiangfeng Duan, 12 Oxford Street, #47, Cambridge, MA 02138, Yi Cui, 94 Franklin Street, Allston, MA 02134, Yu Huang, 12 Oxford Street, #343, Cambridge, MA 02138, Mark Gudiksen, 40 Cedar Street, Apt. 2L, Somerville, MA 02143, Lincoln J. Lauhon, 104 Queensberry #10, Boston, MA 02215, ~~Jiangfang Wang, Richard Hall, Rm 212, 25 Stone Avenue, #2F, Somerville, MA 02143,~~ Hongkun Park, 31 LedgeLawn Avenue, Lexington, MA 02420, Qingqiao Wei, 2635 NW Garryanna Drive, Apt. 6, Corvallis, OR 97330, Wenjie Liang, 18 School Street, #2, Somerville, MA 02143, David C. Smith, 7 Tedder Road, Midanbury, Southampton SO18 4SH, England and Deli Wang, 402 Rindge Avenue, #8-J, Cambridge, MA 02140; hereby:

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Request the Honorable Commissioner of Patents and Trademarks to issue said Letters Patent to said Assignee; and

Covenant with said Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

Date \_\_\_\_\_  
STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:

Charles M. Lieber

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

Notary Public

My Commission Expires \_\_\_\_\_

Serial No. 10/196,337  
Assignment

-2-

H00498.70187.US

\_\_\_\_\_  
Date Xiangfeng Duan

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
Date Yi Cui

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
Date Yu Huang

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

Serial No. 10/196,337  
Assignment

-3-

H00498.70187.US

Date \_\_\_\_\_ Mark Gudiksen \_\_\_\_\_

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

Date \_\_\_\_\_ Lincoln J. Lauhon \_\_\_\_\_

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

11/12/2002  
Date \_\_\_\_\_

*Jianfang Wang*  
\_\_\_\_\_  
Jianfang Wang  
Jianfang (JW)

STATE OF California  
COUNTY OF Santa Barbara

Subscribed and sworn to before me this 12 day of November, 2002.

SEAL

*Lisa Dahlen*  
\_\_\_\_\_  
Notary Public

My Commission Expires October 4, 2005



Serial No. 10/196,337  
Assignment

-4-

H00498.70187.US

\_\_\_\_\_  
Date Hongkun Park

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
Date Qingqiao Wei

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
Date Wenjie Liang

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public  
My Commission Expires \_\_\_\_\_

Serial No. 10/196,337  
Assignment

-5-

H00498.70187.US

\_\_\_\_\_  
Date

\_\_\_\_\_  
David C. Smith

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

\_\_\_\_\_  
Deli Wang

STATE OF \_\_\_\_\_:  
COUNTY OF \_\_\_\_\_:

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_.

SEAL

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_