

Vincent M. Rotello

Charles A. Goessmann Professor of Chemistry

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Updated 1/13/14

Education:

Ph.D., Yale University, New Haven, CT, June 1990
M.S., Yale University, New Haven, CT, 1986
B.S. (Honors) Illinois Institute of Technology, Chicago, IL, 1985

Professional Experience

Charles A. Goessmann Professor of Chemistry, 2005-present, University of Massachusetts-Amherst
Professor, Program in Molecular and Cell Biology, *Adjunct Professor*, Department of Polymer Science and Engineering, 2001-present, University of Massachusetts-Amherst
Associate Professor, 1998-2001, *Assistant Professor*, University of Massachusetts-Amherst, 1993-1998
NSF Postdoctoral Fellow, Massachusetts Institute of Technology, 1990-1993

Honors and Awards:

2013: University of Massachusetts System Technology Development Award
2012: Spotlight Scholar, University of Massachusetts
2011: Edward Mack Jr. Memorial Award for Creativity in Chemistry Research, Ohio State University
2010: Langmuir Lecturer, American Chemical Society, Division of Colloid and Surface Chemistry
2010: Fellow, American Association for the Advancement of Science
2010: Outstanding Accomplishments in Research and Creative Activity Award, University of Massachusetts
2007: Fellow, Royal Society of Chemistry (UK)
2006: University of Massachusetts Chancellor's Medal
2006: College of Natural Sciences and Mathematics Distinguished Researcher Award.
2005: Invited Professor, Ecole Normale Supérieure de Cachan.
2003-2004: Samuel F. Conte University Distinguished Faculty Fellowship
1998-2000: Alfred P. Sloan Fellow
1997-2002: Camille Dreyfus Teacher-Scholar
1997: NSF CAREER Award
1996: John Burlew Award in Research, American Chemical Society, Connecticut Valley Section
1996-2001: Research Corporation Cottrell Scholar
1996-1997: Lilly Teaching Fellow, University of Massachusetts
1990-1993: National Science Foundation Postdoctoral Fellow
1985: American Chemical Society Undergraduate Award in Analytical Chemistry

Named/Plenary/Keynote Lectures:

2013: *Keynote*, ChinaNano, Beijing, China. *Distinguished Lecturer*, Phi Lambda Upsilon Lecture Series, Kansas State University. *Distinguished Lecturer*, Frontiers of Chemistry, Case Western University, Cleveland, OH. **2012:** *Plenary Speaker* Rocky Mountain Regional Meeting of the ACS, Denver CO. *Plenary Speaker* Gold 2011, Tokyo, Japan. *Keynote Speaker*, Gordon Research Conference on Biocatalysis, Smithfield RI. *Keynote Speaker*, 47th Arden Conference: Nanoscience in Pharmaceuticals, AAPS. **2011:** *Plenary Speaker*, Federation of African Chemical Societies Meeting, Johannesburg, South Africa. **2010:** *Langmuir Lecture*, Fall ACS National Meeting, Boston, MA. *Distinguished Lecturer*, National Cancer Institute, Frederick, MD. *Keynote Speaker* Particles 2010, Orlando, FL. *Distinguished Faculty Lecture*, Purdue University. **2009:** *Keynote Speaker*, Fall ACS National Meeting, Hybrid Colloids, Interfaces, and Nanomaterials, Washington D.C. *Keynote Speaker*, 42nd IUPAC International Conference, Glasgow Scotland. *Keynote Speaker*, Gold 2009, Heidelberg Germany. *Plenary Speaker*, International Conference on the Environmental Implications and Applications of Nanotechnology, Amherst, MA. **2007:** *Plenary Speaker*, Bio-Physicochemical Interactions of Engineered Nanomaterials Workshop, UCLA. *Keynote Speaker*, Lorentz Conference, Magnetic Nanoparticles: Challenges and Future Prospects, Leiden, Netherlands, *Cherry Emerson Lecture*, Georgia Tech. **2006:** *Distinguished Faculty Lecture*, University of Massachusetts; *Plenary Lecture*; Particles 2006. **2005:** *Distinguished Faculty Lecture*; Indiana University. **2004:** *Keynote Speaker* Particles 2004. **2002:** *Distinguished Lecture Series* Dept of Materials & Nuclear Eng., University of Maryland; *Keynote Speaker*, Macromolecular Science and Engineering Symposium. University of Michigan, **2000:** *R.T. Major Co-Lecturer*, University of Connecticut. **1999:** Williams College, *Organic Syntheses Lecture*; **1997:** *Nora Harrington Lecture*, Elms College, Springfield, MA. **1996:** *Closs Lecture*, University of Chicago.

Professional Service

Editorships:

2014-2018: **Editor-in-Chief**, *Bioconjugate Chemistry*

2009-2013: **Executive Editor**, *Advanced Drug Delivery Reviews*

2009-2013: **Associate Editor for North America**, *Journal of Materials Chemistry*

Other Editorial:

2013-2016: **Editorial Advisory Board**, *Materials Horizons*

2012-2015: **Editorial Advisory Board**, *Small*

2011-2014: **Editorial Advisory Board**, *Chemical Society Reviews*

2011-2014: **Editorial Advisory Board**, *Langmuir*

2010-2013: **Editorial Advisory Board**, *Chemical Research in Toxicology*

2010: **Guest Co-Editor**, *Current Opinions in Chemical Biology*, issue on "Array Based Sensing"

2009: **Guest Editor**, *International Journal of Molecular Sciences* special issue "Molecular Recognition"

2009-2012: **Editorial Board**, *International Journal of Green Nanotechnology*

2008: **Guest Editor**, *Journal of Materials Chemistry* feature issue "Biology in the Service of Materials"

2008: **Guest Editor**, *Advanced Drug Delivery Reviews* focus issue "Inorganic Particles in Drug Delivery"

2007: **Co-Editor**, *Polymers Today* special issue "Recognition Mediated Self-Assembly of Polymers"

2006-2009: **Editorial Board**, *Journal of Materials Chemistry*

2009-2011: **Editorial Board**, *International Journal of Molecular Sciences*

2005- **Editorial Advisory Board**, *Chemical Biology & Drug Design*

2002- **Editorial Advisory Board**, *Mini-Reviews in Organic Chemistry*, *Letters in Organic Chemistry*, *Drug Design Reviews*, *Medicinal Chemistry*, *Current Organic Synthesis*

2001- **Analyst**, *Faculty of 1000* research highlighting service

2001: **Editor**, *Tetrahedron* Symposium in Print "Self-Assembly of Organic Molecules"

2001: **Co-Editor** "Organic Cofactors" Forum Issue of *Antioxidants and Redox Signaling*

Scientific Advisory Boards

2009-2010: European Institute of Chemistry and Biology

2009-2011: OmegaGenesis Inc

Panels/Study Sections

NIH Panel Standing Membership: 2010-2011: **Chair**, F14 Fellowship Panel. 2002-2006: **Member**, Medicinal Chemistry (MCHA/SBCA) Study Section.

Ad Hoc NIH Service: 2013: ZAI1 LR-M (P01 program project grant), ZRG1 IMST-L (SBIR)2012: BST-U AREA grants (Summer), BCMB-SEP (Summer), Gene and Drug Delivery (GDD, Spring), 2011: R13 Conference Grants (OSR-C, Fall); Technologies in Cell Biology (ZRG1 CB-N, Fall). 2009: F14 Fellowship Panel (Fall), **Co-Chair**, Special Topics in Bioengineering, (ZRG1 BST-J) (Fall) **Chair**, Technologies in Cell Biology (ZRG1 CB-N) (Spring) Microscopic Imaging (MI) Special Emphasis Panel (ZRG1 BST-Q)(Spring) 2008: Microscopic Imaging (MI) (Fall), Microscopic Imaging (MI) Special Emphasis Panel (ZRG1 BST-Q)(Summer). 2007: **Chair**; Microscopic Imaging (MI); Special Emphasis Panel (ZRG1 BST-Q, Spring); Molecular Probes for Microscopy (BST-R). 2006: F14 Fellowship Panel; Program Project Grant Evaluation. 2005: Nanomedicine Design Centers (NDC); Biomedical Sensing and Instrumentation (SBIB-K). Small Business Bioengineering and Physiology (SSSMI-K); Bioengineering Nanotechnology Initiative (SBIB-S 50R); **Chair** R13 Conference Grants (OSR-C); Sepsis and CAP: Partnerships for Diagnostics Development (SR-M M1); Microarrays and Nanoparticles (BST-A). 2004: Prokaryotic Cell and Molecular Biology (PCMB) Study Section. 2003: COBRE Biomedical Center Panel; Medical Imaging (SSS7) Study Section. 2002: Special Emphasis Panel; F32 Special Emphasis Panel. 2001: Medicinal Chemistry (Spring, Fall); Bioorganic and Natural Products (Summer).

NSF: 2004: Nanotechnology Science and Engineering Center (NSEC) reverse site visit panel; Organic Optoelectronics

EPSRC: 2006-2009: Member, EPSRC Peer Review College

Argonne National Lab: 2007-2010: Proposal Evaluation Board, Center for Nanoscale Materials

Symposium Organizing:

ACS: 2010: Session Organizer, "Engineering the Materials-Biology Interface" Division of Polymer Chemistry, Spring National Meeting of the ACS, San Francisco, CA; 2006: Session co-organizer "Nanoparticles and Microparticles" Division of Polymer Chemistry; "Organic Nanotechnology" Division of Organic Chemistry Fall National Meeting of the ACS, San Francisco, CA.. 2005: "Molecular Recognition using Polymeric Materials", Division of Polymer Chemistry, Fall National Meeting of the ACS, Washington, DC; 2003: "Supramolecular Chemistry and Molecular

Recognition”, Division of Organic Chemistry, “Molecular Recognition using Polymeric Materials” Division of Polymer Chemistry, Fall National Meeting of the ACS, New York, NY; “Polymer Design Using Noncovalent Methods”, Division of Polymer Chemistry, Spring National Meeting of the ACS, New Orleans, LA; 2000: Session Organizer, “Nanoscale Materials and Devices”, New England Region of the ACS, Storrs, CT

MRS: Symposium co-organizer: 2009: “Biological Imaging and Sensing using Nanoparticle Assemblies” Symposium XX, Materials Research Society Fall Meeting, Boston MA. 2007: “Biomolecular and Biologically-Inspired Interfaces and Assemblies”, Symposium MM, 2005: “Nanomaterials in the Environment” (Symposium O) Materials Research Society Fall Meeting, Boston MA.

NSF: 2006-2008 National Science Foundation, “Workshop on Physical Organic Chemistry”, (S. David and M. Garcia-Garibay co-organizers)

Current/Recent Funding (Total Costs)

Current: National Academies of Science, "Development of Ultrasensitive, Robust and Affordable Nanoparticle-Based Test Strips for Detecting Bacteria" 8/1/13-7/31/2016, \$271,930

National Science Foundation “International Collaboration in Chemistry: Plasmon-Enhanced Chiroptical Sensors” CHE- 1307021, 8/1/13-7/31/16, \$400,000

National Institutes of Health, “Enzyme Amplified Array Sensing of Proteins for Cancer Detection” R21CA155866-01, 9/1/12-8/31/14, \$373,772.

National Science Foundation, “MRI: Acquisition of FACSARIA-II” BDI-1126366, 9/1/11-8/31/14, \$384,586 (Minter PI, VR Co-PI)

National Aeronautics and Space Agency, MNT-SBIR with Aerodyne, 4/01/12-3/31/13, \$37,500 (Rotello, UMass PI)

National Institutes of Health, “Intracellular Host-Guest Activation of Nanoparticle Therapeutics” R01 EB014277-01, 4/1/12-3/31/15, \$1,039,515.

National Institutes of Health, “Platform for High-Throughput Analysis of Protein Adducts for Carcinogen Exposure Assessment” R21 CA140036, 7/1/11-6/30/14, \$649,000 (\$138,00 to VR) (DiCaprio, FIU P.I.)

Firmenich, Sponsored research, 2/1/11-1/31/14, \$213,000.

Teijin, Sponsored research 10/15/2011-10/15/13 \$159,000.

National Institutes of Health, “Multi-Channel Protein and Cell Sensing using Fluorescent Protein-Nanoparticle Sensors” R01 GM077173-05, 4/1/11-3/31/15, \$1,168,000

National Science Foundation “International Collaboration in Chemistry: Synergistic Tailoring of Flavins and Quantum Dots for Solar Cell Applications” CHE-1025889, 8/1/10-7/31/13, \$425,000

National Institutes of Health, “Multiplexed Tracking of Nanoparticles using Laser Desorption/Ionization Mass Spectrometry” R21 ES017871-01, 9/1/10-8/31/12, \$419,200 (VR P.I., R. Vachet Co-I)

Department of Energy “Polymer-Based Materials for Harvesting Solar Energy, an Energy Frontier Research Center”, (DE-SC0001087), 9/1/2009-8/31/2014, \$16,000,000 (\$57,000/year to VR) (Lahti, Russell, P.I.s)

Department of Energy “Hyperbranched Conjugated Polymers and Their Nanodot Composites as Universal Bioinspired Architectures” (DE-FG02-04ER46141) 4/4/10-4/3/13, \$494,691 (\$199,000 to VR) (U. Bunz P.I.).

National Science Foundation, “Center for Hierarchical Manufacturing”, CMMI-1025020, 5/01/2011-04/30/2016, \$4,000,000 (\$78,000/year to VR, \$128,000 in 2012)(J. Watkins, M. Tuominen, P.I.s)

National Science Foundation, “Materials Research Science and Engineering Center on Polymers”, 8/1/08-12/31/13, DMR-0820506 \$4,092,000 (\$35,000/year to VR)(T. Russell, P.I.)

Recent: National Science Foundation “Bionanocomposites through Protein-Mediated Assembly of Nanoparticles” (CHE-0808945), 8/1/08-7/31/11, \$423,000. National Institutes of Health, “Nanoparticle-Stabilized Capsules as Drug Delivery Systems” R21 EB012246-01, 8/1/10-7/31/12, \$416,846. National Science Foundation, “IGERT: Research and Innovation in Nanoscale Device Development”, 8/1/05-7/31/11 (one year NCE), DUE-044852, \$3,189,732 (co-

P.I., J. Watkins, P.I.) National Institutes of Health, “Recognition and Presentation of α -Helices using Nanoparticle Receptors” R01 GM077173, 4/1/07-3/31/11, \$1,061,000. National Institutes of Health, “Detection of Bacteria using Nanoparticle-Polymer Sensors” R21 AI073425-01, 4/1/08-3/31/11, \$423,489 (VR P.I., U. Bunz, Co-P.I.) National Institutes of Health, “Tailored Magnetic Nanoparticles for Cell Alignment and Tissue Engineering” GM077173-03S1

(Supplement), 7/17/09-7/16/10, \$235,078 (VR P.I., E. Alsberg, B. Yellen, Co-P.I.) Department of Energy “Hyperbranched Conjugated Polymers and their Nanodot Composites as Universal Bioinspired Architectures” (DE-FG02-04ER46141) 4/4/07-4/3/10, \$494,691 (\$199,000 to VR) (U. Bunz P.I.) National Science Foundation,

“Workshop on Physical Organic Chemistry”, 8/1/06-7/31/09, (CHE-633924), \$62,544, (Co-PI with S. David and M. Garcia-Garibay) BAE Systems “Bacterial Sensors” 1/1/09-12/31/09, \$36,600. National Science Foundation,

“Recognition-Controlled Polymer Self-Assembly” CHE-0518487 8/1/05-7/31/08, \$365,000. National Institutes of Health, “Nanoparticles with Tailored Monolayers for DNA Transfection” R21 EB004503-01, 8/1/05-7/31/07,

\$416,000. Office of Naval Research “Nanoparticle Assemblies as New Highly Efficient Extraction Materials”,

1/1/2005-12/31/07, \$1,250,000 (R. Vachet, P.I., 1 other investigator). National Academies Keck Futures Initiative "Integrated Nanoparticle-Protein Nanocomposite Systems" 4/1/05-3/31/07, \$50,000 (V. Rotello P.I., M. Tuominen Co-PI). Army Research Office, "Targeting of Breast Tumors and Tumor Cells using Inductive Magnetic Heating of Metallic Nanoparticles", BC021171, 4/1/03-3/31/06, \$460,500. National Institutes of Health, "Nanoparticles: Model Systems for Flavoenzyme Activity" RO1 GM59249-04, 4/1/02-3/31/06, \$921,000.

Books/Software

- Rotello, V. M.; Thayumanavan, S., eds. "Molecular Recognition and Polymers: Control of Polymer Structure and Self-Assembly" Wiley: New York, 2008.
- Bull, R.; Rotello, V. M.; Reckhow, D.; Bull, O. M.; Kim, J. *Use of Toxicological and Chemical Models to Prioritize DBP Research*, AWWA: Denver, 2007.
- Rotello, V., ed. *Nanoparticles: Building Blocks for Nanotechnology*, Kluwer: New York, 2004.
- Vining, W.; Rotello, V. M.; Bak, D. "Harcourt Interactive Organic Chemistry" (CD-ROM) Harcourt:New York, 2001.

Peer Reviewed Publications

- 390) Kim, C. S.; Duncan, B.; Creran, B.; Rotello, V. M. "Triggered nanoparticles as therapeutics" *Nano Today* **2013**, *8*, 439-447.
- 389) Xu, Y. S.; Engel, Y.; Yan, Y. F.; Chen, K. M.; Moyano, D. F.; Dubin, P. L.; Rotello, V. M. "Enhanced electrostatic discrimination of proteins on nanoparticle-coated surfaces" *J. Mater. Chem. B*, **2013**, *1*, 5230-5234.
- 388) Tang, R.; Kim, C. S.; Solfiell, D. J.; Rana, S.; Mout, R.; Velazquez-Delgado, E. M.; Chompoosor, A.; Jeong, Y.; Yan, B.; Zhu, Z. J.; Kim, C.; Hardy, J. A.; Rotello, V. M. "Direct Delivery of Functional Proteins and Enzymes to the Cytosol Using Nanoparticle-Stabilized Nanocapsules" *ACS Nano* **2013**, *7*, 6667-6673.
- 387) Park, M. H.; Kim, S. T.; Rana, S.; Solfiell, D.; Jeong, Y.; Duncan, B.; Yan, B.; Aksoy, B.; Rotello, V. M. "Replenishable dendrimer-nanoparticle hybrid membranes for sustained release of therapeutics" *Nanoscale* **2013**, *5*, 7805-7808.
- 386) Yan, B.; Kim, S. T.; Kim, C. S.; Saha, K.; Moyano, D. F.; Xing, Y. Q.; Jiang, Y.; Roberts, A. L.; Alfonso, F. S.; Rotello, V. M.; Vachet, R. W. "Multiplexed Imaging of Nanoparticles in Tissues Using Laser Desorption/Ionization Mass Spectrometry" *J. Am. Chem. Soc.* **2013**, *135*, 12564-12567.
- 385) Mattoussi, H.; Rotello, V. M. "Inorganic Nanoparticles in Drug Delivery (Preface)" *Adv. Drug Deliv. Rev.* **2013**, *65*, 605-606.
- 384) Nandwana, V.; Serrano, L. A.; Solntsev, K. M.; Ebenhoch, B.; Liu, Q.; Tonga, G. Y.; Samuel, I. D. W.; Cooke, G.; Rotello, V. M. "Engineering the Nanoscale Morphology of a Quantum Dot-Fullerene Assembly via Complementary Hydrogen Bonding Interactions" *Langmuir* **2013**, *29*, 7534-7537.
- 383) Arvizo, R. R.; Moyano, D. F.; Saha, S.; Thompson, M. A.; Bhattacharya, R.; Rotello, V. M.; Prakash, Y. S.; Mukherjee, P. "Probing Novel Roles of the Mitochondrial Uniporter in Ovarian Cancer Cells Using Nanoparticles" *J. Biol. Chem.* **2013**, *288*, 17610-17618.
- 382) Liu, Q.; Yeh, Y. C.; Rana, S.; Jiang, Y.; Guo, L.; Rotello, V. M. "Differentiation of cancer cell type and phenotype using quantum dot-gold nanoparticle sensor arrays" *Cancer Lett.* **2013**, *334*, 196-201.
- 381) Nandwana, V.; Samuel, I.; Cooke, G.; Rotello, V. M. "Aromatic Stacking Interactions in Flavin Model Systems" *Accounts Chem. Res.* **2013**, *46*, 1000-1009.
- 380) Zainalabdeen, N.; Fitzpatrick, B.; Kareem, M. M.; Nandwana, V.; Cooke, G.; Rotello, V. M. "Synthesis and Characterization of Naphthalenediimide-Functionalized Flavin Derivatives" *Int. J. Mol. Sci.* **2013**, *14*, 7468-7479.
- 379) Kim, S. T.; Saha, K.; Kim, C.; Rotello, V. M. "The Role of Surface Functionality in Determining Nanoparticle Cytotoxicity" *Accounts Chem. Res.* **2013**, *46*, 681-691.
- 378) Elci, S. G.; Moyano, D. F.; Rana, S.; Tong, G. Y.; Phillips, R. L.; Bunz, U. H. F.; Rotello, V. M. "Recognition of Glycosaminoglycan Chemical Patterns using an Unbiased Sensor Array" *Chem. Sci.* **2013**, *4*, 2076-2080.
- 377) Le, N. D. B.; Rana, S.; Rotello, V. M. "Chemical Nose Sensors: An Alternative Strategy for Cancer Diagnosis" *Expert Rev. Mol. Diagn.* **2013**, *13*, 111-113.
- 376) Kim, C. S.; Tonga, G. Y.; Solfiell, D.; Rotello, V. M. "Inorganic Nanosystems for Therapeutic Delivery: Status and Prospects" *Adv. Drug Deliv. Rev.* **2013**, *65*, 93-99.
- 375) Jeong, Y.; Patra, D.; Sanyal, A.; Rotello, V. M. "Fabrication of Stable Nanoparticle-Based Colloidal Microcapsules" *Curr. Org. Chem.* **2013**, *17*, 49-57.
- 374) Zhu, Z. J.; Wang, H. H.; Yan, B.; Zheng, H.; Jiang, Y.; Miranda, O. R.; Rotello, V. M.; Xing, B. S.; Vachet, R. W. "Effect of Surface Charge on the Uptake and Distribution of Gold Nanoparticles in Four Plant Species" *Environ. Sci. Technol.* **2012**, *46*, 12391-12398.
- 373) Engel, Y.; Schiffman, J. D.; Goddard, J. M.; Rotello, V. M. "Nanomanufacturing of Biomaterials" *Mater. Today* **2012**, *15*, 478-485.

- 372) Li, X. N.; Wen, F.; Creran, B.; Jeong, Y. D.; Zhang, X. R.; Rotello, V. M. "Colorimetric Protein Sensing Using Catalytically Amplified Sensor Arrays" *Small* **2012**, *8*, 3589-3592.
- 371) Nandwana, V.; Mout, R.; Yeh, Y. C.; Dickert, S.; Tuominen, M. T.; Rotello, V. M. "Patterning of Protein/Quantum Dot Hybrid Bionanostructures" *J. Inorg. Organomet. Polym. Mater.* **2013**, *23*, 227-232.
- 370) Yu, X.; Pham, J. T.; Subramani, C.; Creran, B.; Yeh, Y. C.; Du, K.; Patra, D.; Miranda, O. R.; Crosby, A. J.; Rotello, V. M. "Direct Patterning of Engineered Ionic Gold Nanoparticles via Nanoimprint Lithography" *Adv. Mater.* **2012**, *24*, 6330-6334.
- 369) Saha, K.; Kim, S. T.; Yan, B.; Miranda, O. R.; Alfonso, F.; Schlosman, D.; Rotello, V. M. "Surface Functionality of Nanoparticles Determines Cellular Uptake Mechanisms in Mammalian Cells" *Small* **2013**, *9*, 300-305.
- 368) Park, M. H.; Subramani, C.; Rana, S.; Rotello, V. M. "Chemoselective Nanoporous Membranes via Chemically Directed Assembly of Nanoparticles and Dendrimers" *Adv. Mater.* **2012**, *24*, 5862-5866.
- 367) Kim, S. T.; Chompoosor, A.; Yeh, Y. C.; Agasti, S. S.; Solfiell, D. J.; Rotello, V. M. "Dendronized Gold Nanoparticles for siRNA Delivery" *Small* **2012**, *8*, 3253-3256.
- 366) Nandwana, V.; Fitzpatrick, B.; Liu, Q.; Solntsev, K. M.; Yu, X.; Tonga, G. Y.; Eymur, S.; Tonga, M.; Cooke, G.; Rotello, V. M. "Fluorescence Resonance Energy Transfer in Recognition-Mediated Polymer-Quantum Dot Assemblies" *Polym. Chem.* **2012**, *3*, 3072-3076.
- 365) Chou, S. S.; De, M.; Luo, J. Y.; Rotello, V. M.; Huang, J. X.; Dravid, V. P. "Nanoscale Graphene Oxide (nGO) as Artificial Receptors: Implications for Biomolecular Interactions and Sensing" *J. Am. Chem. Soc.* **2012**, *134*, 16725-16733.
- 364) Duncan, B.; Elci, S. G.; Rotello, V. M. "Beyond biomarkers: Identifying cell state using unbiased nanosensor arrays" *Nano Today* **2012**, *7*, 228-230.
- 363) Rana, S.; Singla, A. K.; Bajaj, A.; Elci, S. G.; Miranda, O. R.; Mout, R.; Yan, B.; Jirik, F. R.; Rotello, V. M. "Array-Based Sensing of Metastatic Cells and Tissues Using Nanoparticle-Fluorescent Protein Conjugates" *ACS Nano* **2012**, *6*, 8233-8240.
- 362) Zhu, Z. J.; Posati, T.; Moyano, D. F.; Tang, R.; Yan, B.; Vachet, R. W.; Rotello, V. M. "The Interplay of Monolayer Structure and Serum Protein Interactions on the Cellular Uptake of Gold Nanoparticles" *Small* **2012**, *8*, 2659-2663.
- 361) Fang, B.; Gon, S.; Park, M. H.; Kumar, K. N.; Rotello, V. M.; Nusslein, K.; Santore, M. M. "Using Flow to Switch the Valency of Bacterial Capture on Engineered Surfaces Containing Immobilized Nanoparticles" *Langmuir* **2012**, *28*, 7803-7810.
- 360) Fitzpatrick, B.; Creran, B.; Cooke, G.; Rotello, V. M. "Flavin-Functionalized Amphiphilic Block Copolymer Gels" *Macromol. Chem. Phys.* **2012**, *213*, 1758-1767
- 359) Arvizo, R. R.; Giri, K.; Moyano, D.; Miranda, O. R.; Madden, B.; McCormick, D. J.; Bhattacharya, R.; Rotello, V. M.; Kocher, J. P.; Mukherjee, P. "Identifying New Therapeutic Targets via Modulation of Protein Corona Formation by Engineered Nanoparticles" *PLoS One* **2012**, *7*.
- 358) Hayden, S. C.; Zhao, G. X.; Saha, K.; Phillips, R. L.; Li, X. N.; Miranda, O. R.; Rotello, V. M.; El-Sayed, M. A.; Schmidt-Krey, I.; Bunz, U. H. F. "Aggregation and Interaction of Cationic Nanoparticles on Bacterial Surfaces" *J. Am. Chem. Soc.* **2012**, *134*, 6920-6923.
- 357) Saha, K.; Agasti, S. S.; Kim, C.; Li, X. N.; Rotello, V. M. "Gold Nanoparticles in Chemical and Biological Sensing" *Chem. Rev.* **2012**, *112*, 2739-2779.
- 356) Zhu, Z. J.; Tang, R.; Yeh, Y. C.; Miranda, O. R.; Rotello, V. M.; Vachet, R. W. "Determination of the Intracellular Stability of Gold Nanoparticle Monolayers Using Mass Spectrometry" *Anal. Chem.* **2012**, *84*, 4321-4326.
- 355) Subramani, C.; Saha, K.; Creran, B.; Bajaj, A.; Moyano, D. F.; Wang, H.; Rotello, V. M. "Cell Alignment using Patterned Biocompatible Gold Nanoparticle Templates" *Small* **2012**, *8*, 1209-1213
- 354) Rana, S.; Bajaj, A.; Mout, R.; Rotello, V. M. "Monolayer Coated Gold Nanoparticles For Delivery Applications" *Adv. Drug Deliv. Rev.* **2012**, *64*, 200-216.
- 353) Yu, X.; Eymur, S.; Singh, V.; Yang, B. Q.; Tonga, M.; Bheemaraju, A.; Cooke, G.; Subramani, C.; Venkataraman, D.; Stanley, R. J.; Rotello, V. M. "Flavin as a photo-active acceptor for efficient energy and charge transfer in a model donor-acceptor system" *Phys. Chem. Chem. Phys.* **2012**, *14*, 6749-6754.
- 352) Creran, B.; Yan, B.; Moyano, D. F.; Gilbert, M. M.; Vachet, R. W.; Rotello, V. M. "Laser Desorption Ionization Mass Spectrometric Imaging Of Mass Barcoded Gold Nanoparticles For Security Applications" *Chem. Commun.* **2012**, *48*, 4543-4545.
- 351) Tsvetkova, I.; Chen, C.; Rana, S.; Kao, C. C.; Rotello, V. M.; Dragnea, B. "Pathway switching in templated virus-like particle assembly" *Soft Matter* **2012**, *8*, 4571-4577.
- 350) Moyano, D. F.; Goldsmith, M.; Solfiell, D. J.; Landesman-Milo, D.; Miranda, O. R.; Peer, D.; Rotello, V. M. "Nanoparticle Hydrophobicity Dictates Immune Response" *J. Am. Chem. Soc.*, **2012**, *134*, 3965-3967.

- 349) Abul Kashem, M. M.; Patra, D.; Perlich, J.; Rothkirch, A.; Buffet, A.; Roth, S. V.; Rotello, V. M.; Muller-Buschbaum, P. "Two- and Three-Dimensional Network of Nanoparticles via Polymer-Mediated Self-Assembly" *ACS Macro Lett.*, **2012**, *1*, 396-399.
- 348) Yeh, Y. C.; Creran, B.; Rotello, V. M. "Gold Nanoparticles: Preparation, Properties, and Applications in Bionanotechnology" *Nanoscale*, **2012**, *4*, 1871-1880.
- 347) Mout, R.; Moyano, D. F.; Rana, S.; Rotello, V. M. "Surface Functionalization of Nanoparticles for Nanomedicine" *Chem. Soc. Rev.*, **2012**, *41*, 2539-2544.
- 346) Caruso, F.; Hyeon, T.; Rotello, V. M. "Nanomedicine" *Chem. Soc. Rev.*, **2012**, *41*, 2537-2538.
- 345) Rana, S.; Yu, X.; Patra, D.; Moyano, D. F.; Miranda, O. R.; Hussain, I.; Rotello, V. M. "Control of Surface Tension at Liquid-Liquid Interfaces Using Nanoparticles and Nanoparticle-Protein Complexes" *Langmuir*, **2012**, *28*, 2023-2027.
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- 6) Rotello, V.; Hong, J. I.; Rebek, J. "Sigmoidal Growth in a Self-Replicating System" *J. Am. Chem. Soc.* **1991**, 113, 9422-9423.
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- 4) Wasserman, H. H.; Rotello, V. M.; Williams, D. R.; Benbow, J. W. "Synthesis of the Tricarbonyl Region of Fk-506 Through an Amidophosphorane" *J. Org. Chem.* **1989**, 54, 2785-2786.
- 3) "The Chemistry of Vicinal Tricarbonyl Compounds. Use of Vinyl Tricarbonyl Esters in the Formation of 3-Hydroxypyrrole-2-Carboxylates" H. H. Wasserman, J. D. Cook, J. M. Fukuyama, V. M. Rotello, *Tetrahedron Lett.*, **1989**, 30, 1721.
- 2) Wasserman, H. H.; Fukuyama, J.; Murugesan, N.; Vanduzer, J.; Lombardo, L.; Rotello, V.; McCarthy, K. "The Chemistry of Vicinal Tricarbonyls - a Stable Vinyl Tricarbonyl Hydrate As a Dielectrophile and Trielectrophile" *J. Am. Chem. Soc.* **1989**, 111, 371-372.
- 1) Garner, P.; Park, J. M.; Rotello, V. "An Enantioselective Synthesis of the Carzinophilin Degradation Product (2s,3s) 4-Amino-2,3-Dihydroxy-3-Methylbutyric Acid" *Tetrahedron Lett.* **1985**, 26, 3299-3302.

Patents

- 5) United States Patent 8,382,858 B2, 2/26/213, "Nanoparticle-Textured Surfaces and Related Methods for Selective Adhesion, Sensing, and Separation" Inventors Maria M. Santore, Jung Zhang, and Vincent M. Rotello
- 4) United States Non-Provisional Patent Application 12/313,116, filed on 11/17/2008, "Methods and Compositions for Protein Detection Using Fluorescent Polymer Sensors." Inventors: Vincent Rotello, Uwe Bunz, Chang-Cheng You, Oscar Miranda and Ik-Bum Kim
- 3) United States Non-Provisional Patent Application 12/313,137, filed on 11/17/2008, "Methods and Compositions for Pathogen Detection Using Fluorescent Polymer Sensors." Inventors: Vincent Rotello, Uwe Bunz, Ronnie Phillips, Oscar Miranda and Chang-Cheng You.
- 2) United States Non-Provisional Patent Application 60/956,515 filed on 8/18/08, "Direct Incident Beam Lithography for Patterning Nanoparticles, and the Articles Formed Thereby" Yuval Ofir, Qijun Xiao, Bappaditya Samanta, Vincent M. Rotello
- 1) "MIP/QCM Sensors for High Sensitivity Sensing of Small Molecules in Solution" Penelle, J.; Rotello, V. M.; Das, K. US Patent 6,890,486.

Invited Presentations:

2014

Stanford University, Palo Alto, CA
 University of California, Davis, CA
 King Mongkut's University of Technology, Thonburi, Thailand

European Symposium on Biological and Organic Chemistry, Gregynog, Wales
 Colloidal Semiconductor Nanocrystals Gordon Conference, Smithfield, RI

2013

Case Western University, Cleveland, OH
 Materials Research Society Spring National Meeting, San Francisco, CA
 Temple University, Philadelphia, PA
 E-MRS, Strasbourg, France
 International Symposium on Macrocyclic and Supramolecular Chemistry, Washington, DC
 Emory University, Atlanta, GA
 Georgia State University, Atlanta, GA
 CINT User Workshop, Santa Fe, NM
 North Carolina State University, Raleigh, NC

University of Massachusetts Medical School, Worcester, MA
 International Advanced Drug Delivery Symposium 2013, Hsinchu, Taiwan
 ChinaNano 2013, Beijing, China
 Kansas State University, Manhattan, KS
 Fall National Meeting of the Materials Research Society, Boston, MA
 Beijing University, Beijing, China
 Institute of Chemistry, Chinese Academy of Sciences, Beijing, China

2012

Virginia Tech University, Blacksburg, VA
 NanoDDS, Saarbrücken, Germany
 University of Heidelberg, Heidelberg, Germany

Noble Metal Nanoparticles Gordon Conference, Mount Holyoke, MA
 Biocatalysis Gordon Conference, Smithfield, RI

Firmenich, Geneva, Switzerland
47th Arden Conference: Nanoscience in
Pharmaceuticals, West Point, New York
American Chemical Society Spring National Meeting,
San Diego, CA (three Talks)
Connecticut Section of the Controlled Release Society,
Storrs, CT

2011

Federation of African Chemical Societies Meeting,
Plenary Lecture, Johannesburg, South Africa
Ohio State University, Edward Mack Lectures
University of Kentucky, Lexington, KY
14th International Symposium on Olfaction and
Electronic Nose, New York, NY
Polymers (East) Gordon Conference, Mount Holyoke,
MA
Faraday Discussion on Gold, Cardiff, Wales
University of Illinois, Chicago IL

2010

Tulane University, New Orleans, LA
American Chemical Society, Spring National Meeting,
four talks (Poly, 2 PMSE, Phys), San Francisco, CA
11th European Symposium on Controlled Drug
Delivery, Egmond aan Zee, Netherlands
Particles 2010, Orlando, FL
PacificChem, two talks, Honolulu, HI
Purdue University, Distinguished Faculty Lecture, West
Lafayette, IN
Penn State University, State College, PA.

2009

American Chemical Society, Fall National Meeting,
three talks, Washington, DC.
2nd Aquitaine Conference on Polymers, Arcachon,
France
University of California-San Diego
Scripps Research Institute, La Jolla, CA
University of Massachusetts, Lowell, MA
International Institute for Nanotechnology (IIN) 2009
Symposium on Nanotechnology in Biology and
Medicine, Evanston, IL

2008

University of Florida, Gainesville FL
American Chemical Society, Spring National Meeting,
(PMSE), two talks, New Orleans, LA.
International Symposium on Macrocyclic and
Supramolecular Chemistry, Las Vegas, NV
University of Maryland, College Park, MD
University of Michigan, Ann Arbor, MI

2007

Rennselear Institute of Technology, Troy, NY
University of Puerto Rico, Rio Piedras, PR
Lorentz Conference: Magnetic Nanoparticles:
Challenges and Future Prospects, Leiden, Netherlands

Controlled Release Society Annual Meeting, Quebec
City, Quebec
Gold 2012, Tokyo, Japan
Rocky Mountain Regional Meeting of the ACS, Denver,
CO

University of Pittsburgh, Pittsburgh, PA
University of Wisconsin (two talks, Pharmacy and
Chemistry), Madison WI
Materials Research Society, Spring National Meeting,
San Francisco, CA.
American Association of Pharmaceutical Scientists
National Biotechnology Conference, San Francisco, CA
American Chemical Society Fall National Meeting,
Denver, CO (four Talks)
University of Rhode Island, Kingston, RI

Tufts University, Medford, MA
University of Minnesota, St. Paul, MN
Argonne National Labs, Argonne, IL
MRS Workshop on Biomedical Applications of
Nanomaterials, Denver, CO
Molecular Foundry, Lawrence Berkeley National Labs,
Berkeley, CA
New England Complex Fluids Workshop, Albany, NY
National Cancer Institute, Distinguished Lecture,
Frederick, MD

University of California-Irvine
California Institute of Technology, Pasadena, CA
42nd IUPAC International Conference, Glasgow
Scotland.
Gold 2009, Heidelberg Germany.
Int. Conf. on the Environmental Implications and
Applications of Nanotechnology, Amherst, MA.
SERMACS 2009, San Juan, PR

Arizona State University, Tempe AZ
Particles 2008, Orlando, FL, two talks.
Canadian Society of Chemistry, two talks, Edmonton
AL, Canada
Polymers in Life Science 2008, Zurich, Switzerland
American Chemical Society, Fall National Meeting,
(POLY), Philadelphia, PA

Department of Chemistry and Biochemistry, University
of California, Los Angeles CA
California NanoSystems Institute, University of
California, Los Angeles, CA

Purdue University, West Lafayette, IN
Gordon Research Conference: Supramolecules and Assemblies", Il Ciocco, Italy
New York University, New York, NY
Georgia Institute of Technology, Atlanta, GA
Materials Research Society, Fall National Meeting, Boston, MA,: Symposium PP and Symposium MM/PP Tutorial

2006

University of Miami, Coral Gables FL
Organic Structure and Properties Gordon Conference
American Chemical Society, Spring National Meeting, (PMSE)
Johnson and Johnson, Spring House, PA
Xerox Material Research Center, Mississauga, ON
American Chemical Society, Fall National Meeting, 3 talks (POLY, COLL, and ORGN)
Particles 2006, *Plenary Lecture*, Orlando, CA
Skidmore College, Saratoga Springs, NY
3M Corporation, St. Paul, MN
Mayo Clinic, Rochester, MN

2005

University of Texas, Arlington, TX
Ohio State University, Columbus, OH
University of Buffalo, Buffalo, NY
American Chemical Society Spring National Meeting, San Diego, CA (ANYL, Applications of Nanomaterials)
Self-Assembled Nanomaterials Workshop, Argonne National Labs, Argonne, IL.
University of Vermont, Burlington, VT
Indiana University, Bloomington, IN
American Chemical Society, Fall National Meeting, 3 talks (POLY, COLL, and ANYL)

2004

Duke University, Durham, NC
Research Triangle ACS Polymer Discussion Group, Durham, NC
13th International Symposium on Supramolecular Chemistry, South Bend ND
Georgia State University, Atlanta, GA
North Dakota State University, Fargo, ND
NSF Workshop "Models of Thought Processes: Insights toward Chemical Systems" Washington, DC
Indiana University, Bloomington, IN
Naval Research Labs, Washington, DC

Department of Materials Science and Eng. University of California, Los Angeles, CA.
University of Eindhoven, Netherlands
University of Twente, Netherlands
Radboud University of Nijmegen, Netherlands
Johns Hopkins University, Baltimore, MD
University of Central Florida, Orlando, FL

University of Montreal, Montreal, QC
Laval University, Québec, QC
McGill University
Brigham Young University, Provo, UT
University of Utah, Salt Lake City, UT
SUNY-Albany, Albany, NY
Gordon Conference : Macromolecular Organization and Cell Function: Cellular Systems Biology, South Hadley, MA
Northwestern University, Evanston, IL
Indo-US Symposium on Nanotechnology in Advanced Drug Delivery, Punjab, India

Simon Fraser University, Vancouver BC
University of Victoria, Victoria, BC
Lehigh University, Bethlehem, PA
University of Connecticut, Storrs, CT.
Era of Hope Breast Cancer Symposium, Philadelphia, PA
Materials Research Society, Fall National Meeting, Boston, MA, 3 talks: Symposia O, Q, and CC
Dartmouth College, Hanover NH
Biologically Inspired Nanomaterials ICAM workshop, Penn State University, State College, PA

North Carolina State University, Raleigh, NC
NSF Workshop on Supramolecular Chemistry, Sanibel Island, FL
Keynote Speaker, Particles 2004, Orlando, Fla
Nanotechnology Research Institute, The National Institute of AIST, Tsukuba, Japan
Tokyo University, Tokyo, Japan
American Chemical Society Spring National Meeting, (POLY, Metal-Mediated Assembly of Materials)
American Chemical Society Spring National Meeting, (COLL, Nanoscience and Nanotechnology)

Mass. Medical Society, Waltham MA

2003

Clemson University, Clemson, SC
Green Chemistry in Practice, Andover MA
American Chemical Society Spring National Meeting,
(POLY, Non-Covalent Assembly of Polymers)
Materials Research Society, Fall National Meeting,
Boston MA (Nanostructured Organic Materials),
Boston, MA
Southern Illinois University, Carbondale, IL
Lawrence Livermore National Laboratories, Livermore,
CA

2002

20th International Symposium on the Organic Chemistry
of Sulfur, Flagstaff, AZ
Purdue University, West Lafayette, IN
Northwestern University, Evanston, IL
University of Notre Dame, Notre Dame, IN
University of Illinois, Urbana, IL
University of South Carolina, Columbia, SC
Macromolecular Science and Engineering Symposium,
University of Michigan, Ann Arbor, MI

2001

University of Texas, Austin, TX
NSF Workshop on Materials Chemistry
MRSEC-HOMRC (Korea) Joint Workshop, Amherst,
MA
Southeastern Regional Meeting of the American
Chemical Society, (Biomimetic Chemistry and
Nanostructured Materials sessions) Savannah, GA
Emory University, Atlanta, GA
University of Washington, Seattle, WA
Bowling Green State University, Bowling Green, OH

2000

Third International Symposium on Atomic Scale
Processing and Novel Properties in Nanoscopic
Materials, Osaka, Japan
R.T. Major Lecturer, University of Connecticut, Storrs,
CT
Wayne State University, Detroit, MI
Mount Holyoke College, South Hadley, MA
Case-Western Reserve University, Dept. of
Macromolecular Sciences, Cleveland, OH
University of Maine, Orono ME

1999

CUMIRP Fall Meeting, Amherst, MA
University of Maryland-Baltimore County, Baltimore,
MD
NSF Workshop on Materials Chemistry
Fullerenes in Polymer Chemistry, ACS National
Meeting (Presented by F. Ilhan)
Flavins and Flavoproteins 1999, Konstanz (Germany)
University of New Orleans, New Orleans, LA

1998

Eastern Analytical Symposium, (Bionanomaterials)

Montana State University, Bozeman MT
American Chemical Society Fall National Meeting
(POLY, Self-Assembly of Nanostructures)
American Chemical Society Fall National Meeting
(POLY, Molecular recognition using Polymeric
Materials)
American Chemical Society Fall National Meeting
(ORGN, Supramolecular Chemistry)
Sandia National Laboratories, Albuquerque, NM
Yale University, New Haven, CT

Tulane University, New Orleans, LA
Louisiana State University, Baton Rouge LA
Sandia National Labs, Albuquerque NM
University of North Carolina, Chapel Hill NC
Texas A&M University, College Station, TX
Distinguished Lecture Series, Dept of Materials & Nuc.
Eng. , University of Maryland, College Park MD
NSF Physical Organic Workshop, Hilton Head, SC
Colorado State University, Fort Collins CO

Georgia Institute of Technology, Atlanta, GA
Tufts University, Medford, MA
University of Massachusetts, Department of Polymer
Science and Engineering, Amherst, MA
Polytechnic University, Brooklyn, NY
Materials Research Society, Symposium Z-Patterning
Soft Materials, San Francisco, CA
Materials Research Society, Symposium Y-
Applications of Nanostructures, San Francisco, CA
University of Toledo, Toledo, OH

AIChe National Meeting, Los Angeles, CA
Gordon Conference (Bioorganic Chemistry), Plymouth,
NH
Gordon Conference (Polymers East), Short Talk
(Presented by F. Ilhan)
Material Res. Society Spring Meeting, San Francisco,
CA
Vanderbilt University, Nashville, TN
Wesleyan University, Middletown, CT

Johns Hopkins University, Baltimore, MD
Organic Syntheses Lecturer, Williams College,
Williamstown, MA
NSF New England Workshop on Molecular Modeling,
Amherst, MA
Temple University, Philadelphia, PA

Brown University, Providence, RI
University of California, Irvine, CA
University of Nevada, Reno NV
Scripps Institute, La Jolla, CA
San Diego State University, San Diego, CA

1997

Merrimack College, North Andover, MA
CUNY- City College, New York, NY
SUNY Stonybrook, Stonybrook, NY
Union College, Schenectady, NY

1996

University of Wisconsin, Milwaukee, WI
University of Wisconsin, Madison WI
University of Maryland, College Park MD
Case-Western Reserve University, Cleveland, OH
Closs Lecturer, University of Chicago, Chicago, IL
Illinois Institute of Technology, Chicago, IL

1995

University of Massachusetts Medical School,
Worcester, MA
Amherst College, Amherst, MA
University of Sheffield, Sheffield (U.K.)
University of Leeds, Leeds (U.K.)
University of East Anglia (U.K.)

North Carolina State University, Raleigh, NC
University of Pittsburgh, Pittsburgh, PA
University of Durham, Durham (UK)
University of Northumbria, Newcastle (UK)
Virginia Commonwealth University, Richmond, VA

University of Teeside, Teeside (UK)
Tufts University, Medford, MA
Nora Harrington Lecturer, Elms College, Springfield,
MA

University of California, Los Angeles, CA
Mount Holyoke College, South Hadley, MA
Electrochemical Society National Meeting-Fullerene
section, Los Angeles, CA
CUNY- Brooklyn College, New York, NY

Parke-Davis Research Laboratories, Cambridge (U.K.)
Institute for Science Instruction and Study, New Haven,
CT
Gordon Conference (Bioorganic Chemistry), Plymouth,
NH
Fairfield University, Fairfield, CT

Courses Taught:

Chem 263: Organic Chemistry-Non-Majors
Chem. 551: Advanced Organic Chemistry
Chem 756: Organic Synthesis
Chem 791A: Molecular Recognition (proposed and developed)
Chem 791H: Graduate Core Course (proposed and developed)
NS&M 121A: Undergraduate Seminar

University/College/Department Service:

2012-2013 Chair, Translational Biomedicine search
Departmental Awards Committee
Member, Executive Committee, Chemistry-Biology Interface Training Grant
Head's Advisory Committee
Graduate Studies Committee
Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)

2011-2012 Departmental Awards Committee
Outstanding Accomplishments in Research Award Committee, University of Massachusetts
Member, Executive Committee, Chemistry-Biology Interface Training Grant
Head's Advisory Committee
Graduate Studies Committee
Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)

2010-2011 Chemistry Department Development Committee
Member, Executive Committee, Chemistry-Biology Interface Training Grant
Head's Advisory Committee
Graduate Studies Committee
Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)
Convocation Award Committee

2009-2010 Chemistry Department Development Committee
Member, Executive Committee, Chemistry-Biology Interface Training Grant
Head's Advisory Committee
Graduate Studies Committee
Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)

2008-2009 Chemistry Department Development Committee
Member, Executive Committee, Chemistry-Biology Interface Training Grant
Head's Advisory Committee
NSM Awards Committee
Graduate Studies Committee
Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)

2008-2009 Chair, Head Search Committee
Member, Executive Committee, Chemistry-Biology Interface Training Grant
NSM Awards Committee
Graduate Studies Committee
Inorganic Search Committee
Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)

2007-2008 Distinguished Faculty Lecture Series Selection Panel
Member, Executive Committee, Chemistry-Biology Interface Training Grant
Graduate Studies Committee
Graduate Recruiting Committee

NSM Awards Committee

2006-2007 Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)
 Chair, Combined Inorganic Materials, Bioorganic, and Device Searches
 Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)
 Member, CVIP Patent Evaluation Committee
 Member, Executive Committee, Chemistry-Biology Interface Training Grant
 Faculty Advisor, MassNanoTech

2005-2006 Member, Head's Advisory Committee
 Member, Device Search Committee
 Member, CVIP Patent Evaluation Committee
 Member, Executive Committee, Chemistry-Biology Interface Training Grant
 Faculty Advisor, MassNanoTech
 Member, Head's Advisory Committee

2004-2005 Member, Biological Search Committee
 Member, CVIP Patent Evaluation Committee
 Member, Executive Committee, Chemistry-Biology Interface Training Grant
 Faculty Advisor, MassNanoTech
 Member, NSM Awards Committee
 Member, Departmental Personnel Committee
 Member, Graduate Program Committee

2003-2004 Member, Biological Search Committee
 Member, Center for Emergency Preparedness Faculty Leadership Committee
 Member, CVIP Patent Evaluation Committee
 Member, Executive Committee, Chemistry-Biology Interface Training Grant
 Member, MCB recruiting committee
 Faculty Advisor, MassNanoTech

2002-2003 *Vice-Chair*, Organic/Physical Search Committee
 Member, Center for Emergency Preparedness Faculty Leadership Committee
 Member, Graduate Studies/Recruiting Committee
 Member, CVIP Patent Evaluation Committee
 Member, Executive Committee, Chemistry-Biology Interface Training Grant

2001-2002 *Vice-Chair*, Organic/Inorganic Search Committee
 Member, Graduate Studies/Recruiting Committee
 Member, CVIP Patent Evaluation Committee
 Member, Executive Committee, Chemistry-Biology Interface Training Grant

2000-2001 Chair, Symposium on Nanoscience and Technology
 Organizer, Nanotechnology Initiative
Chair, Faculty Search Committee
 Member, Graduate Studies, Recruiting and Admissions Committee

1999-2000 Member, Advisory Committee to the Head

1998-1999 Member, Graduate Studies Committee
 Member, Future Planning Committee

1997-1998 Member, Organic Search Committee;
 Member, Graduate Studies Committee;

1996-1997 *Director*, Howard Hughes Biological Chemistry REU;
Chair, Graduate Curriculum Reform Committee;
Chair, Bioorganic Search Committee;
Faculty Mentor, PSITAP;

Director, Howard Hughes Biological Chemistry REU;

Member, Graduate Studies Committee;

Co-Chair, LSSC bioanalytical faculty proposal committee

1995-1996

Faculty Mentor, PSITAP

Assistant Director, Howard Hughes Biological Chemistry REU;

Member, Graduate Studies Committee;

Member, Eugene Eisenberg Curriculum Development Committee

1994-1995

Faculty Mentor, Physical Sciences Talant Advancement Program (PSITAP)

Assistant Director, Howard Hughes Biological Chemistry REU

Member, Space Committee

1993-1994

Member, Computer Committee