Atty. Dkt. No. 083847-0231

FORM PTO-1595 (modified)	U.S. DEPARTMENT OF COMMERCE				
RECORDATION FORM COVER SHEET Patent and Trademark Offi					
PATEN	NTS ONLY				
	· · · · · ·				
	ice: Please record the attached original documents or copies thereof.				
Name of conveying party(ies):	Name and address of receiving party(ies):				
Hua Zhang (08/09/2004)					
Chad A. Mirkin (08/06/2004)					
Dana Weinberger (08/04/2004)	Northwestern University				
Seunghun Hong (08/24/2004)	1880 Oak Avenue, Suite 100				
	Evanston, Illinois 60201				
Additional conveying party(ies) NO					
Nature of conveyance:					
ASSIGNMENT					
Execution Date:	Additional name(s) & address(es) attached? NO				
Application number(s) or patent number(s):	Additional name(s) & address(es) attached? NO				
4. Application number(s) of patent number(s).					
If this is being filed together with a new application, the	execution date of the application is:				
A. Patent Application Number(s):	B. Patent Number(s):				
A. Tatent Application (4d) bet(3).	D. I dient Number(s).				
10/725,939					
Additional nu	 mbers attached? NO				
5. Name and address of party to whom correspondence	Total number of applications/patents involved: 1				
concerning document should be mailed:					
Stophon B. Machine	7. Total fee (37 C.F.R. § 3.41): \$40.00				
Stephen B. Maebius FOLEY & LARDNER LLP	Check Enclosed				
Washington Harbour					
3000 K Street, N.W., Suite 500	X Charge to deposit account				
Washington, D.C. 20007-5143	8. Deposit account number: 19-0741				
Fax: 202-672-5399					
DO NOT I	USE THIS SPACE				
9. Statement and signature:	ping information is true and correct and any attached easy is a favo				
	oing information is true and correct and any attached copy is a true by authorized to charge any additional recordation fees which may				
be required in this matter to the above-identified deposit ag					
L Starten Butt	XL 1/1. X (4/D. 153)				
J. Steven Rutt	August 27, 2004				
Name of person signing	Signature Date				
Total number of	pages including cover sheet, attachments, and document: 15				

002.1254138.1

4-08-12 01:08PM FROM-TECHNOLOGY TRANSFER NORTHWESTERN UNIV

847 491 3825

T-241 P.011/019 F-807

Atty. Dkt. No. 083847-0231 Application No. 10/725,939

ASSIGNMENT AND AGREEMENT

WHEREAS, HUA ZHANG of 1228 Oak Avenue, Apartment 5, Evanston, IL 60202, CHAD A. MIRKIN of 111 16th Street, Wilmette, IL 60091, DANA WEINBERGER of 4475 Georgia Street, San Diego, CA 92116 and SEUNGHUN HONG of Asia-Seon-Su-Chon APT 6-205, Song-Pa-Gu, Jam-Sil-Dong, Seoul 138-797, Korea (hereinafter referred to as "ASSIGNOR") have invented a certain invention entitled FABRICATION OF SOLID-STATE NANOSTRUCTURES INCLUDING SUB-50 NM SOLID-STATE NANOSTRUCTURES BASED ON NANOLITHOGRAPHY AND CHEMICAL ETCHING (Atty. Dkt. No. 083847-0231) for which an application for United States Letters Patent was filed on December 3, 2003 as Application No. 10/725,939 and

WHEREAS, Northwestern University, a corporation duly organized and existing under the laws of the State of Illinois, and having its principal place of business at 1880 Opk Avenuc, Suite 100, Evanston, IL 60201 (hereinafter referred to as "ASSIGNEE") is desirous of acquiring the entire interest therein;

NOW THEREFORE, in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto ASSIGNEE, its successors and assigns, the full and exclusive right, title, and interest in and to (a) the above-identified invention or inventions and all improvements and modifications thereof, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for the above-identified invention or inventions and all improvements and modifications thereof, including priority document U.S. Provisional Application No. 60/430,349 filed 12/03/2002, U.S. Application No. 09/866,533, filed 05/24/2001, and U.S. Provisional Application No. 60/207,713, filed 05/26/2000 (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the (till benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representatives or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful

Page 1 of 4

002,1205183.1

2004-08-12 01:00PM

M FROM-TECHNOLOGY TRANSFER NORTHWESTERN UNIV

847 481 3625

T-241 P.012/019 F-80

Atty. Dkt. No. 083847-0231 Application No. 10/725,939

papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, eaths, affidavits, declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute shy document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of Foley & Lardner LLP the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Fotey & Lardner LLP do not personally represent ASSIGNOR or ASSIGNEE's legal interests.

Executed this 9 day of 4 2004

HUA ZHANG

State of I ((iwn i >))

On this 4 day of the same person whose name is subscribed to the foregoing instrument, and he/she seknowledged that be/she signed, scaled, and delivered the said instrument at his/her free and voluntary act for the uses and purposes therein set forth.

(Scal)

OFFICIAL SEAL SUZANNE F. AUBURN NOTARY PUBLIC, STATE OF ILLINOIS MY COMMISSION EXPIRES 5-16-2008 Normy Public

My Commission Expires: 5-16-66

Page 2 of 4

002.1205183.1

-08-12 01:10PM

FROM-TECHNOLOGY TRANSFER NORTHWESTERN UNIV

847 401 3625

T-241 P.013/019 F-807

Arty. Dkt. No. 083847-0231 Application No. 10/725,939

Executed this 6 day of Aug 5+	, 20 <u>o ዓ</u> .
	Q66M
,	CHAD A. MIRKIN
State of <u>Michael's</u>	
County of Cook	
On this	are me, a neonry public in and for soid county, appeared CFIAD A. some is subscribed to the foregoing instrument, and be she acknowledged a and voluntary not for the uses and purposes therein set forth.
	France Outen
OFFICIAL SEAL	Nomry Public
SUZANNE F. AUBURN NOTARY PUBLIC. STATE OF ILLINOIS	My Commission Expires: 5 - 16 + 64e
(SEE) MY COMMISSION EXPIRES 6-16-2006	
	·
Executed this day of	. 20
	DANA WEINBERGER
Srate of	DANA WEINDERGER
County of	
· · -	
On this day of, 20, befine the same person with the control of the control of the same person with the control of the contro	tro end, a storagy public in and for said county, appeared DANA whose name is subscribed to the foresoins instrument, and he/she
ಾದರಾಖಳೀರಲ್ಲಿದೆ ಬಿಸಿಕ ಗಿರ/ಕೊಠ rigned, Cealed, and delivered the said instrume	or as Als/her free and voluntary per far the uses and purposes therein set
ferth.	
	Nousy Public
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Page 3 of 4

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2004-08-12 01:10PM FROM-TECHNOLOGY TRANSFER NORTHWESTERN UNIV

847 481 3625

T-241 P.014/019 F-807

Atty, Dkt. No. 083847-0231 Application No. 10/725,939

Executed this day of	, 20
	SEUNGHUN HONG
Scare of) just, County of)	
HONG who is personally known to me to be the same person	20
	Notary Public
(Seal)	My Commission Expiret!

Page 4 of 4

002.1205183.1

·12 01:08PM

FROM-TECHNOLOGY TRANSFER NORTHWESTERN UNIV

847 491 3625

T-241 P.007/019 F-807

Atty. Dkt. No. 083847-0231 Application No. 10/725,939

ASSIGNMENT AND AGREEMENT

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NOW THEREFORE, in consideration of One Dollar (\$1,00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ASSIGNOR has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto ASSIGNEE, its successors and assigns, the full and exclusive right, title, and interest in and to (a) the above-identified invention or inventions and all improvements and modifications thereof, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for the above-identified invention or inventions and all improvements and modifications thereof, including priority document U.S. Provisional Application No. 60/430,349 filed 12/03/2002, U.S. Application No. 09/866,533, filed 05/24/2001, and U.S. Provisional Application No. 60/207,713, filed 05/26/2000 (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

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Page 1 of 4

01:09PM FROM-TECHNOLOGY TRANSFER NORTHWESTERN UNIV

847 491 3625

T-241 P.008/010 F-807

Atty. Dkt. No. 083847-0231 Application No. 10/725,939

reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

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	Executed 1	fhis	_ day of _		, 20					
							HUA Z	HANG		-
County 0	On this	day of to me to be red the sai) just.) the same persid instrument a	, 20_ gpn whose nam s his/her free a	, before me, a not w is subscribed to th and voluntary set for	ary public it e foregoine the uses and	n and for said (instrument, an i purposes that	county, appeared d he/she acknow win set forth.	i HUA ZHANG, viedgēd thet be/sikb)
						 -		Notary Public		
	-					My C	Commission Bx	pires:		_
	(Seal)									

Page 2 of 4

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847 481 3625

T-241 P.009/010 F-807

Atty. Dkt. No. 083847-0231 Application No. 10/725,939

Executed this	day of	, 20
State of)]ss.	CHAD A. MIRKIN
VURKIN, who is personally known t	o me to be the same per	20, before me, a notary public in and for said county, appeared CHAD A. son whose name is subscribed to the foregoing instrument, and he/she acknowledge as his/her free and voluntary act for the uses and purposes therein set forth.
		Notary Public
(\$cal)		My Commission Expires:
Executed this	4_ day of <u>Alu</u>	Sana a. Wenty
		DANA WEINBERGER
county of San Diest)84	
On this day of WEINBERGER, who is personally k cknowledged that he/she signed, so both.	known to me to be the so aled, and delivered the s	20 <u>0°4</u> , before me, a notary public in and for sald county, appeared DANA time person whose name is subscribed to the foregoing instrument, and he/she said instrument as his/her see and voluntary act for the uses and purposes therein se
1	EMMAN	UEL CHUZ
5	COMM.	#1483363 Nome Papile My Commission Expires: Jone 1,2006

Page 3 of 4

2004-08-12 01:09PM FROM-TECHNOLOGY TRANSFER NORTHWESTERN UNIV

847 491 3625

T-241 P.010/010 F-807

Atty. Dkt. No. 083847-0231 Application No. 10/725,939

Executed this	day of	, 20	
			SEUNGHUN HONG
State of			
County of)is5.)		
On this day of _ FIONG, who is personally known to he/she signed, sealed, and delivered		LOOKITSHIE SERVER AND	public in and for said county, appeared SEUNGHUN to the foregoing instrument, and he/she acknowledged that for the uses and purposes therein set forth.
			Notary Public
			My Commission Expires:
(Scal)			

Page 4 of 4

002.1205183.1

Atty. Dkt. No. 083847-0231 Application No. 10/725,939

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Page 1 of 4

002-1205183.1

Atty. Dkt. No. 083847-0231 Application No. 10/725,939



reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

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1	Executed th	is	day of			, 20	2
							HUA ZHANG
State of							
County of)83.)				
who is perp signed, scal	On this onelty known to led, and delivere	day of mo to be the	ie same para natroment os	an whose no his/her free	, befor ame is sub and volum	re me, a no scribed to stary act fo	otary public in and for said acuaty, appeared HUA ZHANG. the firegoing instrument, and laciate acknowledged that he/s in the uses and purposes therein set forth.
							Notary Public
							My Commission Expires;
	(Sen1)						

Page 2 of 4

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<u>PATENT</u>
REEL: 015089 FRAME: 0289

Atty. Dkt. No. 083847-0231 Application No. 10/725,939

The state of the s	ि. वर	
Executed this	day of	, 2 0
atc of) Test.	CHAD A. MIRKIN
w is personally known to me to be the	20 be same person whose name is a	store me. a notary public in and for said county, appeared CHAD A. MIRKT ubscribed to the fareguing instrument, and be she acknowledged that he/she huntary set for the uses and purposes therein act for the
		Notary Public
(Seal)		My Cummission Esquipes:
Executed this	day of	, 20 <u></u> .
boof		DANA WEINBERGER
On thisday of SINDERGER, who is personally kno	20, be while me to be the same person it, and delivered the said instru	first me, a policy public in and for said county, appeared DANA. Whose name is subscribed to the foregoing instrument, and her/spe Bent 88 his/her frue and voluntary set for the uses and purposes therein set
		Notary Public
(Scal)		My Commission Expires:

Page 3 of 4

002.1205183.1

PATENT

REEL: 015089 FRAME: 0290

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Atty. Dkt. No. 083847-0231 Application No. 10/725,939

DOO RE LAW AND NOTARY OFFICE Jeonggok South BLD, 1711 Seocho-Dong Seocho-Gu, Seoul, Korea.

Page 4 of 4

002.1205183.1