

Professor of Chemical Engineering
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Appointments

2012-pres.	Professor of Chemical Engineering, Department of Chemical Engineering, MIT
2009-2012	Charles and Hilda Roddey Associate Professor of Chemical Engineering, Tenured, Department of Chemical Engineering, MIT
2007-2009	Charles and Hilda Roddey Associate Professor of Chemical Engineering, WOT, Department of Chemical Engineering, MIT
2006-2007	Associate Professor, Department of Chemical and Biomolecular Engineering, University of Illinois, Urbana-Champaign
2005-2007	Affiliate, Bioengineering Department, University of Illinois, Urbana-Champaign
2004-2007	Affiliate, Beckman Institute, University of Illinois, Urbana-Champaign
2003-2007	Faculty Appointment, Center for Nanoscale Science and Technology, University of Illinois, Urbana-Champaign
2003-2006	Assistant Professor, Department of Chemical and Biomolecular Engineering, University of Illinois, Urbana-Champaign
2002-2003	<i>Postdoctoral Fellow</i> , Center of Nanoscale Science and Technology with Prof. Richard E. Smalley, Rice University, Houston, TX
1998-2001	<i>Visiting Scientist</i> , Central Research and Development, DuPont Company Laboratory

Education

1997-2001	Ph.D. Chemical Engineering, University of Delaware, Newark, DE <i>Thesis Title:</i> Nanoporous Reactive Membranes – the Influence of Pore Structure on Membrane Selectivity <i>Thesis Advisor:</i> Henry C. Foley Graduation <i>summa cum laude</i>
1993-1997	B.S. Chemical Engineering, Polytechnic University, Brooklyn, NY <i>Senior Thesis Title:</i> A Multivariable Metric Approach to Simultaneous Chemical and Physical Thermodynamic Equilibrium Graduation <i>summa cum laude</i>

Awards and Honors

2012	Nanoscale Science and Engineering Forum Award, American Institute of Chemical Engineering
2011	Kavli Frontiers of Science Fellow, National Academy of Sciences
2011	Thompson Reuters, One of Top 20 Chemist of the Decade 2000-2010
2010	Council of Scientific Society Presidents, Honorary Lecturer
2010	R. M. Langer Lectureship, Yale University
2009	NSF Alan T. Waterman Award, Honorable Mention

2009	Brilliant 10, Popular Science Magazine
2009	Thiele Lectureship, Notre Dame University
2008	Allen P. Colburn Award, American Institute of Chemical Engineers
2008	Office of Naval Research, Young Investigator Award
2008	Colburn Memorial Lectureship, University of Delaware
2008	Outstanding Young Investigator Award, Materials Research Society
2008	Alfred P. Sloan Foundation Research Fellowship
2007	National Academy of Engineers, Frontiers of Engineering
2007	American Chemical Society Unilever Award for Colloidal Science
2007	Henry and Camille Dreyfus Teacher-Scholar Award
2006	Presidential Early Career Award for Scientists and Engineers (PECASE)
2006	Collaboration Success Award from the Council of Chemical Research
2006	Beckman Young Investigator Award
2006	3M Nontenured Faculty Award
2006	Coblentz Award for Excellence in Molecular Spectroscopy
2005	Young Investigator Award, Nanoscale Science and Engineering Forum, AIChE
2005	Top 1% of Highly Cited Researchers, Essential Science Indicators/Web of Science
2005	National Science Foundation Career Award
2004	Top Young Innovator Award, MIT Technology Review (TR100)
2004	Dupont Young Investigator Award

Selected Invited Lectures (2002-2006)

2002

“Single Walled Carbon Nanotubes in Aqueous Suspension: Solution Phase Behavior, Enhanced Spectral Properties and Selective Reaction Pathways,” Dupont Experimental Station, Wilmington, DE, November 2002

2003

“Single Walled Carbon Nanotubes in Aqueous Suspension: Solution Phase Behavior, Enhanced Spectral Properties and Selective Reaction Pathways,” Dupont Experimental Station, Wilmington, DE, November 2002

“Spectroscopic Assignment and Selective Reaction Pathways of Metallic Single Walled Carbon Nanotubes,” IWEPNM Annual 2003 Winterschool, Kirchberg, Austria, March 2003

“Advances in Carbon Nanotube Spectroscopy,” Institute of Physical Chemistry, University of Karlsruhe, Germany, March 2003

“Selective Functionalization of Single Walled Carbon Nanotubes for Separation,” FACSS Meeting, October 2003

2004

“Charge Transfer at the Single Walled Carbon Nanotube Interface,” Naval Research Laboratories, January 2004

“Understanding and Exploiting the Surface Chemistry of Single Walled Carbon Nanotubes,” Science at the Edge Seminar Series, Michigan State University, February 2004

“Selective Functionalization of Single Walled Carbon Nanotubes for Separation,” American Chemical Society Meeting, Spring 2004

“Selective Functionalization of Single Walled Carbon Nanotubes According to Electronic Structure,” American Physical Society Meeting, March 2004

“Understanding Carbon Nanotube Surface Chemistry,” Southern Illinois University, March 2004

“Applications of Nanotechnology in Medicine,” University of Illinois at Chicago, Grand Rounds, UIC Cancer Center, 2004

“Understanding the Surface Chemistry of Single Walled Carbon Nanotubes,” Oklahoma State University, EPSCoR Meeting, 2004

“Applications of Carbon Nanotube Surface Chemistry,” Nanotube 2004, San Louis Potosi, Mexico, July 2004

2005

Keynote Speaker, “Optical Characterization and Applications of Single Walled Carbon Nanotubes,” American Physical Society, March 2005

“Understanding and Exploiting the Chemistry of Single Walled Carbon Nanotubes,” University of California – Santa Barbara, Department of Chemical Engineering, May 2005

“Applications of Carbon Nanotube Surface Chemistry,” IWEPNM Annual 2005 Winterschool, Kirchberg, Austria, March 2005

“Understanding and Exploiting the Chemistry of Single Walled Carbon Nanotubes,” Georgia Institute of Technology, Department of Polymer Engineering, September 2005

“Understanding and Exploiting the Chemistry of Single Walled Carbon Nanotubes,” Purdue University, Department of Chemical Engineering, October 2005

2006

“Biomolecular Detection via Single Walled Carbon Nanotube Fluorescence,” UIUC, Center for Nanoscale Science and Technology, January 2006

“Detection of Aqueous Contaminants via nIR Carbon Nanotube Sensors,” UIUC, Center for Nanoscale Science and Technology, February 2006

“Understanding and Exploiting the Chemistry of Single Walled Carbon Nanotubes,” Brown University, Department of Chemical Engineering, April 2006

“Understanding and Exploiting the Chemistry of Single Walled Carbon Nanotubes,” Massachusetts Institute of Technology, Department of Chemical Engineering, April 2006

“Biomolecular Detection via Single Walled Carbon Nanotube Fluorescence,” FNano06, Boulder, CO, April 2006

Invited Speaker, “Single Walled Carbon Nanotube Chemistry,” Nanotube 2006, Nagano, Japan, June 2006

“Biomolecular Detection via Single Walled Carbon Nanotube Fluorescence,” American Chemical Society Annual Meeting, San Fran. CA, Sept 2006

“Understanding and Exploiting the Chemistry of Single Walled Carbon Nanotubes,” University of Oklahoma, Department of Chemical Engineering, Sept 2006

2007

“Fluorescence Applications of Single Walled Carbon Nanotubes,” Invited Lecturer, MOF Conference, Salsburg, Austria, Sept 2007

“Molecular Electronic Applications of Single Walled Carbon Nanotubes,” Royal Society of London, London, England, April 2007

“Optical Modulation of Single Walled Carbon Nanotubes,” Invited Speaker, Ottawa, Canada Wonton 2007

“Optical Modulation of Single Walled Carbon Nanotubes,” Invited Speaker, NIST Workshop, Bethesda, MD, Sept 2007

“Optical Modulation of Single Walled Carbon Nanotubes,” Invited Speaker, MRS Annual Meeting, Boston, MA Dec. 2007

“The Chemistry of Single Walled Carbon Nanotubes,” Cornell, Ithica, NY, Sept 2007

“Colloidal Chemistry of Single Walled Carbon Nanotubes,” Unilever Award Lecture, University of Delaware, Newark Delaware, June 2007

“The Chemistry of Single Walled Carbon Nanotubes,” UCLA Materials Science, Los Angeles, CA, Oct. 2007

2008

“The Chemistry and Applications of Single Walled Carbon Nanotubes,” KAIST, Korea, January 2008.

“The Chemistry and Applications of Single Walled Carbon Nanotubes,” SKKU, Suwon, Korea, January 2008.

“The Chemistry of Single Walled Carbon Nanotubes,” Tulane, New Orleans, LA, January 2008.

“The Chemistry of Single Walled Carbon Nanotubes,” University of Michigan, Ann Arbor, January 2008.
“Optical Modulation of Single Walled Carbon Nanotubes” IWEPM Annual 2008 Winter School, Kirchberg, Austria, March 2008.
“The Chemistry of Single Walled Carbon Nanotubes,” Invited Award Lecture, Materials Research Society, Spring Meeting, YIA Award Lecture, San Fran. CA, March 2008.
“The Chemistry of Single Walled Carbon Nanotubes,” Invited Award Lecture, Colburn Memorial Lecture, University of Delaware, April 2008.
“Optical Modulation of Single Walled Carbon Nanotubes” Carbon 2008, Nagano, Japan, July 2008.
“Recent Progress towards Separation of Single Walled Carbon Nanotubes and Graphene,” 2008 DARPA workshop on RF electronics, Silver Springs, MD, Aug 2008.
“Optical Modulation of Single Walled Carbon Nanotubes” 2008 Gordon Research Conference, Sept 2008, Aussois, France

2009

“Applications of single walled carbon nanotube sensors to Epidermal Growth Factor Signaling” University of Illinois, Biophysics, Sept 2009
“Near Infrared Fluorescent Sensors for In-Vivo Glucose Detection Based on Single Walled Carbon Nanotubes” A. Tech. Treatment Diabetes Athens, Greece, Feb 2009
“Optical sensors based on single walled carbon nanotubes” Am. Physics Soc., Pittsburgh, PA, March 2009
“The Chemistry of Single Walled Carbon Nanotubes: Biosensors and Thermopower Waves” SAINT, Seoul, S. Korea, March 2009
“The Wonders of One Dimensional Chemistry: Carbon Nanotubes for Single Molecule Biodetection and Energy Applications” Thiel Lecture, Notre Dame, South Bend, Indiana, April 2009
“Energy Harvesting using Chemically Driven, Nanotube Guided Thermopower Waves” AFOSR workshop, Arlington, VA, April 2009
“The Wonders of One Dimensional Chemistry: Carbon Nanotubes for Single Molecule Biodetection and Energy Applications Lecture”, U. Conn., Storrs, CN, April 2009
“Biological Applications of Near Infrared Fluorescent Sensors based on Single Walled Carbon Nanotubes” WONTON '09, Japan, June 2009
“Progress in single walled carbon nanotube electronic networks for sensor applications” ICMAT, Singapore June 2009
“Transparent, Reactive Armor from Single Walled Carbon Nanotube Reactive Framework Materials” AFOSR, Arlington, VA, July 2009
“Biological Applications of Near Infrared Fluorescent Sensors based on Single Walled Carbon Nanotubes” ACS, Graphite Mat. Sci., Washington, DC, Aug 2009
“Biological Applications of Near Infrared Fluorescent Sensors based on Single Walled Carbon Nanotubes” Beckman Meeting, Irvine, CA, Aug 2009
“The Chemistry of Graphene” MURI Kickoff, Washington, DC, Sept 2009
“The Wonders of One Dimensional Chemistry: Carbon Nanotubes for Single Molecule Biodetection and Energy Applications” Penn State lecture, Univ. Park, PA, Sept 2009
“Biological Applications of Near Infrared Fluorescent Sensors based on Single Walled Carbon Nanotubes” NANO DDS, Tampa, FL, Sept 2009
“Photoelectrochemical Complexes for Solar Energy Conversion that Chemically and Autonomously Regenerate” DOE, 3rd Biennial Mtg., Warrenton, VA, Oct. 2009
“The Rational Design of Nitric Oxide Selectivity in Single-Walled Carbon Nanotube Near Infrared Fluorescence” “Sensors for Biological Detection Thermopower Waves” AIChE annual Mtg., Nashville, TN, Nov 2009
“The Wonders of One Dimensional Chemistry: Carbon Nanotubes for Single Molecule Biodetection and Energy Applications” Tufts seminar, Medford, Mass., Nov 2009
“The Wonders of One Dimensional Chemistry: Carbon Nanotubes for Single Molecule Biodetection and Energy Applications” Langer Lecture, Yale University, New Haven Conn., Dec 2009

The wonders of one dimensional chemistry: carbon nanotubes for single molecule biodetection and energy applications, Invited Seminar, University of Massachusetts at Lowell, Jan. 2010

2010

“The role of reactive oxygen signaling in Epidermal Growth Factor Receptor (EGFR) function: insights from single molecule detection using fluorescent carbon nanotubes”, Invited Speaker, Nanoworkshop Los Alamos National Laboratory, Sante Fe, April 2010

“Chemically driven carbon-nanotube-guided thermopower waves”, Invited Seminar, NETL, April 2010

“Chemically driven carbon-nanotube-guided thermopower waves”, Invited Seminar, Council of Scientific Society Presidents, June 2010

“New concepts in molecular and energy transport within carbon nanotubes: thermopower waves, stochastically resonant ion channels, and single molecule biosensors,” Invited Speaker, NT 10, Annual Carbon Nanotube Conference, June 2010.

“New concepts in molecular and energy transport within carbon nanotubes: thermopower waves, stochastically resonant ion channels, and single molecule biosensors”, Invited Speaker, American Vacuum Society, June 2010

“Single Molecule Analyte Detection using Stochastic Nanosensors”, Invited Lecture, University of Illinois at Urbana Champaign, July 2010

“New concepts in molecular and energy transport within carbon nanotubes: thermopower waves and stochastically resonant ion channels”, Invited Seminar, Chemistry, University of Maryland, Sept 2010

“A single walled carbon nanotube based optical glucose sensor for continuous in vivo glucose detection”, Procter and Gamble, September 2010

“Dancing on the Head of a Pin: the Coming Revolution in Nanosensors for Single Molecule Biodetection, Invited Seminar”, NIST, Oct. 2010

“Bi- and Tri- Layer Graphene Solutions and Electronic and Regio- Selective Chemistry of Graphene for Nanoelectronics”, MURI Review, MIT, Oct. 2010

“Dancing on the Head of a Pin: the Coming Revolution in Nanosensors for Single Molecule Biodetection, Invited Speaker”, TTI Vanguard, Dec. 2010

“Exciton Antennae, Solar Concentrators, and Carbon Cages from the Directed Assembly of Single Walled Carbon Nanotubes”, Invited Speaker, MRS Annual Meeting, Dec. 2010

“New concepts in molecular and energy transport within carbon nanotubes: thermopower waves and stochastically resonant ion channels”, Invited Seminar, University of Texas at Austin, Dec. 2010

Industrial Consulting (with Confidentiality Agreement)

Dupont, Wilmington DE (2003-2004)

Intel, Portland OR (2005-pres.)

Luna Innovation (2006-pres.)

Nanoasis (2008-pres)

Ross (2008-pres)

Nanterra (2009-pres)

DCM (2009-pres)

Recent Professional Activities

2011 AICHE Awards Committee

2010 Nanoscale Science and Engineering Forum, Executive Committee, and Blue Ribbon Awards Panel, American Institute of Chemical Engineers

2010 Session organizer/chairman for American Institute of Chemical Engineers Annual Meeting

2010 Session organizer/chairman for Materials Research Society Annual Meeting

2009 NIH Panel Reviewer, several study sections, Nanomedicine, NCI and Grand Challenges

2008 Editorial board, Journal Carbon

2007 Advisory board, Journal of Physical Chemistry, American Chemical Society
2006 Editorial board member: Journal of Experimental Biology and Medicine
2006 NSF Panel Reviewer, Nanotechnology Interdisciplinary Research Grants (NIRT)
2006 American Chemical Society, Presidential Symposium Organizer
2005 Panel Reviewer, NCI-NIH Nanotechnology Platforms
2005-06 Treasurer, NSEF, AIChE
2004 NSF Panel Reviewer, Sensors and Sensor Networks
2004 NSF Panel Reviewer, Nanotechnology Interdisciplinary Research Grants (NIRT)
2004 Reviewer, Department of Energy, Basic Energy Sciences
2004 Organizer and Co-Chair, Nanoscale Science and Technology Plenary Sessions, AIChE
2004 Organizer and Chair, Issues in Carbon Nanotubes Sessions, AIChE Annual Meeting
2003 NSF Panel Reviewer, Sensors and Sensor Networks
2003 Organizer and Chair, Issues in Carbon Nanotubes Sessions, AIChE Annual Meeting

Active reviewer for Journals: Science, PNAS, Nature Materials, Journal of the American Chemical Society, Advanced Materials, Nanoletters, Carbon, Journal of Physical Chemistry B, Langmuir, Physical Review Letters, Applied Physics Letters, Science, Nature Nanotechnology, Nature Materials, Nature Photonics, Nature Biotechnology

Professional Associations

American Chemical Society
American Physical Society
Materials Research Society
American Institute of Chemical Engineers
Federation of Analytical Chemistry and Spectroscopy Society
Tau Beta Pi, Engineering Honor Society
Omega Chi Epsilon, Chemical Engineering Honor Society

Students and Postdoctoral Associates

Current: 16 Ph.D. Graduate Students, Chemical and Biomolecular Engineering
7 Post Doctoral Researchers

Joel Abrahamson PhD Chemical Engineering
Won Joon Choi PhD Mechanical Engineering

Arde Boghossian PhD Chemical Engineering
Jingqing Zhang PhD Chemical Engineering

Geraldine Paulus PhD Chemical Engineering
Andrew Hilmer PhD Chemical Engineering

Nigel Reuel PhD Chemical Engineering
Steven Shimizu PhD Chemical Engineering
Chih Jen Shih PhD Chemical Engineering (w/D. Blankschtein)

Zachary Ulissi PhD Chemical Engineering
Sayalee Girish Mahajan PhD Chemical Engineering
Lee William Drahushuk PhD Chemical Engineering

Peter Bojo MS Bioengineering
Darin Bellisario PhD Chemistry

Rishabh Jain PhD Materials Science
Akira Kudo PhD Materials Science (w/B. Wardle)

Current postdoctoral researchers

Dr. Jae Hee Han
Dr. Changsik Song
Dr. Jin Ho Ahn
Dr. Kyonseok Yun
Dr. Jong Ho Kim
Dr. Tom McNichilos
Dr. Qing Hua Wang
Dr. Moon Ho Ham
Dr. Zhang Jin

Past Graduate Students

Jaeyun Sung, October 2006-2007, Masters Degree, Chemical Engineering, UIUC
Daniel Heller, 2003-2009, PhD Chemistry, UIUC (currently post doctoral researcher at MIT with R. Langer)
Rachel Graff, 2003-2007, Masters Degree, Chemical Engineering, UIUC
Nitish Nair, "A Structure-Reactivity Relationship for Single Walled Carbon Nanotubes," PhD Chemical Engineering, MIT
Esther Jeng, "The Detection of DNA Hybridization Using the Near-Infrared Fluorescence of Single-Walled Carbon Nanotubes," PhD Chemical Engineering, MIT
Paul Barone, "Signal Transduction in Glucose Oxidase - Single Walled Carbon Nanotube Complexes: A Near-Infrared Glucose Sensor," PhD Chemical Engineering, UIUC
Monica L. Usrey, "Selective Chemistry and Separation of Single Walled Carbon Nanotubes," December, 2006
Hong Jin, PhD Chemical Engineering, MIT
Chang Young Lee, Interior and Exterior Detection of Analytes Using Single Walled Carbon Nanotubes. PhD Chemical Engineering, MIT
Esther Jeng, "", PhD Chemical Engineering, MIT, January 2010
Richa Sharma, "" PhD Chemical Engineering, MIT, October 2010

Past Postdoctoral Researchers

2008 Postdoctoral researcher, Dr. Marie Kalbacova (currently Assistant Professor, Department of Biology, Prague, Czech Republic)
2007-2008 Postdoctoral researcher, Dr. Joon Hyun Baik (currently Post Doctorial Researcher, Department of Chemical and Biomolecular Engineering, Penn State University)
2005-2009 Postdoctoral researcher, Dr. Woo Jae Kim (currently Assistant Professor, Department of Chemical and Biomolecular Engineering, University, Korea)
2005-2009 Postdoctoral researcher, Dr. Cristiano Fantini (currently Assistant Professor, Department of Physics, University, Brazil)
2006-2007 Postdoctoral researcher, Dr. Ryuichiro Maruyama (currently Sony Corp. Japan)
2005-2008 Postdoctoral researcher, Dr. Jong Hyun Choi (currently Assistant Professor, Department of Mechanical Engineering, Purdue University, Indiana)
2003-2004 Postdoctoral researcher, Dr. Seunghyun Baik (currently Assistant Professor, Department of Mechanical Engineering, Sungkyunkwan University, Korea)
2004-2005 Postdoctoral researcher, *Dr. Jianqi Zhang* (whereabouts unknown)

Teaching Responsibilities

ChE 261 Introduction to Chemical Engineering, 2003-2006 (UIUC)
ChE 370 Chemical Engineering Thermodynamics, 2004-2007 (UIUC)
ChE 574 Graduate Reaction Engineering, 2005-2007, (UIUC)

Course 10.10 Introduction to Chemical Engineering, 2007 (MIT)
Course 10.65 Graduate Reaction Engineering, 2007-present (MIT)
Course 10.585 Engineering Nanotechnology, 2007-present (MIT)
Course 10.27 Energy Laboratory Module, 2010-present (MIT)

Campus Service

2003 Seminar Committee, Center for Nanoscale Science and Technology
2003-date Library Committee, School of Chemical Sciences
2003-date Academic Advising Committee, Department of Chemical Engineering
2003-date Administrative Committee, Department of Chemical Engineering
2007-date Graduate Admissions Committee, Chemical Engineering, MIT
2007-date Seminar Committee, Chemical Engineering, MIT
2007-date Faculty Hiring Committee, Chemical Engineering, MIT
2009-date Reviewer, Lemelson Prize, MIT

Publications

Book Chapters

Strano, M. S., J. Rempel, J. Halverson, C. Burket, J. Mathews and H. C. Foley. Structural Modeling of Nanoporous Carbon: A Review of Approaches Simulating an Aperiodic and Non-Equilibrium Solid. in *From Semiconductors to Proteins: Beyond the Average Structure*, edited by S. J. Billinge and M. F. Thorpe (Kluwer Academic/Plenum, New York, 2001)

Strano, M. S., E. Haroz, C. Kittrell, R. H. Hauge, and R. E. Smalley. Assignment of (n,m) Raman and Absorption Spectral Features of Metallic Single-Walled Carbon Nanotubes. in *Electronic Properties of Novel Materials - Molecular Nanostructures*, edited by H. Kuzmany, J. Fink, M. Mehring, and S. Roth (Springer, New York, 2003), pp. 246-252.

Hennrich, F., M. M. Kappes, **M. S. Strano**, R. H. Hauge, and R. E. Smalley. Infrared Analysis of Amine Treated Single-Walled Carbon Nanotubes Produced by Decomposition of CO. in *Electronic Properties of Novel Materials - Molecular Nanostructures*, edited by H. Kuzmany, J. Fink, M. Mehring, and S. Roth (Springer, New York, 2003), pp. 197-201.

Weisman, R. B., S. M. Bachilo, **M. S. Strano**, C. Kittrell, R. H. Hauge, and R. E. Smalley. (n,m)- Assigned Absorption and Emission Spectra of Single-Walled Carbon Nanotubes. in *Electronic Properties of Novel Materials - Molecular Nanostructures*, edited by H. Kuzmany, J. Fink, M. Mehring, and S. Roth (Springer, New York, 2003), pp. 241-245.

Patents

Eight US Patents Issued

Selected Peer Reviewed Journal Publications

(h-index = 46 as of Oct 2012)

(1) Huxtable, S. T.; Cahill, D. G.; Shenogin, S.; Xue, L. P.; Ozisik, R.; Barone, P.; Usrey, M.; Strano, M. S.; Siddons, G.; Shim, M.; Keblinski, P.: Interfacial heat flow in carbon nanotube suspensions. *Nature Materials* **2003**, 2, 731-734.

(2) Strano, M. S.: Probing chiral selective reactions using a revised Kataura plot for the interpretation of single-walled carbon nanotube spectroscopy. *Journal of the American Chemical Society* **2003**, 125, 16148-16153.

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- (3) Strano, M. S.; Dyke, C. A.; Usrey, M. L.; Barone, P. W.; Allen, M. J.; Shan, H. W.; Kittrell, C.; Hauge, R. H.; Tour, J. M.; Smalley, R. E.: Electronic structure control of single-walled carbon nanotube functionalization. *Science* **2003**, *301*, 1519-1522.
- (4) Zheng, M.; Jagota, A.; Strano, M. S.; Santos, A. P.; Barone, P.; Chou, S. G.; Diner, B. A.; Dresselhaus, M. S.; McLean, R. S.; Onoa, G. B.; Samsonidze, G. G.; Semke, E. D.; Usrey, M.; Walls, D. J.: Structure-based carbon nanotube sorting by sequence-dependent DNA assembly. *Science* **2003**, *302*, 1545-1548.
- (5) Doorn, S. K.; Heller, D. A.; Barone, P. W.; Usrey, M. L.; Strano, M. S.: Resonant Raman excitation profiles of individually dispersed single walled carbon nanotubes in solution. *Applied Physics a-Materials Science & Processing* **2004**, *78*, 1147-1155.
- (6) Doorn, S. K.; O'Connell, M. J.; Sivaram, S.; Strano, M. S.: Near infrared Raman characterization of individualized, aggregated, and separated carbon nanotubes. *Abstracts of Papers of the American Chemical Society* **2004**, *227*, 217-IEC.
- (7) Fantini, C.; Jorio, A.; Souza, M.; Strano, M. S.; Dresselhaus, M. S.; Pimenta, M. A.: Optical transition energies for carbon nanotubes from resonant Raman spectroscopy: Environment and temperature effects. *Phys. Rev. Lett.* **2004**, *93*.
- (8) Heller, D. A.; Barone, P. W.; Swanson, J. P.; Mayrhofer, R. M.; Strano, M. S.: Using Raman spectroscopy to elucidate the aggregation state of single-walled carbon nanotubes. *J. Phys. Chem. B* **2004**, *108*, 6905-6909.
- (9) Heller, D. A.; Mayrhofer, R. M.; Baik, S.; Grinkova, Y. V.; Usrey, M. L.; Strano, M. S.: Concomitant length and diameter separation of single-walled carbon nanotubes. *Journal of the American Chemical Society* **2004**, *126*, 14567-14573.
- (10) Kono, J.; Ostojic, G. N.; Zaric, S.; Strano, M. S.; Moore, V. C.; Shaver, J.; Hauge, R. H.; Smalley, R. E.: Ultra-fast optical spectroscopy of micelle-suspended single-walled carbon nanotubes. *Applied Physics a-Materials Science & Processing* **2004**, *78*, 1093-1098.
- (11) Meitl, M. A.; Zhou, Y. X.; Gaur, A.; Jeon, S.; Usrey, M. L.; Strano, M. S.; Rogers, J. A.: Solution casting and transfer printing single-walled carbon nanotube films. *Nano Lett.* **2004**, *4*, 1643-1647.
- (12) Ostojic, G. N.; Zaric, S.; Kono, J.; Strano, M. S.; Moore, V. C.; Hauge, R. H.; Smalley, R. E.: Interband recombination dynamics in resonantly excited single-walled carbon nanotubes. *Phys. Rev. Lett.* **2004**, *92*.
- (13) Strano, M. S.: Selective functionalization of single walled carbon nanotubes: Progress towards separation by electronic type. *Abstracts of Papers of the American Chemical Society* **2004**, *227*, 289-IEC.
- (14) Strano, M. S.; Zheng, M.; Jagota, A.; Onoa, G. B.; Heller, D. A.; Barone, P. W.; Usrey, M. L.: Understanding the nature of the DNA-assisted separation of single-walled carbon nanotubes using fluorescence and Raman spectroscopy. *Nano Lett.* **2004**, *4*, 543-550.
- (15) Zaric, S.; Ostojic, G. N.; Kono, J.; Shaver, J.; Moore, V. C.; Strano, M. S.; Hauge, R. H.; Smalley, R. E.; Wei, X.: Optical signatures of the Aharonov-Bohm phase in single-walled carbon nanotubes. *Science* **2004**, *304*, 1129-1131.
- (16) Barone, P. W.; Baik, S.; Heller, D. A.; Strano, M. S.: Solution phase, near infrared optical sensors based on single walled carbon nanotubes. *Abstracts of Papers of the American Chemical Society* **2005**, *229*, 087-POLY.
- (17) Barone, P. W.; Baik, S.; Heller, D. A.; Strano, M. S.: Modulating single walled carbon nanotube fluorescence in response to specific molecular adsorption. In *Electronic Properties of Novel Nanostructures*; Kuzmany, H., Fink, J., Mehring, M., Roth, S., Eds., 2005; Vol. 786; pp 193-197.
- (18) Barone, P. W.; Baik, S.; Heller, D. A.; Strano, M. S.: Near-infrared optical sensors based on single-walled carbon nanotubes. *Nature Materials* **2005**, *4*, 86-U16.
- (19) Barone, P. W.; Baik, S.; Strano, M. S.: Probing the activity of single walled carbon nanotube - Enzyme complexes. *Abstracts of Papers of the American Chemical Society* **2005**, *229*, 243-POLY.

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- (20) Barone, P. W.; Parker, R. S.; Strano, M. S.: In vivo fluorescence detection of glucose using a single-walled carbon nanotube optical sensor: Design, fluorophore properties, advantages, and disadvantages. *Analytical Chemistry* **2005**, *77*, 7556-7562.
- (21) Blanchet, G. B.; Bo, X. Z.; Lee, C. Y.; Strano, M. S.; Nuckolls, C.: The pick-up stick transistor. *Solid State Communications* **2005**, *135*, 638-644.
- (22) Blanchet, G. B.; Bo, X. Z.; Strano, M. S.; Nuckolls, C.: Carbon nanotubes: Semiconductor networks for organic electronics. *Abstracts of Papers of the American Chemical Society* **2005**, *229*, 005-BMGT.
- (23) Bo, X. Z.; Lee, C. Y.; Strano, M. S.; Goldfinger, M.; Nuckolls, C.; Blanchet, G. B.: Carbon nanotubes-semiconductor networks for organic electronics: The pickup stick transistor. *Applied Physics Letters* **2005**, *86*.
- (24) Bo, X. Z.; Tassi, N. G.; Lee, C. Y.; Strano, M. S.; Nuckolls, C.; Blanchet, G. B.: Pentacene-carbon nanotubes: Semiconducting assemblies for thin-film transistor applications. *Applied Physics Letters* **2005**, *87*.
- (25) Graff, R. A.; Swanson, J. P.; Barone, P. W.; Baik, S.; Heller, D. A.; Strano, M. S.: Achieving individual-nanotube dispersion at high loading in single-walled carbon nanotube composites. *Advanced Materials* **2005**, *17*, 980-+.
- (26) Heller, D. A.; Baik, S.; Eurell, T. E.; Strano, M. S.: Single-walled carbon nanotubes as near-infrared fluorescence and Raman cell labels. *Abstracts of Papers of the American Chemical Society* **2005**, *230*, 133-ANYL.
- (27) Heller, D. A.; Baik, S.; Eurell, T. E.; Strano, M. S.: Single-walled carbon nanotube spectroscopy in live cells: Towards long-term labels and optical sensors. *Advanced Materials* **2005**, *17*, 2793-+.
- (28) Heller, D. A.; Barone, P. W.; Strano, M. S.: Sonication-induced changes in chiral distribution: A complication in the use of single-walled carbon nanotube fluorescence for determining species distribution. *Carbon* **2005**, *43*, 651-653.
- (29) Heller, D. A.; Moll, A. E.; Strano, M. S.: Single-cell chemical sensors using Raman scattering and fluorescence of single-walled carbon nanotubes. *Abstracts of Papers of the American Chemical Society* **2005**, *230*, 299-ANYL.
- (30) Lee, C. Y.; Strano, M. S.: Understanding the dynamics of signal transduction for adsorption of gases and vapors on carbon nanotube sensors. *Abstracts of Papers of the American Chemical Society* **2005**, *230*, 372-ANYL.
- (31) Lee, C. Y.; Strano, M. S.: Understanding the dynamics of signal transduction for adsorption of gases and vapors on carbon nanotube sensors. *Langmuir* **2005**, *21*, 5192-5196.
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