

Vincent M. Rotello

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Updated 10/25/20

Education:

Ph.D., Yale University (Harry Wasserman), 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

University Distinguished Professor 2014-present, University of Massachusetts-Amherst
Charles A. Goessmann Professor of Chemistry, 2005-present, University of Massachusetts-Amherst
Professor, Program in Molecular and Cell Biology, 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 (Julius Rebek) 1990-1993

Honors and Awards:

2018, 2019, 2020: Highly Cited Researcher, Clarivate/Web of Science
2017-2019: Guest Professor, National Center for Nanoscience and Technology, Chinese Academy of Sciences
2016: Bioorganic Lectureship, Royal Society of Chemistry, (U.K.)
2016: Research Corporation Transformational Research and Excellence in Education Award
2016: Australian Nanotechnology Network Traveling Fellowship
2016: Chinese Academy of Sciences, President's International Fellowship for Distinguished Researchers
2015, 2014: Highly Cited Researcher/Most Influential Scientific Minds, Thomson Reuters
2014: Cedric Hassell Lecturer, European Symposium on Biological Chemistry
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:

2019: *Plenary*, End2cancer, Oklahoma City, OK. *Plenary*, Molecular Imaging and Minimally Invasive Therapy, Beijing, China. *Keynote*, ChinaNano, Beijing, China. *Plenary*, Bioorthogonal & Bioresponsive Materials, Edinburgh, Scotland. **2018:** *Plenary*, NanoThailand, Bangkok, Thailand. *Plenary*, Massachusetts Society of Science Teachers, Boxboro, MA. *Plenary*, 7th Thesinge Biofilms Meeting, Groningen, Netherlands. *Plenary*, MESA+ Annual Meeting, Enschede, Netherlands. *Keynote*, Northeast Nanomaterials Meeting, Lake Placid, NY. *Plenary*, 4th International Symposium for Medicinal Sciences, Kanazawa, Japan. *Plenary*, European Society for Controlled Drug Delivery, Amsterdam, Netherlands **2017:** *Molecular Sciences Forum*, Institute of Chemistry, Chinese Academy of Sciences, Beijing China. *Plenary*, LSAMP French-American Workshop on Translational Science, Bordeaux France. **2016:** *Plenary*, NanoBio 2016, Nanjing, China. *Plenary*, 7th International Nanomedicine Conference, Sydney Australia.

Plenary, PolymerVic, Melbourne Australia. *Keynote*, NANAX 9, Marburg, Germany **2015**: *Plenary*, QuimCuba, Havana, Cuba. *Plenary*, New England Structural Biology Association Annual Meeting, Waltham, MA. **2014**: *Plenary*, Challenges in Nanoscience (ISACS 15), San Diego, CA. *Plenary*, NanoFunctional Materials, Pultusk, Poland. *Plenary*, 48th ESBOC Symposium, Gregynog, Wales. **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, Fredrick, 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:

2014-2023: **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:

2018- **Editorial Advisory Board**, *Sci*

2017- : **Editorial Advisory Board**, *Nanomaterials*

2015- : **Editorial Advisory Board**, *ACS Sensors*

2014- : **Editorial Advisory Board**, *MethodsX*

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

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

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

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

2005-2010 **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

2016-2017: ARC Centre of Excellence in Convergent BioNanoscience

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: 2019: NIGMS (NIH) MIRA Young Investigator. 2014: NANO (Summer). 2013: ZAI 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:

International Advisory Committees: 2018: “Gold 2018”, Paris, France. 2017: “International Conference on Nano-Technology in Energy, Nano-Bio Interface and Sustainable Environment, Rajasthan, India. 2015: “Gold 2015”, Cardiff UK. 2014: “International Conference on Small Science”, Hong Kong, China.

ACS: 2017, “Bioconjugate Lecturer Symposium”, Division of Colloid Chemistry, Fall National Meeting of the ACS, Washington, DC. 2016: “Bioconjugate Lecturer Symposium”, “Synergy at the Bio-Nano Interface” Division of Colloid Chemistry, Fall National Meeting of the ACS, Philadelphia, PA. 2014: “Supramolecular Nanoparticles” Division of Colloid Chemistry, Fall National Meeting of the ACS, San Francisco, CA. 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: **2017:** Biomedical Applications of Nanomaterials, XXVI International Materials Research Congress, Cancun, Mexico. 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)

Prof. Rotello has received over \$7M in award funding within the past 5 years, including 3 R01 awards from the NIH, three collaborative awards from the NSF, along with multiple industrially-sponsored projects.

Current: National Institutes of Health, “Crosslinked Nanosponges for the Topical Treatment of Wound Biofilms” R01 AI134770, 07/24/2018 – 06/30/2022, \$1,567,713

National Institutes of Health, “Rapid Multi-Channel Serum Profiling for Liver Disease using Fluorescent Nanosensors” R01 DK121351, 2/1/20-1/31/24, \$1,377,967.

National Institutes of Health, “Supramolecular Bioorthogonal Nanozymes for Targeted Activation of Therapeutics” R01 EB022641, 4/1/17-3/31/21, \$1,547,386

National Institutes of Health, “Immunomodulation through Nanocapsule-Mediated Cytosolic Delivery of siRNA” R21 EB023369, 4/1/17-3/31/20, \$420,374.

National Science Foundation “Multi mode Mass Spectrometric Imaging of Nanomaterials and their Biochemical Effects” CHE-1808199, 7/1/18-6/30/21, \$400,000 (\$200,000 to VR).

National Science Foundation "NSF CCI Phase I: Center for Autonomous Chemistry" CCI-1662737, 9/1/17-8/31/20, (Co-PI, S.Thayumanavan, PI), \$301,275 to VR

Moderna Pharmaceuticals, Sponsored Research, 9/1/19-8/31/20, \$80,000

Merck, Sponsored Research, 6/1/19-5/31/20, Sponsored Research, \$20,000

Recent: National Institutes of Health, "Rapid Multi-Channel Serum Profiling for Cardiac Disease using Fluorescent Nanosensors" R01 GM077173, 4/1/15-3/31/20, \$1,221,356. National Institutes of Health, "Nanosensor-Based Phenotypic Screening for Precision Therapy of Cancer Stem Cells" R56 CA207932, 09/12/17-09/10/2019, \$300,000 National Science Foundation "Multi-mode Mass Spectrometric Imaging of Nanoparticle Stability" CHE-1506725, 7/1/15-6/30/18, \$400,000 (\$200,000 to VR). University of Massachusetts System President's Science and Technology Initiative Fund "Integrating Physical Sciences and Oncology" 7/1/2015-6/30/17, \$125,000. National Academies of Science, Pakistan-U.S. Science and Technology Cooperation Program "Development of Ultrasensitive, Robust and Affordable Nanoparticle-Based Test Strips for Detecting Bacteria" 8/1/13-7/31/17, \$271,930. National Science Foundation "International Collaboration in Chemistry: Plasmon-Enhanced Chiroptical Sensors" CHE- 1307021, 8/1/13-7/31/17, \$400,000 National Science Foundation, "Center for Hierarchical Manufacturing", CMMI-1025020, 5/01/11-04/30/17, \$4,000,000 (\$78,000/year to VR, \$128,000 in 2012)(J. Watkins, M. Tuominen, P.I.s)University of Massachusetts OTCV Award, "CRISPR/Cas9 Protein Delivery using Nanoassemblies" 4/30/2015-3/31/2016, \$25,000Firmenich, Sponsored research, 2/1/11-1/31/16, \$313,000.National Science Foundation, "Materials Research Science and Engineering Center on Polymers", 8/1//08-12/31/14, DMR-0820506 \$4,092,000 (\$35,000/year to VR)(T. Russell, P.I.)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, "Multi-Channel Protein and Cell Sensing using Fluorescent Protein-Nanoparticle Sensors" R01 GM077173-05, 4/1/11-3/31/15, \$1,168,000. 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) 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). 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.)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 Aeronautics and Space Agency, MNT-SBIR with Aerodyne, 4/01/12-3/31/13, \$37,500 (Rotello, UMass PI). Teijin, Sponsored research 10/15/2011-10/15/13 \$159,000. 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.

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.

Journal Publications

The Rotello group is a productive program, with >590 peer-reviewed publications to date. This research has been published in top journals, with 2 papers in *Nature*, 7 in *Nature Nanotechnology*, 4 in *Nature Chemistry*, 1 in *Nature Materials*, along with 74 published in *J. Am. Chem. Soc.*, 25 in *Advanced Materials*, 32 in *ACS Nano*, and 11 in *Nano Letters* and 10 in *Angewandte Chemie*. This research has had an impact on the community, with (Web of Science) 41,183 citations (4003 in 2019), and an *h* of 97 for **Rotello** as of 10/25/2020.

593) Makabenta, J. M. V.; Nabawy, A.; Li, C. H.; Schmidt-Malan, S.; Patel, R.; Rotello, V. M. "Nanomaterial-based therapeutics for antibiotic-resistant bacterial infections" *Nat. Rev. Microbiol.*

592) Li, Y. F.; Liu, Y.; Ren, Y. J.; Su, L. Z.; Li, A.; An, Y. L.; Rotello, V.; Zhang, Z. Z.; Wang, Y.; Liu, Y.; Liu, S. D.; Liu, J.; Laman, J. D.; Shi, L. Q.; van der Mei, H. C.; Busscher, H. J. "Coating of a Novel Antimicrobial Nanoparticle with a Macrophage Membrane for the Selective Entry into Infected Macrophages and Killing of Intracellular Staphylococci" *Adv. Funct. Mater.*

591) Goswami, R.; Jeon, T.; Nagaraj, H.; Zhai, S. M.; Rotello, V. M. "Accessing Intracellular Targets through Nanocarrier-Mediated Cytosolic Protein Delivery" *Trends Pharmacol. Sci.* **2020**, *41*, 743-754.

- 590) Geng, Y. Y.; Hardie, J.; Landis, R. F.; Mas-Rosario, J. A.; Chattopadhyay, A. N.; Keshri, P.; Sun, J. D.; Rizzo, E. M.; Gopalakrishnan, S.; Farkas, M. E.; Rotello, V. M. "High-content and high-throughput identification of macrophage polarization phenotypes" *Chem. Sci.* **2020**, *11*, 8231-8239.
- 589) Zhang, X. Z.; Liu, Y. C.; Gopalakrishnan, S.; Castellanos-Garcia, L.; Li, G. T.; Malassine, M.; Uddin, I.; Huang, R.; Luther, D. C.; Vachet, R. W.; Rotello, V. M. "Intracellular Activation of Bioorthogonal Nanozymes through Endosomal Proteolysis of the Protein Corona" *ACS Nano* **2020**, *14*, 4767-4773.
- 588) Zhang, X. Z.; Fedeli, S.; Gopalakrishnan, S.; Huang, R.; Gupta, A.; Luther, D. C.; Rotello, V. M. "Protection and Isolation of Bioorthogonal Metal Catalysts by Using Monolayer-Coated Nanozymes" *ChemBiochem* **2020**, *21*, 10.1002/cbic.202000207.
- 587) Pan, S. T.; Jeon, T.; Luther, D. C.; Duan, X. X.; Rotello, V. M. "Cytosolic Delivery of Functional Proteins In Vitro through Tunable Gigahertz Acoustics" *ACS Appl. Mater. Interfaces* **2020**, *12*, 15823-15829.
- 586) Medina, M. A.; Oza, G.; Sharma, A.; Arriaga, L. G.; Hernandez, J. M. H.; Rotello, V. M.; Ramirez, J. T. "Triple-Negative Breast Cancer: A Review of Conventional and Advanced Therapeutic Strategies" *Int. J. Environ. Res. Public Health* **2020**, *17*, Art. 2078.
- 585) Huang, R.; Li, C. H.; Cao-Milan, R.; He, L. D.; Makabenta, J. M.; Zhang, X. Z.; Yu, E. L.; Rotello, V. M. "Polymer-Based Bioorthogonal Nanocatalysts for the Treatment of Bacterial Biofilms" *J. Am. Chem. Soc.* **2020**, *142*, 10723-10729.
- 584) Gupta, A.; Makabenta, J. M. V.; Schluter, F.; Landis, R. F.; Das, R.; Cuppels, M.; Rotello, V. M. "Functionalized Polymers Enhance Permeability of Antibiotics in Gram-Negative MDR Bacteria and Biofilms for Synergistic Antimicrobial Therapy" *Advanced Therapeutics* **2020**, *3*, Art. UNSP 2000005.
- 583) Gu, C. C.; Geng, Y. Y.; Zheng, F.; Rotello, V. M. "Rapid evaluation of gold nanoparticle-lipid membrane interactions using a lipid/polydiacetylene vesicle sensor" *Analyst* **2020**, *145*, 3049-3055.
- 582) Geng, Y. Y.; Chattopadhyay, A. N.; Zhang, X. Z.; Jiang, M. D.; Luther, D. C.; Gopalakrishnan, S.; Rotello, V. M. "Nano Assessing Nano: Nanosensor-Enabled Detection of Cell Phenotypic Changes Identifies Nanoparticle Toxicological Effects at Ultra-Low Exposure Levels" *Small* **2020**, *16*, Art. 2002084.
- 581) Cao-Milan, R.; Gopalakrishnan, S.; He, L. D.; Huang, R.; Wang, L. S.; Castellanos, L.; Luther, D. C.; Landis, R. F.; Makabenta, J. M. V.; Li, C. H.; Zhang, X. Z.; Scaletti, F.; Vachet, R. W.; Rotello, V. M. "Thermally Gated Bio-orthogonal Nanozymes with Supramolecularly Confined Porphyrin Catalysts for Antimicrobial Uses" *Chem* **2020**, *6*, 1113-1124.
- 580) Burrows, C. J.; Huang, J. X.; Wang, S.; Kim, H. J.; Meyer, G. J.; Schanze, K.; Lee, T. R.; Lutkenhaus, J. L.; Kaplan, D.; Jones, C.; Bertozzi, C.; Kiessling, L.; Mulcahy, M. B.; Lindsley, C. W.; Finn, M. G.; Blum, J. D.; Kamat, P.; Choi, W.; Snyder, S.; Aldrich, C. C.; Rowan, S.; Liu, B.; Liotta, D.; Weiss, P. S.; Zhang, D. Q.; Ganesh, K. N.; Atwater, H. A.; Gooding, J. J.; Allen, D. T.; Voigt, C. A.; Sweedler, J.; Schepartz, A.; Rotello, V.; Lecommandoux, S.; Sturla, S. J.; Hammes-Schiffer, S.; Buriak, J.; Steed, J. W.; Wu, H. W.; Zimmerman, J.; Brooks, B.; Savage, P.; Tolman, W.; Hofmann, T. F.; Brennecke, J. F.; Holme, T. A.; Merz, K. M.; Scuseria, G.; Jorgensen, W.; Georg, G. I.; Wang, S. M.; Proteau, P.; Yates, J. R.; Stang, P.; Walker, G. C.; Hillmyer, M.; Taylor, L. S.; Odom, T. W.; Carreira, E.; Rossen, K.; Chirik, P.; Miller, S. J.; Shea, J. E.; McCoy, A.; Zanni, M.; Hartland, G.; Scholes, G.; Loo, J. A.; Milne, J.; Tegen, S. B.; Kulp, D. T.; Laskin, J. "Confronting Racism in Chemistry Journals" *Bioconjugate Chem.* **2020**, *31*, 1693-1695.
- 579) Li, D.; Kumari, B.; Zhang, X. Z.; Wang, C. P.; Mei, X. F.; Rotello, V. M. "Purification and separation of ultra-small metal nanoclusters" *Adv. Colloid Interface Sci.* **2020**, *276*.
- 578) Lee, Y. W.; Luther, D. C.; Goswami, R.; Jeon, T.; Clark, V.; Elia, J.; Gopalakrishnan, S.; Rotello, V. M. "Direct Cytosolic Delivery of Proteins through Coengineering of Proteins and Polymeric Delivery Vehicles" *J. Am. Chem. Soc.* **2020**, *142*, 4349-4355.
- 577) Dai, Z. F.; Man, N. K.; Parak, W. J.; Smith, B.; Sumer, B. D.; Tang, B. Z.; van Hest, J.; Rotello, V. M. "Translational Research: Bridging the Gap between Fundamental Research and the Clinic" *Bioconjugate Chem.* **2019**, *30*, 2989-2990.
- 576) Busscher, H. J.; Woudstra, W.; van Kooten, T. G.; Jutte, P.; Shi, L. Q.; Liu, J. F.; Hinrichs, W. L. J.; Frijlink, H. W.; Shi, R.; Liu, J.; Parvizi, J.; Kates, S.; Rotello, V. M.; Schaer, T. P.; Williams, D.; Grainger, D. W.; van der Mei, H. C. "Accepting higher morbidity in exchange for sacrificing fewer animals in studies developing novel infection-control strategies" *Biomaterials* **2020**, *232*.
- 575) Zuraw-Weston, S.; Wood, D. A.; Torres, I. K.; Lee, Y.; Wang, L. S.; Jiang, Z. W.; Lazaro, G. R.; Wang, S. Y.; Rodal, A. A.; Hagan, M. F.; Rotello, V. M.; Dinsmore, A. D. "Nanoparticles binding to lipid membranes: from vesicle-based gels to vesicle tubulation and destruction" *Nanoscale* **2019**, *11*, 18464-18474.
- 574) Zhang, L.; Gopalakrishnan, S.; Li, K.; Wang, L. S.; Han, Y.; Rotello, V. M. "Fabrication of Collagen Films with Enhanced Mechanical and Enzymatic Stability through Thermal Treatment in Fluorous Media" *ACS Appl. Mater. Interfaces* **2020**, *12*, 6590-6597.
- 573) Umapathi, A.; Nagaraju, N. P.; Madhyastha, H.; Jain, D.; Srinivas, S. P.; Rotello, V. M.; Daima, H. K. "Highly efficient and selective antimicrobial isonicotinylhydrazide-coated polyoxometalate-functionalized silver nanoparticles" *Colloid Surf. B-Biointerfaces* **2019**, *184*.

- 572) Sikora, K. N.; Hardie, J. M.; Castellanos-Garcia, L. J.; Liu, Y. C.; Reinhardt, B. M.; Farkas, M. E.; Rotello, V. M.; Vachet, R. W. "Dual Mass Spectrometric Tissue Imaging of Nanocarrier Distributions and Their Biochemical Effects" *Analytical Chemistry* **2020**, *92*, 2011-2018.
- 571) Li, D.; Kumari, B.; Makabenta, J. M.; Gupta, A.; Rotello, V. "Effective detection of bacteria using metal nanoclusters" *Nanoscale* **2019**, *11*, 22172-22181.
- 570) Dai, Z. F.; Man, N. K.; Parak, W. J.; Smith, B.; Sumer, B. D.; Tang, B. Z.; van Hest, J.; Rotello, V. M. "Translational Research: Bridging the Gap between Fundamental Research and the Clinic" *Bioconjugate Chem.* **2019**, *30*, 2989-2990.
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Patents

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|-----------|---|
| 9,849,435 | Maleic anhydride polymer-stabilized microcapsules |
| 8,652,640 | Nanoparticle-textured surfaces and related methods for selective adhesion, sensing and separation |
| 8,382,858 | Nanoparticle-textured surfaces and related methods for selective adhesion, sensing and separation |
| 8,021,891 | Methods and compositions for protein detection using nanoparticle-fluorescent polymer complexes |
| 8,003,404 | Methods and compositions for pathogen detection using nanoparticle-fluorescent polymer complexes |
| 7,993,186 | Simple, ultra-safe, lightweight, hand-held oyster-opening device |
| 7,846,642 | Direct incident beam lithography for patterning nanoparticles, and the articles formed thereby |

Invited Presentations:

2019

Stony Brook University, Stony Brook, NY
Northeastern University, Boston, MA
American Chemical Society National Meeting,
Orlando, FL (4 presentations)
University of Pennsylvania, Philadelphia, PA
Materials Research Society National Meeting, Phoenix,
AZ
Tsinghua University, Beijing China
Institute of Chemistry, Chinese Academy of Sciences,
Beijing China
National Center for Nanoscience and Technology,
Chinese Academy of Sciences, Beijing, China

Bioorthogonal & Bioresponsive Materials, Edinburgh,
Scotland
ChinaNano, Beijing, China
Small Sciences Symposium, Beijing, China
Directors' Forum on Nanotechnology, Beijing, China
Chinese Pharmaceutical University, Nanjing, China
Nanjing University, Nanjing, China.
Institute of Processing, Chinese Academy of Sciences,
Beijing, China
Beijing University of Chemical Technology

2018

Thesinge Biofilms Meeting, Groningen, Netherlands.
Northeast Nanomaterials Meeting, Lake Placid, NY
4th International Symposium for Medicinal Sciences,
Kanazawa, Japan
European Society for Controlled Drug Delivery
Amsterdam, Netherlands
MESA+ Annual Meeting, Enschede, Netherlands
Materials Research Society Fall Meeting, Boston, MA
Technical University Eindhoven, Netherlands
Münster University, Germany

ThaiNano, Bangkok, Thailand
Groningen University, Netherlands
University of Nijmegen, Netherlands
Nagoya Institute of Technology, Nagoya, Japan
University of Delhi, Delhi India
IIT Roorkee, Roorkee India
IISER Mohali, Ajitgarh, India
Metals in Biology GRC, Andover, NH
Tokyo Medical and Dental University, Tokyo, Japan
Osaka Prefecture University, Osaka, Japan
American Chemical Society Fall National Meeting,
Boston MA (4 presentations)

2017

University of Miami, Coral Gables, FL
University of New Hampshire, Durham NH
Inari Agricultural, Cambridge MA
Portland State University, Portland OR
Research Corporation, Tucson, AZ
LSAMP French-American Workshop on Translational
Science, Bordeaux France
Canadian Chemical Society Annual Meeting, Toronto,
Canada
American Chemical Society Fall National Meeting,
Washington, DC, 3 talks
Emerging Science Convention, Hamburg, Germany
Institute of Chemistry, Chinese Academy of Sciences,
Beijing, China.

Durham University, Durham UK
University College London (Chemistry), London, UK
University College London (Medicine), London, UK
University of Liverpool, Liverpool, UK
University of Reading, Reading UK
LCPO, University of Bordeaux, France
Environmental Nanotechnology Gordon Conference,
Stowe, VT.
XXVI International Materials Research Congress,
Cancun, Mexico.
3M Corporation, Minneapolis MN
National Center for Nanoscience and Technology,
Chinese Academy of Sciences, Beijing, China
NCI Alliance for Nanotechnology in Cancer Annual
Meeting, Gaithersburg, MD.

2016

Brandeis University, Waltham, MA
Wayne State University, Detroit MI
University of Maryland, College Park, MD
University of Michigan, Ann Arbor, MI
Czech Institute of Organic Chemistry and
Biochemistry, Prague, Czech Republic
Masaryk University, Brno, Czech Republic
6th International BioNano Conference, Nanjing, China
GTCBiology, Waltham, MA

NANAX 9, Marburg Germany
University of Heidelberg, Heidelberg Germany.
7th International Nanomedicine Conference, Coogee
Beach, Sydney Australia
University of New South Wales, Sydney, Australia
PolymerVic, Melbourne, Australia
University of South Australia, Adelaide, Australia
Australian Institute of Bioengineering and

American Chemical Society Spring National Meeting,
San Diego, CA, 3 talks
National Center for Nano Science and Technology,
Beijing China
Pfizer, Cambridge, MA

2015

MANA Symposium, Tsukuba, Japan
American Chemical Society Spring National Meeting,
Denver, CO
Carnegie Mellon University, Pittsburgh, PA
NanoTech 2015, Washington, DC
QuimCuba, Havana, Cuba

2014

University of St. Andrews, St. Andrews, Scotland
University of Utah, Salt Lake City, UT
University of California, Davis, CA
Weizmann Institute, Tel Aviv, Israel
ISACS 15, San Diego, CA
Nanofunctional Materials 2014, Pultsk, Poland
KAUST, Thuwal, Saudi Arabia.
Flexcon, Brewster, MA
University of Florence, Florence, Italy
Tufts University

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

2012

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

Nanotechnology, Brisbane, Australia
Auckland University, Auckland, New Zealand
China Pharmaceutical University
Beijing University
ACS-ICCS 60th Anniversary Symposium, Beijing,
China

Materials Research Society, Spring National Meeting,
San Francisco, CA.
New England Structural Biology Association Annual
Meeting, Waltham, MA
CECAM Workshop on Metal-Based Nanoparticles,
Toulouse, France
PacificChem, Honolulu, HI, 2 talks
University of Georgia, Athens, GA

City of Hope, Duarte, CA
European Symposium on Biological and Organic
University of Glasgow, Glasgow Scotland
Chemistry, Gregynog, Wales
Colloidal Semiconductor Nanocrystals Gordon
Conference, Smithfield, RI
American Chemical Society Fall National Meeting, San
Francisco, CA, 2 talks

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

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

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
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

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
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

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
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

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)
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

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

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.)

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

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,

University of Leeds, Leeds (U.K.)
University of East Anglia (U.K.)

NH
Fairfield University, Fairfield, CT

Other service:

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: 2014: NANO (Summer). 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:

International Advisory Committees: 2018: "Gold 2018", Paris, France. 2017: "International Conference on Nano-Technology in Energy, Nano-Bio Interface and Sustainable Environment, Rajasthan, India. 2015: "Gold 2015", Cardiff UK. 2014: "International Conference on Small Science", Hong Kong, China.

ACS: 2017: "Bioconjugate Lecturer Symposium", Division of Colloid Chemistry, Fall National Meeting of the ACS, Washington, DC. 2016: "Bioconjugate Lecturer Symposium", "Synergy at the Bio-Nano Interface" Division of Colloid Chemistry, Fall National Meeting of the ACS, Philadelphia, PA. 2014: "Supramolecular Nanoparticles" Division of Colloid Chemistry, Fall National Meeting of the ACS, San Francisco, CA. 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: 2017: Biomedical Applications of Nanomaterials, XXVI International Materials Research Congress, Cancun, Mexico. 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)

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:

2018-2019 Member, M2M (IALS) Steering Committee

Member, Graduate Admissions Committee
Member, Alumni and Industrial relations Committee

- 2017-2018** Chair, Materials Chemistry Search Committee
Fulbright Fellow Evaluation Committee
Member, Executive Committee, Chemistry-Biology Interface Training Grant
Member, M2M (IALS) Steering Committee
Member, Graduate Admissions Committee
Member, Alumni and Industrial relations Committee
- 2016-2017** Member, Fulbright Fellow Evaluation Committee
Member, Animal Models of Disease Search
Member, Executive Committee, Chemistry-Biology Interface Training Grant
Member, M2M (IALS) Steering Committee
Member, Heads Advisory Board
Member, Alumni and Industrial relations Committee
Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)
- 2015-2016** Member, Department of Chemistry Search Committee (3 searches)
Member, Animal Models of Disease Search
Member, Personnel Committee
Member, M2M (IALS) Steering Committee
Member, Heads Advisory Board
Member, Biomaterials Working Group
Member, Graduate Studies Committee
Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)
Member, Executive Committee, Chemistry-Biology Interface Training Grant
- 2014-2015** Member, M2M (IALS) Steering Committee
Member, Heads Advisory Board
Member, Biomaterials Working Group
Member, Graduate Studies Committee
Member, Executive Committee, Chemistry-Biology Interface Training Grant
- 2013-2014** Member, M2M (IALS) Steering Committee
Member, Heads Advisory Board
Member, Biomaterials Working Group
Member, Graduate Studies Committee
Member, Executive Committee, Chemistry-Biology Interface Training Grant
Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)
- 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
Co-leader, Center for Hierarchical Materials TRG 3 (Bionanotechnology)

2006-2007 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
Member, Head's Advisory Committee

2005-2006 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

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

2000-2001 Member, Executive Committee, Chemistry-Biology Interface Training Grant
 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;

1994-1995 Member, Eugene Eisenberg Curriculum Development Committee
Faculty Mentor, Physical Sciences Talent Advancement Program (PSITAP)
 Assistant Director, Howard Hughes Biological Chemistry REU
 Member, Space Committee

1993-1994 Member, Computer Committee