PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 SECURITY AGREEMENT

CONVEYING PARTY DATA

Name	Execution Date
PRVP Holdings, LLC	12/21/2012

RECEIVING PARTY DATA

Name:	nosys, Inc.					
Street Address:	33 S. Hillview Drive					
City:	Milpitas					
State/Country:	CALIFORNIA					
Postal Code:	95035					

PROPERTY NUMBERS Total: 136

Property Type	Number
Patent Number:	6962823
Patent Number:	7151209
Patent Number:	6872645
Patent Number:	7164209
Patent Number:	7422980
Patent Number:	7651944
Patent Number:	7068898
Patent Number:	7228050
Patent Number:	7603003
Patent Number:	8041171
Patent Number:	7067867
Patent Number:	7064372
Patent Number:	7135728
Patent Number:	7262501
Patent Number:	7233041
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Patent Number:	7427328
Patent Number:	7932511
Patent Number:	7851841
Patent Number:	8030186
Patent Number:	8293624
Patent Number:	7051945
Patent Number:	7619562
Patent Number:	7083104
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Patent Number:	7339184
Patent Number:	7767102
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Patent Number:	7553371
Patent Number:	7105428
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Patent Number:	7569941
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Application Number:	11511886
Application Number:	12715126
Application Number:	13551230
Application Number:	13009675
Application Number:	12331150
Application Number:	13124790
Application Number:	13124800
Application Number:	13322117
Application Number:	12772862
Application Number:	12824485
Application Number:	12783243
Application Number:	11485893
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PCT Number:	US2003022061
PCT Number:	US2002010002

CORRESPONDENCE DATA

Fax Number: 4082406900

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 408-240-6700

Email: patents@nanosysinc.com

Correspondent Name: Nanosys, Inc.

Address Line 1: 233 S. Hillview Drive

Address Line 4: Milpitas, CALIFORNIA 95035

ATTORNEY DOCKET NUMBER:	SECURITY INTEREST
NAME OF SUBMITTER:	Michelle Chan
Signature:	/mchan/
Date:	04/25/2013

Total Attachments: 26

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REEL: 030285 FRAME: 0833

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SECURITY AGREEMENT

This Security Agreement (the "Agreement") is made as of December 21, 2012 by and between PRVP Holdings, LLC, a Delaware limited liability company (the "Debtor"), in favor of Nanosys, Inc., a Delaware corporation (the "Secured Party").

RECITALS

The Debtor and the Secured Party are parties to an Asset Purchase Agreement dated as of November 14, 2012 (as amended, the "*Purchase Agreement*") pursuant to which Debtor has issued to the Secured Party a Secured Promissory Note dated as of the date hereof (the "*Promissory Note*") as partial payment of the Purchase Price for its sale to Debtor (and its Affiliates) of the "*Acquired Assets*" as defined in the Purchase Agreement. The parties intend that the Debtor's obligations to repay the Obligations be secured by the Collateral (as defined below).

AGREEMENT

In consideration of the purchase and sale of the Acquired Assets, the Secured Party's acceptance of the Promissory Note as partial payment of the Purchase Price, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Debtor hereby agrees with the Secured Party as follows:

1. Grant of Security Interest.

- (a) To secure the Debtor's full and timely performance of the Obligations, the Debtor hereby grants to the Secured Party a first priority continuing Lien on and security interest (the "Security Interest") in the assets set forth on Exhibit A hereto comprising the Acquired Assets (the "Collateral").
- (b) The following terms shall have the following meanings for purposes of this Agreement:

"Lien" means any mortgage, deed of trust, pledge, hypothecation, assignment for security, security interest, encumbrance, levy, lien or charge of any kind, whether voluntarily incurred or arising by operation of law or otherwise, against any property, any conditional sale or other title retention agreement, any lease in the nature of a security interest, and the filing of any financing statement (other than a precautionary financing statement with respect to a lease that is not in the nature of a security interest) under the UCC or comparable law of any jurisdiction.

"Obligations" shall mean and include all loans, advances, debts, liabilities and obligations, howsoever arising, owed by the Debtor to the Secured Party of every kind and description (whether or not evidenced by any note or instrument and whether or not for the payment of money), direct or indirect, absolute or contingent, due or to become due, now existing or hereafter arising pursuant to the terms of the Promissory Note, including without limitation all fees, charges, expenses, attorneys' fees and accountants' fees chargeable to the Debtor or payable by the Debtor thereunder.

"Permitted Liens" means (a) Liens for taxes not yet delinquent or Liens for taxes being contested in good faith and by appropriate proceedings for which adequate reserves have been established; (b) Liens in respect of property or assets imposed by law which were incurred in the ordinary course of business, such as carriers', warehousemen's, materialmen's and mechanics' Liens and other similar Liens arising in the ordinary course of business which are not delinquent or remain payable without penalty or which are

being contested in good faith and by appropriate proceedings; (c) Liens incurred or deposits made in the ordinary course of business in connection with workers' compensation, unemployment insurance and other types of social security, and other Liens to secure the performance of tenders, statutory obligations, contract bids, government contracts, performance and return of money bonds and other similar obligations, incurred in the ordinary course of business, whether pursuant to statutory requirements, common law or consensual arrangements; (d) Liens in favor of the Secured Party; (e) Liens which constitute rights of setoff of a customary nature or banker's liens, whether arising by law or by contract; and (f) licenses granted in the ordinary course of the Debtor's business.

"*Person*" means any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, limited liability company, institution, public benefit corporation, other entity or government (whether federal, state, county, city, municipal, local, foreign, or otherwise, including any instrumentality, division, agency, body or department thereof).

"UCC" means the Uniform Commercial Code as in effect in the State of Delaware from time to time.

Unless otherwise defined herein, all capitalized terms used herein and defined in the Purchase Agreement shall have the respective meaning given to those terms in the Purchase Agreement, and other terms that are defined in the UCC and used herein shall have the meanings given to them in the UCC.

- 2. **Representations and Warranties.** The Debtor hereby represents and warrants to the Secured Party that:
- (a) <u>Ownership of Collateral</u>. From and after the Closing, the Debtor is the legal and beneficial owner of the Collateral and Debtor has rights in or the power to transfer the Collateral free and clear of any adverse Lien, security interest or encumbrance except as created by this Agreement. No financing statements covering any Collateral or any proceeds thereof are on file in any public office (other than filings listing the Secured Party as the secured party).
- (b) <u>Valid Security Interest</u>. The Security Interest granted pursuant to this Agreement will constitute a valid and continuing perfected security interest in favor of the Secured Party in the Collateral for which perfection is governed by the UCC, filing with the United States Copyright Office, and/or United States Patent and Trademark Office. Such Security Interest will be a first priority interest prior to all other Liens on the Collateral.
- (c) <u>Organization and Good Standing</u>. The Debtor has been duly formed, and is validly existing and in good standing, under the laws of the State of Delaware.
- 3. <u>Covenants</u>. The Debtor covenants that, from and after the date of this Agreement until the Obligations are paid in full:
- (a) <u>Further Documentation</u>. At any time and from time to time, upon the written request of the Secured Party, and at the sole expense of the Debtor, the Debtor will promptly and duly authenticate and deliver such further instruments and documents and take such further action as the Secured Party determines necessary or desirable for the purpose of obtaining or preserving the full benefits of this Agreement and of the rights and powers herein granted including, without limitation, filing any financing or continuation statements under the UCC in effect with respect to the Liens created hereby. The Debtor also hereby authorizes the Secured Party to file any such financing, amendment or continuation statement without the authentication of the Debtor to the extent permitted by applicable law.

A reproduction of this Agreement shall be sufficient as a financing statement (or as an exhibit to a financing statement on form UCC-1) for filing in any jurisdiction.

- (b) <u>Maintenance of Records</u>. The Debtor will keep and maintain at its own expense complete and satisfactory records of the Collateral.
- (c) <u>Inspection Rights.</u> The Secured Party shall have full access during normal business hours, and upon reasonable prior notice, to all the books, correspondence and other records of the Debtor relating to the Collateral. The Secured Party or its representatives may examine such records and make photocopies or otherwise take extracts from such records.
- (d) <u>Compliance with Laws, etc.</u> The Debtor (i) will comply with all laws, rules, regulations and orders of any governmental authority applicable to any of the Collateral or to the operation of the Debtor's business, and (ii) shall not use or permit any Collateral to be used in violation of any provision of the Purchase Agreement and the Promissory Note, any law, rule or obligation or order of any governmental authority, or any policy of insurance covering the Collateral.
- (e) <u>Limitation on Senior Liens on Collateral</u>. At its expense, the Debtor will not create, incur or permit to exist, will defend the Collateral against, and will take such other action as is necessary to remove, any purported senior Lien or claim on or to the Collateral, other than the Security Interest and the Permitted Liens, and will defend the right, title and interest of the Secured Party in and to any of the Collateral against the claims and demands of all other persons.
- (f) <u>Limitations on Dispositions of Collateral</u>. Except for licenses entered in the ordinary course of business, the Debtor will not sell, transfer, alienate or otherwise dispose of any part or the whole of the Collateral, or attempt, offer or contract to do so without the prior written consent of the Secured Party.
- (g) <u>Limitation on Filing of Financing Statements</u>. The Debtor acknowledges that it is not authorized to file any financing statement or amendment or termination statement with respect to any financing statement without the prior written consent of the Secured Party and shall not do so without the prior written consent of the Secured Party, subject to the Debtor's rights under the UCC.

4. Event of Default; the Secured Party's Appointment as Attorney-in-Fact.

- (a) **Event of Default.** For purposes of this Agreement, the occurrence of any one of the following events (each, an "*Event of Default*") shall constitute a default hereunder and under the Promissory Note:
- (i) The Debtor's failure to pay or discharge the Obligations in full in accordance with the terms of the Promissory Note.
- (ii) The commission of any act of bankruptcy by the Debtor, the execution by the Debtor of a general assignment for the benefit of creditors, the filing by or against the Debtor of a petition in bankruptcy or any petition for relief under the federal bankruptcy act or the continuation of such petition without dismissal for a period of ninety (90) days or more, or the appointment of a receiver or trustee to take possession of the property or assets of the Debtor; *provided*, *however*, Debtor shall be provided notice of any of the foregoing events not initiated by the Debtor and a reasonable opportunity (of not less than fifteen (15) days) to cure such Event of Default.

- (b) <u>Powers</u>. The Debtor hereby appoints the Secured Party and any officer or agent of the Secured Party, with full power of substitution, as its attorney-in-fact with full irrevocable power and authority in the place of the Debtor and in the name of the Debtor or Secured Party's own name, from time to time in the Secured Party's discretion so long as an Event of Default has occurred and is continuing, for the purpose of carrying out the terms of this Agreement, to take any appropriate action and to authenticate any instrument which may be necessary or desirable to accomplish the purposes of this Agreement. Without limiting the foregoing, so long as an Event of Default has occurred and is continuing, the Secured Party shall have the right, without notice to, or the consent of, the Debtor, to do any of the following on the Debtor's behalf:
- (i) to pay or discharge any taxes or Liens levied or placed on or threatened against the Collateral;
- (ii) to direct any party liable for any payment to Debtor with respect to any of the Collateral to make payment of any and all amounts due or to become due thereunder directly to the Secured Party or as the Secured Party directs;
- (iii) to ask for or demand, collect, and receive payment of and receipt for, any payments due or to become due at any time in respect of or arising out of any Collateral;
- (iv) to commence and prosecute any suits, actions or proceedings at law or in equity in any court of competent jurisdiction to enforce any right in respect of any Collateral;
- (v) to defend any suit, action or proceeding brought against the Debtor with respect to any Collateral;
- (vi) to settle, compromise or adjust any suit, action or proceeding described in subsection (v) above and to give such discharges or releases in connection therewith as the Secured Party may deem appropriate;
- (vii) to assign any patent or other Intellectual Property Rights included in the Collateral of the Debtor (along with the goodwill of the business to which any such patent right pertains), throughout the world for such term or terms, on such conditions, and in such manner, as the Secured Party shall in its sole discretion determine; and
- (viii) generally, to sell, transfer, pledge and make any agreement with respect to or otherwise deal with any of the Collateral and to take, at the Secured Party's option and the Debtor's expense, any actions which the Secured Party deems necessary to protect, preserve or realize upon the Collateral and the Secured Party's Liens on the Collateral and to carry out the intent of this Agreement, in each case to the same extent as if the Secured Party were the absolute owner of the Collateral for all purposes.

The Debtor hereby ratifies whatever actions the Secured Party shall lawfully do or cause to be done in accordance with this <u>Section 4</u>. The power of attorney created hereunder in favor of Secured Party shall be a power coupled with an interest and shall be irrevocable.

Party by this Section 4 are solely to protect the Secured Party's interests in the Collateral and shall not impose any duty upon it to exercise any such powers. The Secured Party shall be accountable only for amounts that it actually receives as a result of the exercise of such powers, and neither the Secured Party

nor any of its officers, directors, employees or agents shall, in the absence of willful misconduct or gross negligence, be responsible to the Debtor for any act or failure to act pursuant to this <u>Section 4</u>.

- (d) <u>Application of Proceeds</u>. Upon the occurrence and during the continuance of an Event of Default, the proceeds of any sale or other disposition of the Collateral authorized by this Agreement shall be applied first to all collection expenses and all actual reasonable attorneys' fees incurred by the Secured Party. The balance of the proceeds of sale or other disposition shall be applied thereafter in payment of the Obligations, first to reimbursement of any expenses paid by the Secured Party pursuant to <u>Section 10(a)</u> below, and then to principal. Any surplus shall be paid over to the Debtor or to any other person or persons as may be entitled under applicable law. The Debtor shall remain liable to the Secured Party for any deficiency, which shall be paid to the Secured Party immediately upon demand.
- 5. Performance by the Secured Party of the Debtor's Obligations. If the Debtor fails to perform or comply with any of its agreements or covenants contained in this Agreement and the Secured Party performs or complies, or otherwise causes performance or compliance, with such agreement or covenant in accordance with the terms of this Agreement, then the reasonable expenses of the Secured Party incurred in connection with such performance or compliance shall be payable by the Debtor to the Secured Party within ten (10) days of request by the Secured Party and shall constitute Obligations secured by this Agreement.
- 6. <u>Remedies.</u> If an Event of Default has occurred and is continuing, the Secured Party may exercise, in addition to all other rights and remedies granted to it in this Agreement and in any other instrument or agreement relating to the Obligations, all rights and remedies of a secured party under the UCC.
- 7. <u>Limitation on Duties Regarding Preservation of Collateral</u>. Neither the Secured Party nor any of its directors, officers, employees or agents shall be liable for failure to demand, collect or realize upon all or any part of the Collateral or for any delay in doing so other than as a result of the gross negligence or willful misconduct of the same or shall be under any obligation to sell or otherwise dispose of any Collateral upon the request of the Debtor or otherwise.
- 8. No Waiver; Cumulative Remedies. The Secured Party shall not by any act (except by a written instrument pursuant to Section 10(b) hereof), delay, indulgence, omission or otherwise be deemed to have waived any right or remedy hereunder or to have acquiesced in any default under the Promissory Note or in any breach of any of the terms and conditions of this Agreement. No failure to exercise, nor any delay in exercising, on the part of the Secured Party, any right, power or privilege hereunder shall operate as a waiver thereof. No single or partial exercise of any right, power or privilege hereunder shall preclude any other or further exercise thereof or the exercise of any other right, power or privilege. A waiver by the Secured Party of any right or remedy under this Agreement on any one occasion shall not be construed as a bar to any right or remedy which the Secured Party would otherwise have on any subsequent occasion. The rights and remedies provided in this Agreement are cumulative, may be exercised singly or concurrently and are not exclusive of any rights or remedies provided by law.

9. Termination of Security Interest.

(a) The security interest granted herein and all rights to Collateral shall revert to the Debtor, and the Secured Party's rights under this Agreement and the Promissory Note shall terminate, and the original copy of the Promissory Note marked "Cancelled" shall be delivered simultaneously to Debtor, when no Obligations are outstanding under the Promissory Note.

(b) Upon termination of the security interest granted herein pursuant to <u>Section 9(a)</u>, the Secured Party shall authenticate and deliver to the Debtor such other documents as the Debtor may reasonably request to evidence such termination.

10. Miscellaneous.

- Payment of Expenses. At its option, the Secured Party may, after providing (a) written notice to the Debtor and a reasonable time for cure not to exceed 60 days: (a) discharge taxes, liens or security interests or other encumbrances at any time levied or placed on the Collateral; (b) obtain insurance on the Collateral; and (c) pay for the maintenance and preservation of the Collateral. Debtor agrees to reimburse the Secured Party on demand for any reasonable payment made or reasonable expenses incurred by the Secured Party under this Agreement. If the Debtor fails to reimburse the Secured Party within twenty (20) days of receipt of a written invoice, the Secured Party may treat all such payments made as sums to be repaid in cash on the terms and conditions set forth in the Promissory Note. However, the Secured Party shall not discharge any taxes, liens, security interests or other encumbrances placed on the Collateral if the Secured Party has received prior written notice from Debtor that the tax, lien, security interest or other encumbrance is being contested in good faith by the Debtor in a lawful manner and if the Debtor has, in addition, set aside adequate reserves with respect to the tax, lien, security interest or encumbrance. In any case, however, any tax, lien, security interest or encumbrance shall be paid or discharged immediately upon the beginning of proceedings to foreclose any liens, or obtain possession of the Collateral or upon notice of any tax sale by any governmental authority or agency.
- (b) <u>Amendments and Waivers</u>. Any term of this Agreement may be amended with the written consent of the parties or their respective successors and assigns. Any amendment or waiver effected in accordance with this <u>Section 10(b)</u> shall be binding upon the parties and their respective successors and assigns.
- (c) <u>Transfer; Successors and Assigns</u>. The terms and conditions of this Agreement shall be binding upon the Debtor and its successors and assigns, as well as all persons who become bound as a debtor to this Agreement and shall inure to the benefit of the Secured Party and its successors and assigns. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.
- (d) <u>Governing Law</u>. This Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the State of Delaware [would both parties prefer Delaware to define applicable law in the APA], without giving effect to principles of conflicts of law.
- (e) <u>Counterparts</u>. This Agreement may be executed in two or more counterparts, including by pdf, facsimile or other means of electronic signature transmission, each of which shall be deemed an original and all of which together shall constitute one instrument.
- (f) <u>Titles and Subtitles</u>. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.
- (g) <u>Notices</u>. All notices and other communications hereunder shall be in writing and shall be deemed given if delivered personally or by commercial messenger or courier service, or mailed by registered or certified mail (return receipt requested) or sent via facsimile (with acknowledgment of complete transmission) to the parties at the following addresses (or at such other address for a party as

shall be specified by like notice); provided, however, that notices sent by mail will not be deemed given until received:

(i) if to Debtor:

PRVP Holdings, LLC 855 Maude Avenue Mountain View, CA 94043 Attn: Paul Rhodes, President

(b) if to Secured Party:

Nanosys, Inc. 2625 Hanover Street Palo Alto, CA 94304

Attn.: General Counsel and Vice-President of Intellectual Property

- (h) <u>Severability</u>. If one or more provisions of this Agreement is or are held to be unenforceable under applicable law, the parties shall renegotiate such provision in good faith, in order to maintain the economic position enjoyed by each party as close as possible to that under the provision rendered unenforceable. In the event that the parties cannot reach a mutually agreeable and enforceable replacement for such provision, then (i) such provision shall be excluded from this Agreement, (ii) the balance of the Agreement shall be interpreted as if such provision were so excluded, and (iii) the balance of the Agreement shall be enforceable in accordance with its terms.
- (i) Entire Agreement. This Agreement, and the documents referred to herein constitute the entire agreement between the parties hereto pertaining to the subject matter hereof, and any and all other written or oral agreements existing between the parties hereto concerning such subject matter are expressly canceled.

[Signature Page Follows]

IN WITNESS WHEREOF, the Debtor and the Secured Party have caused this Security Agreement to be executed and delivered as of the date first written above by their duly authorized representatives.

THE DEBTOR:

Ву:	J.
<i></i>	(Signature)
Name:	Paul photo.
Title:	Mannying Member

AGREED TO AND ACCEPTED:

THE SECURED PARTY:

NANOSYS, INC.

By:	
Name:	
Title:	

IN WITNESS WHEREOF, the Debtor and the Secured Party have caused this Security Agreement to be executed and delivered as of the date first written above by their duly authorized representatives.

THE DEBTOR:

PRVP HOLDINGS, LLC

By:		
	(Signature)	
Name:		
Title:		

AGREED TO AND ACCEPTED:

THE SECURED PARTY:

NANOSYS, INC.

Name: Jason/Hartlove

Title: CEO

Exhibit A

Collateral

Docket Numbe	,	Case Type	Relation Type	n Filing Type	Status	Application Number	App Date	Patent Number	Grant Date	Title
01- 000500	US	Prov	Original	National	Inactive	60/370113	4/2/2002	2		Methods of Positioning and Orienting Nanowires
01- 000510	PCT	Regular	Original	PCT	Inactive	PCT/US03/09827	4/1/2003	3		Methods of Making, Positioning and Orienting Nanostructures, Nanostructure Arrays and
01- 000510	US	Regular	CIP	National	Granted	10/405992	4/1/2003	3 6962823	11/8/2005	orienting nanostructures, nanostructure arrays and
01- 000511	US	Regular	Con	National	Granted	11/142563	5/31/2005	7151209	12/19/2006	nanostructure devices Methods of making, positioning and orienting nanostructures, nanostructure arrays and
01-	US	Regular	Original	National	Granted	10/239000	9/10/2002	8 6872645	3/29/2005	nanostructure devices Methods of Positioning and/or
000540 01-	US	Regular	Con	National	Granted	11/000557	12/1/2004	7164209	1/16/2007	Orienting Nanostructures Methods of Positioning and/or
000541 01-	US	Regular	Con	National	Granted	11/602784	11/21/2006	7422980	9/9/2008	Orienting Nanostructures
000542 01-	US	Regular	Con	National	Granted	12/186405	8/5/2008	7651944	1/26/2010	Orienting Nanostructures Methods of Positioning and/or
000543	US	Prov	Original	National	Inactive	60/408722	9/5/2002			Orienting Nanostructures Nanocomposites
000800 01-	DE	Regular	Original	PCT/EPC	Granted	3749453.1	9/4/2003	60341675.6	8/1/2012	Nanocomposites
000810 01-	EP	Regular	Original	PCT/EPC	Granted	3749453.1	9/4/2003	1537445	8/1/2012	Nanocomposites
000810 01-	PCT	Regular	Original	PCT	Inactive	PCT/US03/27844	9/4/2003			Nanocomposites
000810 01-	US	Regular	Original	National	Granted	10/656916	9/4/2003	7068898	6/27/2006	Nanocomposites
000810 01- 000811	EP	Regular	Div	PCT/EPC	Filed	11166745.7	9/4/2003			Nanocomposites
01- 000811	US	Regular	Con	National	Granted	11/342087	1/26/2006	7228050	6/5/2007	Nanocomposites
01- 000813	US	Regular	Con	National	Granted	12/212014	9/17/2008	7603003	10/13/2009	Nanocomposites
01-	US	Regular	Div	National	Granted	12/554232	9/4/2009	8041171	10/18/2011	Nanocomposites
000814 01- 001400	US	Prov	Original	National	Inactive	60/414323	9/30/2002			Large area, low cost, high performance and flexible electronics from nanowires and nanowire
01- 001410	US	Prov	Original	National	Inactive	60/414359	9/30/2002			composites High mobility thin film transistors based on oriented semiconductor
01- 001420	AU	Regular	Original	PCT	Granted	2003283973	9/30/2003	2003283973	2/12/2009	nanowires Large Area Nanoenabled Macroelectronic Substrates and
01- 001420	CA	Regular	Original	PCT	Filed	2499965	9/30/2003			Uses Therefor Large Area Nanoenabled Macroelectronic Substrates and Uses Therefor
01- 001420	CN	Regular	Original	PCT	Granted	3825485.9	9/30/2003	CN1745468B		Large Area Nanoenabled Macroelectronic Substrates and Uses Therefor
01- 001420	EP	Regular	Original	PCT/EPC	Filed	3776200.2	9/30/2003			Large Area Nanoenabled Macroelectronic Substrates and Uses Therefor
01- 001420	JP	Regular	Original	PCT	Filed	2005-500333	9/30/2003			Large Area Nanoenabled Macroelectronic Substrates and Uses Therefor
01- 001420	KR	Regular	Original	PCT	Filed	10-2005-7005436	9/30/2003			Large Area Nanoenabled Macroelectronic Substrates and Uses Therefor
01- 001 42 0	PCT	Regular	Original	PCT	Inactive	PCT/US03/30721	9/30/2003			Large Area Nanoenabled Macroelectronic Substrates and Uses Therefor
01- 001420	TW	Regular	Original	National	Granted	92127075	9/30/2003	1309845	5/11/2009	Large Area Nanoenabled Macroelectronic Substrates and Uses Therefor
01- 001420	US	Regular	Original	National	Granted	10/674060	9/30/2003	7067867	6/27/2006	Large Area Nanoenabled Macroelectronic Substrates and Uses Therefor

Docket Number		Case Type	Relation Type	Filing Type	Status	Application Number	App Date	Patent Number	Grant Date	Title
01- 001421	EP	Regular	Div	PCT/EPC	Filed	10156269.2	9/30/2003			Large Area Nanoenabled Macroelectronic Substrates and
01- 001421	JP	Regular	Div	PCT	Filed	2011-015801	9/30/2003			Uses Therefor Large Area Nanoenabled Macroelectronic Substrates and
01- 001421	US	Regular	Con	National	Granted	11/004380	12/3/2004	7064372	6/20/2006	Macroelectronic Substrates and
01- 001422	US	Regular	Con	National	Granted	11/106340	4/13/2005	7135728	11/14/2006	Macroelectronic Substrates and
01- 001425	US	Regular	Con	National	Granted	11/405864	4/18/2006	7262501	8/28/2007	Uses Therefor Large Area Nanoenabled Macroelectronic Substrates and
01- 001426	US	Regular	Con	National	Granted	11/490637	7/21/2006	7233041	6/19/2007	Uses Therefor Large Area Nanoenabled Macroelectronic Substrates and
01- 001427	US	Regular	Con	National	Granted	11/602783	11/21/2006	7427328	9/23/2008	Uses Therefor Large Area Nanoenabled Macroelectronic Substrates and
01- 001429	US	Regular	Con	National	Granted	11/681058	3/1/2007	7932511	4/26/2011	Uses Therefor Large-Area Nanoenabled Macroelectronic Substrates and
01- 001430	US	Prov	Original	National	Inactive	60/468276	5/7/2003			Uses Therefor High Performance Thin Film Transistors Assembled from Semiconductor Nanowires and
01- 001440	US	Regular	Con	National	Granted	11/760382	6/8/2007	7851841	12/14/2010	Nanoribbons Large Area Nanoenabled Macroelectronic Substrates and
01- 001441	US	Regular	Div	National	Granted	12/940789	11/5/2010	8030186	10/4/2011	Uses Therefor Large Area Nanoenabled Macroelectronic Substrates and
01- 001442	US	Regular	Con	National	Granted	13/218286	8/25/2011	8293624	10/23/2012	Uses Therefor Large Area Nanoenabled Macroelectronic Substrates and
01- 001700	US	Prov	Original	National	Inactive	60/493005	8/7/2003			Uses Therefor Large Area Macroelectronic Substrates Incorporating Nanowires and Nanowire Composites in Antenna Array and Acoustic
01- 001701	PCT	Regular	Original	PCT	Inactive	PCT/US2003/030637	9/30/2003			Cancellation Applications Applications of Nano-Enabled Large Area Macroelectronic Substrates Incorporating Nanowires and
01- 001701	TW	Regular	Original	National	Granted	92127018	9/30/2003	1319201	1/1/2010	Nanowire Composites Applications of Nano-Enabled Large Area Macroelectronic Substrates Incorporating Nanowires and
01- 001701	US	Regular	Original	National	Granted	10/674071	9/30/2003	7051 94 5	5/30/2006	Nanowire Composites Applications of Nano-Enabled Large Area Macroelectronic Substrates Incorporating Nanowires and
01- 001702	PCT	Regular	Original	PCT	Inactive	PCT/US2007/026485	12/31/2007			Nanowire Composites Phased array systems and methods
01- 001702	US	Regular	CIP	National	Granted	11/647584	12/29/2006	7619562	11/17/2009	Phased array systems and methods
01- 001703	US	Regular	Div	National	Granted	11/226187	9/14/2005	7083104	8/1/2006	Applications of Nano-Enabled Large Area Macroelectronic Substrates Incorporating Nanowires and
01- 002200	US	Prov	Original	National	Inactive	60/445421	2/5/2003			Nanowire Composites Applications of Nano-Enabled Large Area Macroelectronic (NLAM)
01- 002210	US	Prov	Original	National	Inactive	60/474065	5/29/2003			Substrates Applications of nano-enabled large area macroelectronic (NLAM)
01- 002400	US	Prov	Original	National	Inactive	60/466229	4/28/2003			substrates Super-Hydrophobic Surfaces, Methods of Their Construction and
01- 002410	AU	Regular	Original	PCT	Granted	2004256392	4/27/2004	2004256392		Uses Therefor Super-Hydrophobic Surfaces, Methods of Their Construction and Uses Therefor

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PCT	01-	JP				Granted	2006-532490	4/27/2004	4871726	11/25/2011	Methods of Their Construction and
		PCT	Regular	Original	PCT	Inactive	PCT/US04/13131	4/27/2004			Super-Hydrophobic Surfaces, Methods of Their Construction and
Page		US	Regular	Original	National	Granted	10/833944	4/27/2004	7985475	7/26/2011	Super-Hydrophobic Surfaces, Methods of Their Construction and
		US	Regular	Div	National	Filed	13/160232	6/14/2011			Non-Carbon Nanofiber Super- Liquidphobic Substrate Surfaces and
		US	Prov	Original	National	Inactive	60/491979	8/4/2003			System and Process for Producing Nanowire Composites and Electronic
		CN	Regular	Original	PCT	Filed	200480028982.X	8/4/2004			System and Process for Producing Nanowire Composites and Electronic
PCT		KR	Regular	Original	PCT	Granted	10-2006-7002377	8/4/2004	10-1132076	3/23/2012	System and Process for Producing Nanowire Composites and Electronic
		PCT	Regular	Original	PCT	Inactive	PCT/US2004/025064	8/4/2004			System and Process for Producing Nanowire Composites and Electronic
1-1- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2- 1-2-		US	Regular	Original	National	Granted	10/910800	8/4/2004	7091120	8/15/2006	System and Process for Producing Nanowire Composites and Electronic
		US	Regular	Div	National	Granted	11/225951	9/14/2005	7468315	12/23/2008	System and Process for Producing Nanowire Composites and Electronic
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D1		US	Regular	Con	National	Filed	12/854323	8/11/2010			System and Process for Producing Nanowire Composites and Electronic
		US	Prov	Original	National	Inactive	60/488801	7/22/2003			Integrated Liquid Crystal Display
	01-	JP	Regular	Original	PCT	Granted	2005-500327	9/30/2003	4669784	1/21/2011	Integrated Displays Using Nanowire
PCT	01-	KR	Regular	Original	PCT	Granted	10-2005-7005419	9/30/2003	10-1043578	6/16/2011	Integrated Displays Using Nanowire
Olson Organical Content Organical Conten	01-	PCT	Regular	Original	PCT	Inactive	PCT/US03/30636	9/30/2003			Integrated Displays Using Nanowire
CN	01-	US	Regular	Original	National	Granted	10/673669	9/30/2003	7102605	9/5/2006	Integrated Displays Using Nanowire
01- 002902 002902 01- 01- 01- 03100 01- 01- 01- 01- 02- 03100 01- 01- 01- 01- 01- 02- 03100 01- 01- 01- 01- 01- 01- 01- 01- 01-	01-	CN	Regular	Div	PCT	Filed	201210040611.X	9/30/2003			Integrated Displays Using Nanowire
O1-	01-	US	Regular	Con	National	Granted	11/490630	7/21/2006	7701428	4/20/2010	Integrated Displays Using Nanowire
PCT Regular Original PCT Filed S760196.5 3/8/2005 Nanofiber Surface-Based Capacitor Original PCT Inactive PCT/US05/07977 3/8/2005 Nanofiber Surface-Based Capacitor Original PCT Inactive PCT/US05/07977 3/8/2005 Nanofiber Surface-Based Capacitor Original	01-	US	Prov	Original	National	Inactive	60/554549	3/18/2004			
PCT Regular Original PCT Inactive PCT/USO5/07977 3/8/2005 Nanofiber Surface-Based Capacitors	01-	EP	Regular	Original	PCT/EPC	Filed	5760196.5	3/8/2005			Nanofiber Surface-Based Capacitor
O1-	01-	PCT	Regular	Original	PCT	Inactive	PCT/US05/07977	3/8/2005			Nanofiber Surface-Based Capacitor
Olicidad Olicidad	01-	US	Regular	Original	National	Granted	11/075361	3/8/2005	7057881	6/6/2006	Nanofiber Surface Based Capacitors
O1-	01-	US	Regular	Con	National	Granted	11/330557	1/12/2006	7116546	10/3/2006	Nanofiber Surface-Based Capacitor
Olividial Politics Olividi	01-	US	Regular	Con	National	Granted	11/507267	8/21/2006	7295419	11/13/2007	Nanofiber Surface Based Capacitors
O1- US Prov Original National Inactive PCT/US05/014038 4/22/2005 Systems and Methods for Nanowire Manufacturing O1- US Regular Div National Granted 12/236209 9/23/2008 7985454 7/26/2011 Systems and Methods for Nanowire Manufacturing O1- PCT Regular Div National Granted 12/236209 9/23/2008 7985454 7/26/2011 Systems and Methods for Nanowire Manufacturing O1- PCT Regular Original PCT Inactive PCT/US03/27845 9/4/2003 7662313 2/16/2010 Onented Nanostructures and Methods of Prepaning O1- US Regular Original National Granted 10/656911 9/4/2003 7662313 2/16/2010 Onented Nanostructures and	01-	US	Reissue	Con	National	Filed	12/970774	12/16/2010			Nanofiber Surface-Based Capacitors
O1- US Prov Original National Inactive 60/566602 4/30/2004 Systems and Methods for Nanowire Manufacturing O1- PCT Regular Onginal PCT Inactive PCT/US05/014038 4/22/2005 Systems and Methods for Nanowire Manufacturing O1- US Regular Div National Granted 12/236209 9/23/2008 7985454 7/26/2011 Systems and Methods for Nanowire Growth and Manufacturing O1- PCT Regular Original PCT Inactive PCT/US03/27845 9/4/2003 Oriented Nanostructures and Methods of Preparing O1- US Regular Original National Granted 10/656911 9/4/2003 7662313 2/16/2010 Oriented Nanostructures and	01-	US	Regular	Con	National	Granted	11/840414	8/17/2007	7466533	12/16/2008	Nanofiber Surface-Based Capacitors
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003202 Growth and Manufacturing 01- PCT Regular Original PCT Inactive PCT/US03/27845 9/4/2003 Oriented Nanostructures and 003300 01- US Regular Original National Granted 10/656911 9/4/2003 7662313 2/16/2010 Oriented Nanostructures and	01-	US		-	National	Granted	12/236209	9/23/2008	7985454	7/26/2011	Manufacturing
003300 Methods of Prepanng 01- US Regular Original National Granted 10/656911 9/4/2003 7662313 2/16/2010 Onented Nanostructures and					PCT						Growth and Manufacturing
	01-		•	•					7662313	2/16/2010	Methods of Preparing Oriented Nanostructures and

Docket Number	Cntry	Case Type	Relation Type	Filing Type	Status	Application Number	App Date	Patent Number	Grant Date	Title
01- 003600	US	Regular	Original	National	Granted	10/673092	9/25/2003	7067328	6/27/2006	for Depositing and Orienting
01- 003601	US	Regular	Div	National	Granted	11/226027	9/14/2005	7754524	7/13/2010	Depositing and Orienting
01- 003602	US	Regular	Con	National	Granted	11/507631	8/21/2006	7829351	11/9/2010	Nanostructures Methods, Devices and Systems for Depositing and Orienting
01- 003610	EP	Regular	Original	PCT/EPC	Filed	4784184.6	9/15/2004			Nanostructures Methods, Devices and Systems for Depositing and Orienting
01- 003610	JP	Regular	Original	PCT	Granted	2006-528061	9/15/2004	4927542	2/17/2012	Depositing and Orienting
01- 003610	KR	Regular	Original	PCT	Granted	10-2006-7008013	9/15/2004	1126899	3/7/2012	Depositing and Orienting
01- 003610	PCT	Regular	Original	PCT	Inactive	PCT/US04/30234	9/15/2004			Nanostructures Methods, Devices and Systems for Depositing and Orienting
01- 003610	TW	Regular	Original	National	Filed	93128549	9/21/2004			Nanostructures Methods, Devices and Systems for Depositing and Orienting
01- 003700	US	Prov	Original	National	Inactive	60/586170	7/7/2004			Nanostructures Processes for Manufacturing, Harvesting and Integrating Nanowires into Functional Nanowire
01- 003701	US	Prov	Original	National	Inactive	60/605454	8/30/2004			Based Devices Processes for Manufacturing, Harvesting and Integrating
01- 003702	US	Prov	Original	National	Inactive	60/653574	2/16/2005			Nanowires into Functional Nanowire Based Devices Processes for Manufacturing, Harvesting and Integrating Nanowires into Functional Nanowire
01-	PCT	Regular	Original	PCT	Inactive	PCT/US05/014925	4/29/2005			Based Devices Methods for Nanowire Growth
003703 01-	US	Regular	Original	National	Granted	11/117702	4/29/2005	7344961	3/18/2008	Methods for Nanowire Growth
003703 01- 003704	PCT	Regular	Original	PCT	Inactive	PCT/US05/014922	4/29/2005			Systems and methods for harvesting
01- 003704	US	Regular	Original	National	Granted	11/117707	4/29/2005	7339184	3/4/2008	and integrating nanowires Systems and methods for harvesting
01-	US	Regular	Div	National	Granted	11/839778	8/16/2007	7767102	8/3/2010	and integrating nanowires Systems and methods for harvesting
003705 01- 004500	US	Prov	Original	National	Inactive	60/541463	2/2/2004			and integrating nanowires Porous Substrates, Articles, Systems and Compositions
01- 004510	AU	Regular	Original	PCT	Granted	2005210654	1/28/2005	2005210654	7/15/2010	Comprising Nanofibers and Methods of Their Use and Production Porous Substrates, Articles, Systems and Compositions Comprising Nanofibers and Methods
01- 004510	CA	Regular	Original	PCT	Filed	2554687	1/28/2005			of Their Use and Production Porous Substrates, Articles, Systems and Compositions
01- 004510	EP	Regular	Original	PCT/EPC	Filed	5712617.9	1/28/2005			Comprising Nanofibers and Methods of Their Use and Production Porous Substrates, Articles, Systems and Compositions
01- 004510	JP	Regular	Original	PCT	Filed	2006-552210	1/28/2005			Comprising Nanofibers and Methods of Their Use and Production Porous Substrates, Articles, Systems and Compositions
01- 004510	PCT	Regular	Original	PCT	Inactive	PCT/US05/03237	1/28/2005			Comprising Nanofibers and Methods of Their Use and Production Porous Substrates, Articles, Systems and Compositions
01- 004510	US	Regular	Original	National	Granted	10/941746	9/15/2004	8025960	9/27/2011	Comprising Nanofibers and Methods of Their Use and Production Porous Substrates, Articles, Systems and Compositions Comprising Nanofibers and Methods of Their Use and Production

Docket Number	Cntry	Case	Relation	Filing	Status	Application Number	App Date	Patent Number	Grant Date	Title
01- 004511	JP	Type Regular	Type Div	Type PCT	Filed	2012-107611	1/28/2005			Porous Substrates, Articles, Systems and Compositions Comprising Nanofibers and Methods
01- 004520	US	Regular	CIP	National	Granted	11/331445	1/11/2006	7553371	6/30/2009	of Their Use and Production Porous Substrates, Articles, Systems and Compositions Comprising Nanofibers and Methods
01- 004530	JP	Regular	Original	PCT	Filed	2009-526640	8/22/2007			of Their Use and Production Porous Substrates, Articles, Systems and Compositions Comprising Nanofibers and Methods
01- 004530	PCT	Regular	Original	PCT	Inactive	PCT/US2007/018605	8/22/2007			of Their Use and Production Porous Substrates, Articles, Systems and Compositions Comprising Nanofibers and Methods
01- 004530	US	Regular	CIP	National	Filed	11/511886	8/29/2006			of Their Use and Production Porous Substrates, Articles, Systems and Compositions Comprising Nanofibers and Methods
01- 004531	US	Regular	Div	National	Filed	12/715126	3/1/2010			of Their Use and Production Porous Substrates, Articles, Systems and Compositions Comprising Nanofibers and Methods
01- 004700	US	Prov	Original	National	Inactive	60/588363	7/16/2004			of Their Use and Production Epitaxial Oriented Nanowire Growth Using a Combination of Silicon Precursors
01- 004701	CN	Regular	Original	PCT	Granted	200580021904.1	4/29/2005	200580021904.1	7/25/2012	Systems and Methods for Nanowire
01-	PCT	Regular	Original	PCT	Inactive	PCT/US05/014923	4/29/2005			Growth and Harvesting Systems and Methods for Nanowire
004701 01-	US	Regular	Original	National	Granted	11/117703	4/29/2005	7105428	9/12/2006	Growth and Harvesting Systems and Methods for Nanowire
004701 01-	CN	Regular	Div	PCT	Filed	201110192086.9	4/29/2005			Growth and Harvesting Systems and Methods for Nanowire
004702 01-	US	Prov	Original	National	Inactive	60/754519	12/29/2005			Growth and Harvesting Methods for oriented growth of
004702 01-	US	Regular	Con	National	Granted	11/490636	7/21/2006	7273732	9/25/2007	nanowires on patterned substrates Systems and Methods for Nanowire
004703	US	Ū								Growth and Harvesting
01- 004704		Regular	Con	National	Granted	11/839335	8/15/2007	7666791	2/23/2010	Systems and Methods for Nanowire Growth and Harvesting
01- 005100	US	Prov	Original	National	Inactive	60/634472	12/9/2004			Nanowire-Based Membrane Electrode Assemblies for Fuel Cells
01- 005110	AU	Regular	Original	PCT	Granted	2005314211	12/6/2005	2005314211	10/21/2010	Nanowire-Based Membrane Electrode Assemblies for Fuel Cells
01- 005110	CA	Regular	Original	PCT	Filed	2588548	12/6/2005			Nanowire-Based Membrane Electrode Assemblies for Fuel Cells
01- 005110	CN	Regular	Original	PCT	Granted	200580042287.3	12/6/2005	CN101107737B	3/21/2012	Nanowire-Based Membrane Electrode Assemblies for Fuel Cells
01-	EP	Regular	Original	PCT/EPC	Filed	5853082.5	12/6/2005			Nanowire-Based Membrane
005110 01-	JP	Regular	Original	PCT	Filed	2007-545554	12/6/2005			Electrode Assemblies for Fuel Cells Nanowire-Based Membrane
005110 01-	KR	Regular	Original	PCT	Filed	10-2007-7015612	12/6/2005			Electrode Assemblies for Fuel Cells Nanowire-Based Membrane
005110 01-	PCT	Regular	Original	PCT	Inactive	PCT/US05/44068	12/6/2005			Electrode Assemblies for Fuel Cells Nanowire-Based Membrane
005110 01-	US	Regular	Original	National	Granted	11/295133	12/6/2005	7179561	2/20/2007	Electrode Assemblies for Fuel Cells Nanowire-Based Membrane
005110 01-	CN	Regular	Div	PCT	Filed	200910207967.6	12/6/2005			Electrode Assemblies for Fuel Cells Nanowire-Based Membrane
005111 01-	EP	Regular	Div	PCT/EPC	Filed	11193293.5	12/6/2005			Electrode Assemblies for Fuel Cells Nanowire-Based Membrane
005111		•						7077040	714010044	Electrode Assemblies for Fuel Cells
01- 005111	US	Regular	Con	National	Granted	11/642241	12/20/2006	7977013	7/12/2011	Nanowire-Based Membrane Electrode Assemblies for Fuel Cells
01- 005112	CN	Regular	Div	PCT	Filed	201210023354.9	12/6/2005			Nanowire-Based Membrane Electrode Assemblies for Fuel Cells
01- 005112	US	Regular	Con	National	Granted	12/234104	9/19/2008	7977007	7/12/2011	Nanowire-Based Membrane Electrode Assemblies for Fuel Cells
01- 005113	US	Regular	Con	National	Filed	13/149527	5/31/2011			Nanowire-Based Membrane Electrode Assemblies for Fuel Cells
01- 005114	US	Regular	Con	National	Filed	13/551230	7/17/2012			Nanowire-Based Membrane Electrode Assemblies for Fuel Cells
005114 01- 006200	US	Prov	Original	National	Inactive	60/632337	12/2/2004			Horizontal Nanowire Growth and Substrate Removal

Docket Number	Cntry	Case Type	Relation Type	Filing Type	Status	Application Number	App Date	Patent Number	Grant Date	Title
01- 006210	US	Regular	Original	National	Granted	11/291484	12/1/2005	7560366	7/14/2009	Horizontal Nanowire Growth and Substrate Removal
01- 006900	US	Prov	Original	National	Inactive	60/671131	4/13/2005			Nanowire Dispersion Compositions and Uses Thereof
01- 006910	EP	Regular	Original	PCT/EPC	Filed	6749643	4/6/2006			Nanowire Dispersion Compositions and Uses Thereof
01- 006910	JP	Regular	Original	PCT	Filed	2008-506571	4/6/2006			Nanowire Dispersion Compositions and Uses Thereof
01- 006910	PCT	Regular	Original	PCT	Inactive	PCT/US05/013290	4/6/2006			Nanowire Dispersion Compositions and Uses Thereof
01- 006910	US	Regular	Original	National	Granted	11/399307	4/6/2006	7745498	6/29/2010	Nanowire Dispersion Compositions and Uses Thereof
01- 007400	US	Prov	Original	National	Inactive	60/738100	11/21/2005			Nanowire structures comprising carbon
01- 007410	US	Prov	Original	National	Inactive	60/801377	5/19/2006			Nanowire structures comprising carbon
01- 007420	CA	Regular	Original	PCT	Filed	2624776	11/20/2006			Nanowire structures comprising carbon
01- 007420	CN	Regular	Original	PCT	Filed	200680043546.9	11/20/2006			Nanowire structures comprising carbon
01- 007420	DE	Regular	Original	PCT/EPC	Granted	6838053.4	11/20/2006	602006025118.1	10/12/2011	Nanowire structures comprising carbon
01- 007420	EP	Regular	Original	PCT/EPC	Granted	6838053.4	11/20/2006	1952467	10/12/2011	Nanowire structures comprising carbon
01- 007420	FR	Regular	Original	PCT/EPC	Granted	6838053.4	11/20/2006	1952467	10/12/2011	Nanowire structures comprising carbon
01- 007420	GB	Regular	Original	PCT/EPC	Granted	6838053.4	11/20/2006	1952467	10/12/2011	Nanowire structures comprising carbon
01- 007420	IE	Regular	Original	PCT/EPC	Granted	6838053.4	11/20/2006	1952467	10/12/2011	Nanowire structures comprising carbon
01- 007420	JP	Regular	Original	PCT	Filed	2008-541404	11/20/2006			Nanowire structures comprising carbon
01- 007420	KR	Regular	Original	PCT	Filed	10-2008-7015163	11/20/2006			Nanowire structures comprising carbon
01- 007420	PCT	Regular	Original	PCT	Inactive	PCT/US06/044883	11/20/2006			Nanowire structures comprising carbon
01-	TW	Regular	Original	National	Filed	95143081	11/21/2006			Nanowire structures comprising
007420 01-	US	Regular	CIP	National	Granted	11/601842	11/20/2006	7939218	5/10/2011	carbon Nanowire structures comprising
007420 01-	AU	Regular	Div	PCT	Granted	2011211404	11/20/2006	2011211404	4/5/2012	carbon Nanowire structures comprising
007421 01-	EP	Regular	Div	PCT/EPC	Filed	11173557.7	11/20/2006			carbon Nanowire structures comprising
007421 01-	US	Regular	CIP	National	Granted	11/808760	6/12/2007	7842432	11/30/2010	carbon Nanowire structures comprising
007430 01-	PCT	Regular	Original	PCT	Inactive	PCT/US2009/001130	2/23/2009			carbon Nanostructured Catalyst Supports
007440 01-	US	Regular	CIP	National	Granted	12/391057	2/23/2009	8278011	10/2/2012	Nanostructured catalyst supports
007440 01-	US	Prov	Original	National	Inactive	60/857765	11/9/2006			Method for nanowire alignment and
008200 01-	US	Prov	Original	National	Inactive	60/924057	4/27/2007			deposition Methods for nanowire alignment and deposition
008210 01-	JP	Regular	Original	PCT	Granted	2009-533413	11/9/2007	5009993	6/8/2012	Methods for nanowire alignment and
008220 01-	PCT	Regular	Original	PCT	Inactive	PCT/US2007/023625	11/9/2007			deposition Methods for nanowire alignment and
008220 01-	TW	Regular	Original	National	Filed	96142497	11/9/2007			deposition Methods for nanowire alignment and
008220 01-	US	Regular	Original	National	Granted	11/979949	11/9/2007	7968474	6/28/2011	deposition Methods for nanowire alignment and
008220 01-	US	Regular	Div	National	Granted	13/113680	5/23/2011	8252164	8/28/2012	deposition Methods for nanowire alignment and
008221	US	Prov	Original	National	Inactive	60/857450	11/7/2006			deposition Systems and Methods for Nanowire
008400 01-	CN	Regular	Original	PCT	Filed	200780049370.2	11/6/2007			Growth Systems and Methods for Nanowire
008410 01-	EP	Regular	Original	PCT/EPC	Filed	7839972.2	11/6/2007			Growth Systems and Methods for Nanowire
008410 01-	PCT	Regular	Original	PCT	Inactive	PCT/US2007/023434	11/6/2007			Growth Systems and Methods for Nanowire
008410 01-	US	Regular	Original	National	Granted	11/935884	11/6/2007	7776760	8/17/2010	Growth Systems and Methods for Nanowire
008410										Growth

Docket Number	Cntry	Case Type	Relation Type	Filing Type	Status	Application Number	App Date	Patent Number	Grant Date	Title
01- 008600	US	Prov	Original	National	Inactive	60/754520	12/29/2005			Systems and Methods for Harvesting and Reducing Contamination in
01- 008601	US	Regular	Original	National	Granted	11/643025	12/20/2006	7741197	6/22/2010	and Reducing Contamination in
01- 008700	US	Prov	Original	National	Inactive	60/754519	12/29/2005			Nanowires Methods for oriented growth of
008700 01- 008701	PCT	Regular	Original	PCT	Inactive	PCT/US2006/048456	12/20/2006			nanowires on patterned substrates Methods for oriented growth of
01- 008701	US	Regular	Original	National	Granted	11/641939	12/20/2006	7951422	5/31/2011	nanowires on patterned substrates Methods for oriented growth of
01- 008720	AU	Regular	Original	PCT	Granted	2006343556	12/20/2006	2006343556	6/21/2012	nanowires on patterned substrates Methods for oriented growth of nanowires on patterned substrates
01- 008720	CA	Regular	Original	PCT	Filed	2624778	12/20/2006			Methods for oriented growth of nanowires on patterned substrates
01- 008720	CN	Regular	Original	PCT	Granted	200680045385.7	12/20/2006	200680045385.7	4/20/2011	Methods for oriented growth of nanowires on patterned substrates
01- 008720	EP	Regular	Original	PCT/EPC	Filed	6851310	12/20/2006			Methods for oriented growth of nanowires on patterned substrates
01- 008720	JP	Regular	Original	PCT	Filed	2008-548610	12/20/2006			Methods for oriented growth of nanowires on patterned substrates
01- 008720	KR	Regular	Original	PCT	Filed	10-2008-7018738	12/20/2006			Methods for oriented growth of nanowires on patterned substrates
01- 008720	PCT	Regular	Original	PCT	Inactive	PCT/US2006/048457	12/20/2006			Methods for oriented growth of
01- 008720	US	Regular	Original	National	Granted	11/641946	12/20/2006	7785922	8/31/2010	nanowires on patterned substrates Methods for oriented growth of
01- 008900	US	Prov	Original	National	Inactive	60/872015	11/29/2006			nanowires on patterned substrates Pulsed laser annealing of silicon
01- 008910	PCT	Regular	Original	PCT	Inactive	PCT/US2007/084117	11/8/2007			nanowires Pulsed laser annealing of silicon
01- 008910	US	Regular	Original	National	Granted	11/936590	11/7/2007	7786024	8/31/2010	nanowires Selective Processing of Semiconductor Nanowires by Polarized Visible Radiation
01- 009200	US	Prov	Original	National	Inactive	60/916337	5/7/2007			Method and system for printing aligned nanowires and other electrical devices
01- 009210	CN	Regular	Original	PCT	Filed	200880014974.8	5/5/2008			Method and system for printing aligned nanowires and other electrical devices
01- 009210	JP	Regular	Original	PCT	Filed	2010-507581	5/5/2008			Method and system for printing aligned nanowires and other electrical devices
01- 009210	KR	Regular	Original	PCT	Filed	10-2009-7025545	5/5/2008			Method and system for printing aligned nanowires and other electrical devices
01- 009210	PCT	Regular	Original	PCT	Inactive	PCT/US2008/062623	5/5/2008			Method and system for printing aligned nanowires and other electrical devices
01- 009210	TW	Regular	Original	National	Granted	97116662	5/6/2008	1359784	3/11/2012	Method and system for printing aligned nanowires and other electrical devices
01- 009210	US	Regular	Original	National	Granted	12/114446	5/2/2008	7892610	2/22/2011	Method and system for printing aligned nanowires and other electrical devices
01- 009211	US	Regular	Div	National	Filed	13/009675	1/19/2011			Method and system for printing aligned nanowires and other electrical devices
01- 009400	US	Prov	Original	National	Inactive	61/006028	12/14/2007			Methods for Formation of Substrate Elements
01- 009410	US	Prov	Original	National	Inactive	61/064363	2/29/2008			Methods for Formation of Substrate Elements
01- 009420	US	Prov	Original	National	Inactive	61/064954	4/4/2008			Methods for Formation of Substrate Elements
01- 009421	EP	Regular	Original	PCT/EPC	Filed	8872816.7	12/9/2008			Methods for Formation of Substrate Elements
01- 009421	JP	Regular	Original	PCT	Filed	2010-537943	12/9/2008			Methods for Formation of Substrate Elements
01- 009421	KR	Regular	Original	PCT	Filed	10-2010-7015621	12/9/2008			Methods for Formation of Substrate Elements
01- 009421	PCT	Regular	Original	PCT	Inactive	PCT/US2008/013499	12/9/2008			Methods for Formation of Substrate Elements
01- 009421	TW	Regular	Original	National	Filed	97148251	12/11/2008			Methods for Formation of Substrate Elements

Docket	Cntry	Case	Relation	Filing	Status	Application Number	App Date	Patent Number	Grant Date	Title
Number 01-	US	Type Regular	Type Original	Type National	Filed	12/331150	12/9/2008			Methods for Formation of Substrate Elements
009421 01-	US	Prov	Original	National	Inactive	61/108301	10/24/2008			Membrane electrode assemblies with interfacial layer
009700 01-	JP	Regular	Original	PCT	Filed	2011-533334	10/22/2009			Membrane electrode assemblies with interfacial layer
009710 01-	PCT	Regular	Original	PCT	Inactive	PCT/US2009/061684	10/22/2009			Membrane electrode assemblies with interfacial layer
009710 01- 009710	US	Regular	Original	PCT	Filed	13/124790	7/11/2011			Membrane electrode assemblies with interfacial layer
01- 009800	US	Prov	Original	National	Inactive	61/108304	10/24/2008			Electrochemical catalyst for fuel cells
009800 01- 009810	JP	Regular	Original	PCT	Filed	2011-533335	10/22/2009			Electrochemical catalyst for fuel cells
009810 01- 009810	PCT	Regular	Original	PCT	Inactive	PCT/US2009/061686	10/22/2009			Electrochemical catalyst for fuel cells
009810 01- 009810	US	Regular	Original	PCT	Filed	13/124800	7/12/2011			Electrochemical catalyst for fuel cells
01- 010500	US	Prov	Original	National	Inactive	61/181229	5/26/2009			Electric Field Deposition of Nanowires and Other Devices
01- 010510	JP	Regular	Original	PCT	Filed	2012-513177	5/25/2010			Methods and Systems for Electric Field Deposition of Nanowires and Other Devices
01- 010510	PCT	Regular	Original	PCT	Inactive	PCT/US2010/036065	5/25/2010			Methods and Systems for Electric Field Deposition of Nanowires and Other Devices
01- 010510	US	Regular	Original	PCT	Filed	13/322117	11/22/2011			Methods and Systems for Electric Field Deposition of Nanowires and Other Devices
01-	US	Prov	Original	National	Inactive	61/175293	5/4/2009			Membrane Electrode Assemblies for Fuel Cells
010800 01-	JP	Regular	Original	National	Filed	2010-105661	4/30/2010			Membrane Electrode Assemblies for Fuel Cells
010810 01-	US	Regular	Original	National	Filed	12/772862	5/3/2010			Catalyst Layer for Fuel Cell Membrane Electrode Assembly, Fuel
010810										Cell Membrane Electrode Assembly Using the Catalyst Layer, Fuel Cell, and Method for Producing the Catalyst Layer
01- 010900	US	Prov	Original	National	Inactive	61/221501	6/29/2009			Apparatus and Methods for High Density Nanowire Growth
01-	US	Regular	Original	National	Filed	12/824485	6/28/2010			Apparatus and Methods for High Density Nanowire Growth
010901 01- 011000	US	Prov	Original	National	Inactive	61/179663	5/19/2009			Nanowire Enabled Battery Technology
01- 01- 011010	US	Prov	Original	National	Inactive	61/221392	6/29/2009			Nanostructured Materials for Battery Applications
01- 01- 011020	US	Prov	Original	National	Inactive	61/255732	10/28/2009			Nanostructured Materials for Battery Applications
01- 01- 011030	CN	Regular	Original	PCT	Filed	201080021697.0	5/19/2010			Nanostructured Materials for Battery Application
01- 01- 011030	EP	Regular	Original	PCT/EPC	Filed	10778339.1	5/19/2010			Nanostructured Materials for Battery Application
01- 01- 011030	JP	Regular	Original	PCT	Filed	2012-511997	5/19/2010			Nanostructured Materials for Battery Application
01- 01- 011030	KR	Regular	Original	PCT	Filed	2011-7030289	5/19/2010			Nanostructured Materials for Battery Application
01- 01- 011030	PCT	Regular	Original	PCT	Inactive	PCT/US2010/35435	5/19/2010			Nanostructured Materials for Battery Application
01- 011030	US	Regular	Original	National	Filed	12/783243	5/19/2010			Nanostructured Materials for Battery Applications
01- 011200	US	Prov	Original	National	Inactive	61/511826	7/26/2011			Nanostructured Battery Active Materials and Methods of Producing Same
01- 011201	PCT	Regular	Original	PCT	Filed	PCT/US2012/47979	7/24/2012			Nanostructured Battery Active Materials and Methods of Producing Same
01- 011400	US	Prov	Original	National	Inactive	61/543791	10/5/2011			Salicon Nanostructure Active Materials for Lithium Ion Batteries and Processes, Compositions, Components, and Devices Related Thereto

Docket	Cntry	Case	Relation	Filing	Status	Application Number	App Date	Patent Number	Grant Date	Title
Number 01- 011401	PCT	Type Regular	Type Original	Type PCT	Filed	PCT/US2012/58418	10/2/2012			Silicon Nanostructure Active Materials for Lithium Ion Batteries and Processes, Compositions, Components, and Devices Related
02-	EP	Regular	Original	PCT/EPC	Granted	97907700.5	2/21/1997	885316	11/15/2006	Thereto Metal Oxide Nanorods
124300 02-	FR	Regular	Original	PCT/EPC	Granted	97907700.5	2/21/1997	885316	11/15/2006	Metal Oxide Nanorods
124300 02-	GB	Regular	Original	PCT/EPC	Granted	97907700.5	2/21/1997	,885316	11/15/2006	Metal Oxide Nanorods
124300 02-	PCT	Regular	Original	PCT	Inactive	PCT/US97/02600	2/21/1997			Metal Oxide Nanorods
124300 02-	US	Regular	Original	National	Granted	08/606892	2/26/1996	5897945	4/27/1999	Metal Oxide Nanorods
124300 02- 124301	JP	Regular	Div	PCT	Filed	2009-246569	2/21/1997			Metal Oxide Nanorods
02- 124310	US	Regular	CIP	National	Granted	08/790824	1/22/1997	6036774	3/14/2000	Method of Producing Metal Oxide Nanorods
02- 164110	AU	Regular	Original	PCT	Granted	59055/00	6/30/2000	782000	10/6/2005	Nanoscopic Wire-Based Devices, Arrays, and Methods of Their Manufacture
02- 164110	CA	Regular	Original	PCT	Filed	2372707	6/30/2000			Nanoscopic Wire-Based Devices, Arrays and the Methods of Manufacture
02- 164110	DE	Regular	Original	PCT/EPC	Granted	945062.8	6/30/2000	60044972.6-08	9/15/2010	Nanoscopic Wire-Based Devices, Arrays and the Methods of Manufacture
02- 164110	EP	Regular	Original	PCT/EPC	Granted	945062.8	6/30/2000	1194960	9/15/2010	Nanoscopic Wire-Based Devices, Arrays and the Methods of Manufacture
02- 164110	FR	Regular	Original	PCT/EPC	Granted	945062.8	6/30/2000	1194960	9/15/2010	Nanoscopic Wire-Based Devices, Arrays and the Methods of Manufacture
02- 164110	GB	Regular	Original	PCT/EPC	Granted	945062.8	6/30/2000	1194960	9/15/2010	Nanoscopic Wire-Based Devices, Arrays and the Methods of Manufacture
02- 164110	JP	Regular	Original	PCT	Filed	2001-508518	6/30/2000			Nanoscopic Wire-Based Devices, Arrays and the Methods of Manufacture
02- 164110	PCT	Regular	Original	PCT	Inactive	PCT/US00/18138	6/30/2000			Nanoscopic Wire-Based Devices, Arrays, and Methods of Their
02-	US	Regular	Con	National	Granted	10/033369	10/24/2001	6781166	8/24/2004	Manufacture Nanoscopic Wire-Based Devices and Arrays
164110 02- 164111	AU	Regular	Div	National	Granted	2005201840	5/2/2005	2005201840	5/3/2007	Nanoscopic Wire-Based Devices, Arrays, and Methods of Their Manufacture
02- 164111	JP	Regular	Div	PCT	Filed	2011-099303	6/30/2000			Nanoscopic Wire-Based Devices, Arrays and the Methods of
02- 164111	US	Regular	Con	National	Granted	10/812653	3/29/2004	8178907	5/15/2012	Crossbar Memory Devices and
02- 164112	AU	Regular	Div	National	Granted	2006202493	6/13/2006	2006202493	9/8/2008	Arrays Nanoscopic Wire-Based Devices, Arrays, and Methods of Their
02- 164112	EP	Regular	Div	PCT/EPC	Filed	10166127	6/30/2000			Manufacture Nanoscopic Wire-Based Devices, Arrays and the Methods of
02- 164113	AU	Regular	Div	National	Granted	2008202543	6/13/2006	2008202543	10/14/2010	Manufacture Nanoscopic Wire-Based Devices, Arrays, and Methods of Their
02-	US	Regular	Div	National	Granted	11/283631	11/21/2005	7399691	7/15/2008	Manufacture Methods of forming nanoscopic wire-
164113 02-	US	Regular	Div	National	Granted	11/313096	12/20/2005	7172953	2/6/2007	based devices and arrays Nanoscopic Wire-Based Devices
164115 02-	US	Regular	Con	National	Filed	11/485893	7/13/2006			and Arrays Nanoscopic Wire-Based Devices
164116 02- 164120	US	Regular	Con	National	Filed	13/444334	4/11/2012			and Arrays Nanoscopic Wire-Based Electrical Crossbar Memory Devices and
02-	US	Prov	Original	National	Inactive	60/226835	8/22/2000			Arrays Semiconductor Nanowires
176500 02- 176510	us	Prov	Original	National	Inactive	60/292121	5/18/2001			Semiconductor Nanowires

Docket	Cntry	Case	Relation	Filing	Status	Application Number	App Date	Patent Number	Grant Date	Title
Number 02- 176520	AU	Type Regular	Type Original	Type PCT	Granted	2001286649	8/22/2001	2001286649	8/16/2007	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176520	CA	Regular	Original	PCT	Granted	2417992	8/22/2001	2417992	10/19/2010	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176520	CN	Regular	Original	PCT	Granted	18161685	8/22/2001	ZL01816168.5	12/2/2009	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176520	EP	Regular	Original	PCT/EPC	Filed	1966109.9	8/22/2001			Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176520	JP	Regular	Original	PCT	Granted	2002-521336	8/22/2001	5013650	6/15/2012	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176520	KR	Regular	Original	PCT	Granted	10-2003-7002636	8/22/2001	10-0791732	12/27/2007	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176520	MX	Regular	Original	PCT	Granted	PA/A/2003/001605	8/22/2001	252084	11/30/2007	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176520	PCT	Regular	Original	PCT	Inactive	PCT/US01/26298	8/22/2001			Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176520	SG	Regular	Original	PCT	Granted	200300354-8	8/22/2001	94521	4/29/2005	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176520	TW	Regular	Original	National	Granted	90120587	8/22/2001	1292583	1/11/2008	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176521	AU	Regular	Div	PCT	Granted	2007202897	8/22/2001	2007202897	1/14/2010	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176521	EP	Regular	Div	PCT/EPC	Filed	10195590.4	8/22/2001			Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176521	KR	Regular	Div	PCT	Granted	10-2007-7019 497	8/22/2001	10-0862131	9/30/2008	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating
02- 176521	MX	Regular	Div	PCT	Granted	MX/A/2007/010619	8/30/2007	282140	12/15/2010	Such Devices Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating
02- 176521	TW	Regular	Div	National	Granted	94143539	5/16/2006	1294636	3/11/2008	Such Devices Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
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Docket	Cntry	Case	Relation	Filing	Status	Application Number	App Date	Patent Number	Grant Date	Title
Number 02- 176521	US	Type Regular	Type Div	Type National	Granted	11/082372	3/17/2005	7211464	5/1/2007	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176522	CN	Regular	Div	National	Filed	200910205893.2	8/22/2001			Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176522	EP	Regular	Div	PCT/EPC	Filed	10195600.1	8/22/2001			Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 176522	KR	Regular	Div	PCT	Granted	10-2007-7030228	12/24/2007	10-0995457	11/12/2010	Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating
02- 176522	US	Regular	Con	National	Granted	11/543352	10/4/2006	7666708	2/23/2010	Such Devices Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating
02- 176523	CN	Regular	Div	PCT	Filed	201010206782.6	8/22/2001			Such Devices Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating
02- 176523	KR	Regular	Div	PCT	Granted	10-2008-7015375	8/22/2001	10-0984585	9/24/2010	Such Devices Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating
02- 176523	US	Regular	Con	National	Granted	11/543337	10/4/2006	8153470	4/10/2012	Such Devices Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating
02- 176525	US	Regular	Con	National	Granted	11/543336	10/4/2006	7476596	1/13/2009	Such Devices Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating
02- 176526	US	Regular	Con	National	Granted	11/543353	10/4/2006	7915151	3/29/2011	Such Devices Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating
02- 17652 7	US	Regular	Con	National	Granted	11/543326	10/4/2006	7595260	9/29/2009	Such Devices Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating
02- 176529	US	Regular	Con	National	Filed	13/490325	6/6/2012			Such Devices Doped Elongated Semiconductors, Growing Such Semiconductors, Devices Including Such Semiconductors and Fabricating Such Devices
02- 185210	US	Prov	Original	National	Inactive	60/292035	5/18/2001			Nanowire and Nanotube Sensors
02- 185220	AU	Regular	Original	PCT	Granted	2002229046	12/11/2001	2002229046	8/31/2006	Nanosensors
02- 185220	CA	Regular	Original	PCT	Filed	2430888	12/11/2001	4040077	0/40/0000	Nanosensors
02- 185220	CH	Regular	Original	PCT/EPC	Granted		12/11/2001	1342075	9/10/2008	Nanosensors
02- 185220	DE	Regular	Original	PCT/EPC	Granted		12/11/2001	60135775.2-08	9/10/2008	Nanosensors
02- 185220	EP	Regular	Original	PCT/EPC	Granted		12/11/2001	ES2312490 T3	9/10/2008	Nanosensors Nanosensors
02- 185220	ES	Regular	Original	PCT/EPC	Granted			1342075	9/10/2008	Nanosensors
02- 185220	FR	Regular	Original	PCT/EPC	Granted	1990 10 1.8	12/11/2001	1342073	JI 1012000	14011035113013

Docket	Cntry	Case	Relation	Filing	Status	Application Numb	er App Date	Patent Number	Grant Date	Title
Number 02-	GB	Type Regular	Type Original	Type PCT/EPC	Granted	19901	81.8 12/11/2001	1342075	9/10/2008	Nanosensors
185220 02-	ΙE	Regular	Original	PCT/EPC	Granted	19901	81.8 12/11/2001	1342075	9/10/2008	Nanosensors
185220 02- 185220	IT	Regular	Original	PCT/EPC	Granted	199018	81.8 12/11/2001	1342075	9/10/2008	Nanosensors
02- 185220	JP	Regular	Original	PCT	Granted	2002-549958	12/11/2001	4583710	9/10/2010	Nanosensors
02- 185220	LI	Regular	Original	PCT/EPC	Granted	199018	81.8 12/11/2001	1342075	9/10/2008	Nanosensors
02- 185220	NL	Regular	Original	PCT/EPC	Granted	199018	81.8 12/11/2001	1342075	9/10/2008	Nanosensors
02- 185220	PCT	Regular	Original	PCT	Inactive	PCT/US01/48230	12/11/2001			Nanosensors
02- 185220	SE	Regular	Original	PCT/EPC	Granted	199018	81.8 12/11/2001	1342075	9/10/2008	Nanosensors
02- 185220	US	Regular	Original	National	Granted	10/020004	12/11/2001	7129554	10/31/2006	Nanosensors
02- 185221	EP	Regular	Div	PCT/EPC	Filed	612115	57.9 12/11/2001			Nanosensors
02- 185221	JP	Regular	Div	PCT	Filed	2008-074167	12/11/2001			Nanosensors
02- 185221	US	Regular	Con	National	Granted	11/012549	12/15/2004	7256466	8/14/2007	Nanosensors
02- 185222	KR	Regular	Div	PCT	Granted	10-2008-7013814	12/11/2001	10-1035205	5/9/2011	Nanosensors
02- 185222	JP	Regular	Div	PCT	Filed	2008-209206	12/11/2001			Nanosensors
02- 185222	US	Regular	Div	National	Granted	11/582167	10/17/2006	7385267	6/10/2008	Nanosensors
02- 185223	KR	Regular	Div	PCT	Granted	10-2008-7027974	12/11/2001	10-0984603	9/24/2010	Nanosensors
02- 185223	US	Regular	Con	National	Granted	12/038794	2/27/2008	7619290	11/17/2009	Nanosensors
02- 185224	KR	Regular	Div	PCT	Granted	10-2008-7028931	12/11/2001	10-0991573	10/27/2010	Nanosensors
02- 185224	US	Regular	Con	National	Granted	12/571371	9/30/2009	7911009	3/22/2011	Nanosensors
02- 185225	US	Regular	Con	National	Granted	12/792711	6/2/2010	7956427	6/7/2011	Nanosensors
02- 185226	US	Regular	Con	National	Filed	13/083817	4/11/2011			Nanosensors
02- 205800	AU	Regular	Original	PCT	Granted	2002324	426 8/22/2001	2002324426	11/8/2007	Nanoscale Wires and Related Devices
02- 205800	PCT	Regular	Original	PCT	Inactive	PCT/US02/16133	5/20/2002			Nanoscale Wires and Related Devices
02- 205801	AU	Regular	Div	National	Granted	2007211	919 8/24/2007	2007211919	4/23/2009	Nanoscale Wires and Related Devices
02- 205801	PCT	Regular	Original	PCT	Inactive	PCT/US2003/22061	7/16/2003			Nanoscale Wires and Related Devices
02- 205801	US	Regular	CIP	National	Granted	10/196337	7/16/2002	7301199	11/27/2007	Nanoscale Wires and Related Devices
02- 205806	US	Regular	Con	National	Filed	12/072844	2/27/2008			Nanoscale Wires and Related Devices
04- 019010	US	Prov	Original	National	Inactive	60/280676	3/30/2001			Nanowire Heterostructures and Method of Fabrication
04- 019020	US	Prov	Original	National	Inactive	60/349206	1/15/2002			Block-by-Block Growth of Single- Crystalline Si/SiGe
019020 04- 019030	AU	Regular	Original	PCT	Granted	20023070	008 3/29/2002	2002307008	8/21/2008	Methods of Fabricating Nanostructures and Nanowires and Devices Fabricated Therefrom
04- 019030	CA	Regular	Original	PCT	Filed	24429	985 3/29/2002			Methods of Fabricating Nanostructures and Nanowires and Devices Fabricated Therefrom
04- 019030	CN	Regular	Original	PCT	Granted	28096	601 3/29/2002	ZL02809601.0	3/21/2007	Methods of Fabricating Nanostructures and Nanowires and
04- 019030	EP	Regular	Original	PCT/EPC	Filed	275770	06.3 3/29/2002			Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019030	ID	Regular	Original	PCT	Granted	W00200301939	3/29/2002	202610	2/22/2008	Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019030	MX	Regular	Original	PCT	Granted	PA/a/2003/008935	3/29/2002	256312	4/15/2008	Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and Devices Fabricated Therefrom

Docket Number	Cntry	Case Type	Relation Type	Filing Type	Status	Application Number	App Date	Patent Number	Grant Date	Title
04- 019030	PCT	Regular	Original	PCT	Inactive	PCT/US02/10002	3/29/2002			Methods of Fabricating Nanostructures and Nanowires and
04- 019030	SG	Regular	Original	PCT	Granted	200305983-9	3/29/2002	100339	12/30/2005	Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019030	TW	Regular	Original	National	Granted	91106432	3/30/2002	NI-188731	2/12/2004	Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019030	US	Regular	Original	National	Granted	10/112578	3/29/2002	6882051	4/19/2005	Devices Fabricated Therefrom Nanowires, Nanostructures and Devices Fabricated Therefrom
04- 019031	AU	Regular	Div	National	Granted	2008200507	2/4/2008	2008200507	9/2/2010	Methods of Fabricating Nanostructures and Nanowires and
04- 019031	CN	Regular	Div	PCT	Granted	200710008259.0	1/26/2007	ZL10008529.0	5/19/2010	Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 0190 3 1	EP	Regular	Div	PCT/EPC	Filed	10012530.1	3/29/2002			Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019031	KR	Regular	Div	PCT	Granted	10-2009-7023682	3/29/2002	10-1008294	1/7/2011	Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019032	CN	Regular	Div	PCT	Filed	200910168694.9	9/7/2009			Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
0 4 - 019033	JP	Regular	Div	National	Filed	2010-253763	3/29/2002			Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019040	US	Regular	Original	National	Granted	10/112698	3/29/2002	6996147	2/7/2006	Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019050	US	Regular	Con	National	Granted	11/040664	1/20/2005	7569847	8/4/2009	Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019060	US	Regular	Con	National	Granted	11/645241	12/22/2006	7569941	8/4/2009	Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019070	US	Regular	Con	National	Granted	11/645236	12/22/2006	7834264	11/16/2010	Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
04- 019080	US	Regular	Div	National	Filed	12/488310	6/19/2009			Devices Fabricated Therefrom Methods of Fabricating Nanostructures and Nanowires and
11- 000110	US	Regular	Original	National	Granted	09/875443	6/6/2001	6687987	2/10/2004	Devices Fabricated Therefrom Electro-fluidic assembly process for integration of electronic devices onto a substrate

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Assets

Olympus compound Microscope System

Scanning Electron Microscope JSM-6500F

Model 1010 2-Stack Furnace (6N/8U)

Laminar Flow Hood

FAS1Femtostat Potentiostat/Galvanostat/ZRA (Gamry and Pine RDE)

Split tube furnace and control system

TBE Furn 1100C

Zetasizer Non-s Size Ultra Micro cell

Benchtop Furnace (RD)

Quartz process tube

Recirculating chiller

Homogenizer Ultrasonic Model 300 V/T

High Temperature Bath 30L

Mechanical Pumps for Furnace

Nitrogen Filter System for New Bulk Tank

Potentiostat/Galvanostat/FRA (PARstat 2273)

High Temperature Furnace

Plumbing Associated with Sil Tet Source Cabinet & 8" Furnace

GES5 Variable Angle Spectroscopic Ellipsometer

Gas bubbler, Part No. HTS-TC-GTL (Electrochem, Inc fuel cell station)

AB-S Series Analytical balances: AB304-S, 0.1mg readability

P400A ALD reactor. Details of accessories included are in the Quotation document

Multi-frequency Capacitance/Loss Bridge

Nano ZS instrument (scattering)

Fuel cell/battery tester (4 channel tester)

HYDRAULIC / PNEUMATIC PINCH-OFF TOOL

SH-661 BENCHTOP TEMPERATURE & HUMIDITY CHAMBER

Cosmos FloWorks PE Network

CHI6002C and CHI 680B CH instruments electroanalytical analysers (2 units)

M150S abatement system; with better payment terms. Includes air tuyere, end point

Nanosys Account O-15:(1) SDC Fully automated silane cabinet model # CipherconN 1

YES 1224P silane vapor deposition system

HITECH Furnace System with one oxidation and one anneal furnace

FCTS 200HL fuel cell stations (2 units: A10405 & A10439)

Ultrasonic Generator: S8540-18 (40kHz, 750W) per attached quote.

Mettler XP2U Ultramicrobalance, 2.1G X 0.1UG (demo)

Ultrasonic Tank (for 170kHz unit): CH1012-170-12 (240V, 10" X 12" X 10"D) per at

CHI 627D Electrochemical Workstation (2 units)

mettler toledo brand coulometric KF titrator diaphragm-less model model C20X

Glove Box MB200MOD. Includes Installation (2 units)

Page 1 of 2

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AFA-III Automatic Film Coater with Vacuum chuck & Heating Cover and Micromter ad ECD-1 Standard dilatometer; The price is estimated and subject to change upto ex lab density meter anton paar DMA4100M part#45498

107A temperature chamber

Shimadzu UV-Vis

E&H diaphragm pressure transmitter for vacuum part # special

Planetary ball mill PQ-N4 and 4 SS jars (with SS balls)

107A temperature chamber

30L Jacketted Reactor System

12" sieve shaker and various test sieves

Glove Box, Series 100; Twin Model, Polycarbonate for Open Loop, P/N 1681-32E-OL-6' XPERT BULK POWDER FILTER VENTED ENCLOSURE SYSTEM, RIGHT SIDE(Vendor Catalog #

Purchase of Delta Premium DP-6000 Handheld XRF Instrument for Si wt % estimation 9ft X 3ft X 3ft stainless steel lab bench with integrated sink and storage cabin Cannon miniAV Automatic Viscometer 115V

6-FT XPERT BULK POWDER FILTER SYSTEM, Left Side Opening, per attached quotation Bench-Top Precision Automatic Heating Calendar (Rolling Press -11" W x 8.5" Dia Battery tester BT-5HC100A4ch with 1kHz impedance measurement, 3 current range Sieve shaker- scale up the seiving process.

NP800 ultrasonic metal welder

ASAP 2020 Automatic Chemisorption Analyzer, with Automatic Degas System 202/3360

Neware 8-channel battery testers (144 units)

Retsch MM301 shaker

NBK-1 Non Bubbling Kneader

Silverson L5M-A mixer (2 units)

Doctor blade coater with vacuum table (2 units)

Vacuum ovens – VWR (2 units)

BINDER Oven

Vacuum oven Thermo Scientific

LINDBERG BLUE M Vacuum Oven

THELCO Lab Oven

SYMPHONY VWR Oven

Precision Vacuum Oven

Thermo Scientific Thermolyne oven

Coin cell crimpers (3 units)

Cell opener

Fuel cell MEA spray system

Oxford SEM with EDS

Vertical furnace

Page 2 of 2

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