CURRICULUM VITAE

Gregory N. Tew

Polymer Science and Engineering Department
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Personal:

Born: February 11, 1971; Married to Dawn C. Tew since 1996
Home: 6 Crestview Drive/P.O. Box 108, South Deerfield, MA

Education:

University of Pennsylvania, The Medical School 2000-2001
Post-doctoral Fellow
Research Advisor: Prof. William F. DeGrado

University of Illinois at Urbana-Champaign 1995-2000
Ph.D., Materials Chemistry
Research Advisor: Prof. Samuel I. Stupp
Thesis: "Phenylene Vinylene Based Supramolecular Materials"

North Carolina State University 1989-1995
B.S., Chemistry, *Magna Cum Laude*
Research Advisor: Prof. David A. Shultz

Professional Positions:

University of Massachusetts-Amherst 2011-2012
Professor, Polymer Science & Engineering

University of Massachusetts – Amherst 2011-2012
Adjunct Professor, Molecular & Cellular Biology

University of Massachusetts – Amherst 2007
Associate Professor, Polymer Science and Engineering

University of Massachusetts – Amherst 2001-2007
Assistant Professor, Polymer Science and Engineering

University of Pennsylvania, The Medical School 2000-2001
Post-doctoral Fellow

University of Illinois at Urbana-Champaign 1995-2000
Research and Teaching Assistant

Burroughs-Wellcome, Co. 1992-1995
Research Chemist, Organic Division

Societies:

American Chemical Society: Division of Organic Chemistry and Division of Polymers
Materials Research Society
American Association for the Advancement of Science

Principal Research Interests:

Supramolecular polymer science, directed self-assembly, bioinspired and biomimetic structures, self-organization, well-defined macromolecular architectures, metal-containing polymers, membrane biophysics, physical organic chemistry, sensors, novel biomaterials, hydrogels

Awards & Honors:

2011	Member, Scientific Advisory Board, Polymer Competence Center Leoben GmbH (PCCL)
2011	Selected as Member of Faculty 1000, Macromolecular Chemistry Section
2010	American Chemical Society-Division of Polymer Chemistry-2010 Polymer Division Fellow
2010	Member, Defense Sciences Study Group of the Institute for Defense Analyses (DSSG)
2007:	American Chemical Society-Polymer Division-Herman F. Mark Young Scholar Award
2006:	IUPAC MACRO International Samsung Young Polymer Scientist Award
2005-2006:	Selected member of NSF-MEXT U.S.-Japan Young Faculty Exchange in BioNanoTechnology
2005-2010:	National Science Foundation CAREER Award Presidential Early Career
2004-2009:	Award for Scientists and Engineers (PECASE)
2004-2007:	DuPont Young Faculty Grant
2003-2006:	Office of Naval Research Young Investigator
2002-2005:	Army Research Office Young Investigator
2002-2005:	3M Untenured Faculty Award
1998-1999:	American Chemical Society-Division of Organic Chemistry Graduate Fellowship
1997-1998:	Beckman Institute for Advanced Science and Technology Research Fellowship
1997-1998:	R. C. Fuson Award for Outstanding Graduate Research
1995-1996:	Graduate Research Fellowship
1994-1995:	Hypercube Scholar – Outstanding Academic Senior
1993-1994:	Robert Proctor Undergraduate Research Scholarship
1993:	Outstanding Undergraduate Travel Award - American Chemical Society

LIST OF PUBLICATIONS

(*indicates I am the corresponding author)

-Publication Statistics-

1. Refereed Journal Articles – 144
2. Refereed Articles Published since joining UMass-PSE –128

(14-*submitted or in press, 4-in preparation*)

3. Patents – 7
4. Refereed or Invited Book Chapters – 9

Peer Reviewed:
At UMass-Amherst

In preparation

144 Y. Zha, R. R. Maddikeri, H. Thaker, S. P. Gido, G. N. Tew, "Magnetic Properties of Block-Random Copolymer Architecture Containing Ferrocene and Mono Cobalt," in preparation, (2011).

143 R. R. Maddikeri, Y. Zha, J, Jiang, S. P. Gido, G. N. Tew, "Effect of Morphology on the Magnetic Properties of Cobalt Functionalized Oxanorbornene Block Copolymers," in preparation, (2011).

142 *J. M. Grolman, R. Maddikeri, G. N. Tew, "Novel Cross-Linked Star Networks via Ring-Opening Metathesis Polymerization (ROMP)", in preparation, (2011).

141 Y. Zha, R. R. Maddikeri, H. Thaker, S. P. Gido, G. N. Tew, "Magnetic Properties of Block-Random Copolymer Architecture Containing Ferrocene and Mono Cobalt" in preparation, (2011).

Submitted

140 C. N. Walker, C. Versek, M. Tuominen, G. N. Tew, "Tunable Networks from Thiol-ene Chemistry for Lithium Ion Conduction," *ACS Macro Letters*, submitted, (2012).

139 J. Cui, M. A. Lackey, A. E. Madkour, E. M. Saffer, D. M. Griffin, S. R. Bhatia, A. J. Crosby, G. N. Tew, "Synthetically Simple, Highly Resistant Hydrogels Inspired by Resilin," *Biomacromolecules*, submitted, (2011).

138 *S. Colak, G. N. Tew, "Amphiphilic Polybetaines: the Effect of Side-chain Hydrophobicity on Protein Adsorption," *Biomacromolecules*, submitted, (2011).

137 A. O. Tezgel, G. Gonzalez-Perez, J. C. Telfer, B. A. Osborne, L. M. Minter, G. N. Tew, "NOTCH1-siRNA Delivery to Primary Cells by Protein Transduction Domain Mimics," *Nature Chem. Biol.*, submitted, (2011).

136 Y. Zha, M. L. Disabb-Miller, Z. D. Johnson, M. A. Hickner, G. N. Tew, "Metal Cation-Based Anion Exchange Membranes, *JACS*, submitted, (2011).

135 *K. Zhang, G. N. Tew, "Cyclic Brush Polymers by Combining Ring-Expansion Metathesis Polymerization and the 'Grafting from' Technique," *ACS Macro Letters*, submitted, (2011).

134 Y. Li, K.-N. Kumar, J. M. Dabkowski, M. Corrigan, R. W. Scott, K. Nusslein, G. N. Tew, "A New Bactericidal Surgical Suture Coating," *Langmuir*, submitted, (2011).

133 A. Som, N. Navasa, A. Percher, R. W. Scott, J. Anguita, G. N. Tew, "Identification of Synthetic Host Defense Peptide Mimics that Exert Dual Antimicrobial and Anti-Inflammatory Adtivities," submitted, (2011).

132 J. Cui, M. A. Lackey, A. E. Madkour, E. M. Staffer, D. M. Griffin, S. R. Bhatia, A. J. Crosby, G. N. Tew, "Simple Highly Resilient Polymer Networks Inspired by Resilin," submitted, (2011).

131 Z. M. AL-Badri, P. Dobriyal, R. Shunmugam, T. P. Russell, G. N. Tew, “Ferromagnetic Materials via Directed Self-Assembly,” submitted, (2010).

130 *H. Tang, L. Arnt, G. N. Tew, J. A. Finlay, L. Arnt, M. E. Callow, J. A. Callow, C. Hellio, T. Clare, “Activity of Host Defense Peptide Mimics against Marine Fouling Organisms,” *Journal of Peptide Science*, submitted, (2010).

129 *R. Shunmugam, G. N. Tew, “Protein-like Hierarchical Self-Assembly from Metal-Ligand Block Copolymers,” *Science*, submitted, (2010).

128 *A. Som, Y. Xu, R. W. Scott, G. N. Tew, "Anion Mediated Activation of Guanidine Rich Small Molecules, *Org. & Biomol. Chem.*, submitted, (2011).

In Press

127 A. Som, A. Reuter, G. N. Tew, "Protein Transduction Domain Mimics: The Role of Aromatic Functionality," *Angew. Chem. Int. Ed.*, in press, (2011).

Published

126 Z. M. AL-Badri, R. R. Maddikeri, Y. Zha, H. D. Thaker, P. Dobriyal, R. Shunmuam, T. P. Russell, G. N. Tew, "Room Temperature Magnetic Materials from Nanostructured Diblock Copolymers," *Nature Comms.*, **2**, 482, (2011).

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124 R. R. Maddikeri, S. Colak, S. P. Gido, G. N. Tew, “Zwitterionic Polymersomes in an Ionic Liquid: Room Temperature TEM Characterization,” *Biomacromolecules* (Communication), **12**, 3412-3417, (2011).

123. J. M. Rathfon, R. W. Cohn, A. J. Crosby, J. P. Rothstein, G. N. Tew, "Confinement Effects on Chain Entanglement in Free-Standing Polystyrene Ultrathin Films," *Macromolecules*, **44**, 5436-5442, (2011).

122 A. O. Tezgel, J. C. Telfer, G. N. Tew, “De Novo Designed Protein Transduction Domain Mimics from Simple Synthetic Polymers,” *Biomacromolecules*, **12**, 3078-3083, (2011).

121 W. Hu, A. Som, G. N. Tew, "Interactions Between Lipids and Antimicrobial Oligomers Studied by Solid-State NMR," *J. Phys. Chem B.*, **115**, 8474-8480, (2011).

120 K. Zhang, M. A. Lackey, Y. Wu, G. N. Tew, "Universal Cyclic Polymer Templates," *J. Am. Chem. Soc.*, **133**, 6906-6909, (2011).

119 *A. Som, A. O. Tezgel, G. J. Gabriel, G. N. Tew, "Self Activation in De Novo Designed Mimics of Cell-Penetrating Peptides," *Agnew. Chem., Int. Ed.*, **50**, 1-5, (2011).

118 *K. Lienkamp, A. E. Madkour, G. N. Tew, "Antibacterial Peptidomimetics: Polymeric Synthetic Mimics of Antimicrobial Peptides," *Adv. Polym. Sci.*, 1-32, (2011).

117 *K. Zhang, M. Lackey, J. Cui, G. N. Tew, “Gels Based on Cyclic Polymer,” *J. Am. Chem. Soc.*, **133**, 4140-4148, (2011).

116 *H. D. Thaker, F. Sgolastra, D. Clements, R. W. Scott, G. N. Tew, “Synthetic Mimics of Antimicrobial Peptides from Triaryl Scaffolds,” *Journal of Medicinal Chemistry*, **54**. 2241-2254, (2011).

115 *A. E. Madkour, J. M. Grolman, G. N. Tew, "Synthesis of Hydrogels via Ring-Opening Metathesis Polymerization: Factors Affecting Gelation," *Polym. Chem.*, **2**, 114-119,

(2011)

J. M. Rathfon, R. W. Cohn, A. J. Crosby, G. N. Tew, "Hole Nucleation in Free-Standing Polystyrene Ultrathin Films, *Macromolecules*, **44**, 134-139, (2011).

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112 S. K. Agrawal, N. Sanabria-DeLong, S. K. Bhatia, G. N. Tew, S. R. Bhatia, "Energetics of Association in Poly(lactic acid)-based Hydrogels with Crystalline and Nanoparticle-Polymer Junctions," *Langmuir*, **26**, 17330-17338, (2010).

111 *R. Shunmugam, G. J. Gabriel, K. A. Aamer, G. N. Tew, "Metal-Ligand-Containing Polymers: Terpyridine as the Supramolecular Unit," *Macromol. Rapid Comm.*, **31**, 784-793, (2010).

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107 J. A. Lamboy, J. A. Arter, K. A. Knopp, D. Der, C. M. Overstreet, E. F. Palermo, H. Urakami, T.-B. Yu, O. Tezgel, G. N. Tew, Z. B. Guan, K. Kuroda, G. A. Weiss, "Phage Wrapping with Cationic Polymers Eliminates Nonspecific Binding between M13 Phage and High p/Target Proteins," *J. Am. Chem. Soc.*, **131**, 16454-16460, (2009).

106 K. Lienkamp, A. E. Madkour, K.-N. Kumar, Klaus Nüsslein, G. N. Tew, "Antimicrobial Polymers Prepared by Ring-Opening Metathesis Polymerization: Manipulating Antimicrobial Properties by Organic Counterion and Charge Density Variation," *Chem. E. J.*, **15**, 11715-11722, (2009).

105 K. Lienkamp, K.-N. Kumar, A. Som, K. Nüsslein, G. N. Tew, "'Doubly Selective' Antimicrobial Polymers: How Do They Differentiate Between Bacteria?" *Chem. E. J.*, **15**, 11710-11714, (2009).

104 A. Som, L. Yang, G. Wong, G. N. Tew, "Divalent Metal Ion Triggered Activity of a Synthetic Antimicrobial in Cardiolpin Membranes," *J. Am. Chem. Soc.*, **131**, 15102-15103, (2009).

103 *K. Lienkamp, G. N. Tew, "Synthetic Mimics of Antimicrobial Peptides – A Versatile Ring-Opening Metathesis Polymerization Based Platform for the Synthesis of Selective Antibacterial and Cell-Penetrating Polymers," *Chem. E. J.*, **15**, 11784-11800, (2009). **Highlighted on the Cover.*

102 C. W. Avery, A. Som, Y. Xu, G. N. Tew, Z. Chen, "Dependence of Antimicrobial Selectivity and Potency on Oligomer Structure Investigated Using Substrate Supported Lipid Bilayers and Sum Frequency Generation Vibrational Spectroscopy," *Anal. Chem.*, **81**, 8365-8372, (2009).

101 J. M. Rathfon, J. M. Grolman, A. J. Crosby, G. N. Tew, "Formation of Oriented, Suspended Fibers by Melting Free Standing Polystyrene Thin Films," *Macromolecules*, **42**, 6716-6722, (2009).

100 S. Pabba, M. M. Yazdanpanah, B. H. F. Totten, W. Dobrokhotov, J. M. Rathfon, G. N. Tew, R. W. Cohn, "Biopolymerization-Driven Self-Assembly of Nanofiber Air-Bridges," *Soft Matter*, **5**, 1378-1385, (2009).

99 *T. Eren, G. N. Tew, "Phosphonic Acid Based Amphiphilic Diblock Copolymers Derived from ROMP," Journal of Poly. Sci. Poly. Chem., 47, 3949-3956, (2009).

98 J. Chen, J. A. Hessler, K. Putchakayala, B. K. Panama, D. P. Khan, S. Hong, D. G. Mullen, S. C. DiMaggio, A. Som, G. N. Tew, A. N. Lopatin, J. R. Baker, Jr., M. M. Banaszak Holl, B. G. Orr, "Cationic Nanoparticles Induce Nanoscale Disruption in Living Cell Plasma Membranes," *J. Phys. Chem.*, **113**, 11179-11185, (2009).

97 *K. Lienkamp, C. F. Kins, S. F. Alfred, A. E. Madkour, G. N. Tew "Water-Soluble Polymers from Acid-Functionalized Norbornenes," *Jrnl. Polym. Sci, Polym. Chem.*, **47**, 1266-1273, (2009).

96 S. Colak, C. F. Nelson, K. Nüsslein, G. N. Tew, "Hydrophilic Modifications of an Amphiphilic Polynorbornene and the Effects on its Hemolytic and Antibacterial Activity," *Biomacromolecules*, **10**, 353-359, (2009).

95 J. M. Rathfon, Z. M. AL-Badri, R. Shunmugam, S. M. Berry, S. Pabba, R. S. Keynton, R. W. Cohn, G. N. Tew, "Fluorimetric Nerve Gas Sensing Based on Pyrene Imines Incorporated into Films and Sub-Micrometer Fibers," *Adv. Funct. Mat.*, **19**, 689-695, (2009).

94 A. E. Madkour, J. M. Dabkowski, K. Nüsslein, G. N. Tew, "Fast Disinfecting Antimicrobial Surfaces." *Langmuir*, **25**, 1060-1067, (2009)

93 G. J. Gabriel, J. A. Maegerlein, C. F. Nelson, J. M. Dabkowski, T. Eren, K. Nüsslein, G. N. Tew, "Comparison of Facially Amphiphilic versus Segregated Monomers in the Design of Antibacterial Copolymers." *Chem. Eur. J.*, **15**, 433-439, (2009)

92 L. Yang, V. D. Gordon, D. R. Trinkle, N. W. Schmidt, M. A. Davis, C. DeVries, A. Som, J. E. Cronan, Jr., G. N. Tew, G. C. L. Wong, "Mechanism of a Prototypical Synthetic Membrane-Active Antimicrobial: Efficient Hole-Punching via Interaction with Negative Intrinsic Curvature Lipids," *Proc. Natl. Acad. Sci.*, **105**, 20595-20600, (2008).

91 R. W. Scott, W. F. DeGrado, G. N. Tew, "De Novo Designed Synthetic Mimics of Antimicrobial Peptides," *Cur. Opin. BioTech.*, **19**, 620-627, (2008).

90 Z. M. AL-Badri, A. Som, S. Lyon, C. F. Nelson, K. Nüsslein, G. N. Tew, "Investigating the Effect of Increasing Charge Density on the Hemolytic Activity of Synthetic Antimicrobial Polymers," *Biomacromolecules*, **9**, 2805-2810, (2008).

89 G. J. Gabriel, A. E. Madkour, J. M. Dabkowski, C. F. Nelson, K. Nüsslein, G. N. Tew, "Synthetic Mimic of Antimicrobial Peptide with Nonmembrane-Disrupting Antibacterial Properties," *Biomacromolecules*, **9**, 2980-2983, (2008).

88 S. K. Agrawal, N. Sanabria-DeLong, G. N. Tew, S. R. Bhatia, "Nanoparticle-Reinforced Associative Network Hydrogels," *Langmuir*, **24**, 13148-13154, (2008).

87 *S. Colak, G. N. Tew, "Synthesis and Solution Properties of Norbornene Based Polybetaines," *Macromolecules*, **41**, 8436-8440, (2008).

86 S. K. Agrawal, N. Sanabria-DeLong, G. N. Tew, S. R. Bhatia, "Structural Characterization of PLA-PEO-PLA Solutions and Hydrogels: Crystalline vs. Amorphous PLA Domains," Macromolecules, 41, 1774-1784, (2008).

85 *M. M. Slutsky, J. S. Phillip, G. N. Tew, "Synthesis and Characterization of Amphiphilic *o*-Phenylene Ethynylene Oligomers," *New J. Chem.*, **32**, 670-675, (2008).

84 N. Sanabria-DeLong, A. J. Crosby, G. N. Tew, "Photo-Cross-Linked PLA-PEO-PLA Hydrogels from Self-Assembled Physical Networks: Mechanical Properties and Influence of Assumed Constitutive Relationships," *Biomacromolecules*, **9**, 2784-2791, (2008).

83 G. J. Gabriel, J. Pool, A. Som, J. M. Dabkowski, E. B. Coughlin, M. Muthukumar, G. N. Tew, "Interactions Between Antimicrobial Polynorbornenes and Phospholipid Vesicles Monitored by Light Scattering and Microcalorimetry," *Langmuir*, **24**, 12489-12495, (2008).

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64 S. H. Seo, J. H. Park, G. N. Tew, J.-Y. Chang, "Thermotropic Liquid Crystals of 1*H*-Imidazole Amphiphiles Showing Hexagonal Columnar and Micellar Cubic Phases," *Tetrahedron Letters*, **48**, 6839-6844, (2007).

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Patents (^indicates licensed by a company)

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   Title: Ferromagnetic block polymers and related methods
   UMass Docket No: UMA 08-07, 12/229,431 filed 8/22/08

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   Title: Facially amphiphilic polyaryl and polyarylalkynly polymers and oligomers, and uses therof
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   Title: Facially amphiphilic polymers and oligomers thereof, and use thereof in methods of treating cancer
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   Title: Amphiphilic polynorbornene derivatives and methods of using the same
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5. Inventors: Tew, Gregory N., Shunmugam, Raja
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   Title: Synthetic mimics of cell penetrating peptides
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10. Inventors: Tew, Gregory, Bhatia, Surita
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    U.S. Patent Application: 20060018872 PCT/Pending

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11. M. Lis, G. N. Tew, 9.43 Polymer-Membrane Interactions in *Comprehensive Polymer Science*, in press, (2011).

Published Meeting Abstracts:

The Polymer Chemistry and Polymer Materials: Science and Engineering Divisions of the American Chemical Society publish two-page extended abstracts for all invited, or contributed oral and poster presentations at the Spring and Fall National Meetings of the Society. These "pre-prints" are *not* peer reviewed prior to publication; however they are intended to serve as a pre-publication notice of work that typically will appear in the literature in the next six to twelve months. The authors, titles, and keywords of these pre-prints are listed in most major scientific database archives; however **no** citation record is kept by ISI for meeting abstracts. The pre-prints are very important to the industrial members of the Divisions. In addition, the pre-prints, which are required in order to present at the ACS meeting in these two Divisions,

document participation. *A listing of "Non-Refereed Journals and Proceedings" is available at the end of this document.*

LIST OF PRESENTATIONS

-Presentation Statistics-

1. Invited Research Talks (since 2002) – 112
2. Contributed Research Talks – 72

Invited Lectures: (since 2002)

2002

"Antimicrobial Polymers," Army Natick Research Laboratories, Natick, MA, Feb, 2002.

"Polymers for Biology," Center for Tissue Engineering, University of Massachusetts-Medical School, Mar 2002

"Designing Facially Amphiphilic Antimicrobials," AIChE, Indianapolis, IN, Sept 2002

"Simple Facially Amphiphilic Polymers as Peptide Mimics," American Chemical Society, Boston, MA, Aug 2002

"Simple Facially Amphiphilic Polymers as Peptide Mimics," Solutia, Inc. Pensacola, FL, Sep. 2002

"Antimicrobial and Supramolecular Polymers," Army Research Laboratories, Aberdeen, MD, June 2002

2003

"Degradable Polymers and Antimicrobials," U of Minnesota, Minneapolis, MN, May 2003

"Proteomics to Antimicrobials," Bioengineering Research Partnership-NIH, Bethesda, MD, June 2003

"Designing Facially Amphiphilic Phenylene Ethynylenes," American Chemical Society, New York, NY, Sep 2003

"Biomimetic Polymers," Polymer for Advanced Technologies, Ft. Lauderdale, FL, Sep 2003

"Triblock PLA-PEO-PLA Hydrogels: Structure and Mechanical Properties," American Chemical Society, New York, NY, Sep 2003

"Designing Antimicrobial Oligomers," University of Tennessee-Knoxville, Knoxville, TN, Nov 2003

"Antimicrobial Oligomers," Army Research Laboratories, Aberdeen, MD, Nov 2003

"Novel Antimicrobial Agents," Regional Technology Alliance, Holyoke, MA, Nov 2003

"Antimicrobial Oligomers for Antifouling Materials," Office of Naval Research Workshop, Orlando, FL, Dec 2003

"Facially Amphiphilic Polymers as Antimicrobials," Materials Research Society, Boston, MA, Dec 2003

2004

"Block Copolymers Containing Metal Ligand Side Chains for Use in Supramolecular Chemistry," American Chemical Society, Anaheim, CA, Mar 2004

"Blocky Macromolecules Containing Terpyridince for Supramolecular Materials," American Chemical Society, Anaheim, CA, Mar 2004

"Facially Amphiphilic Phenylene Ethynylenes with Potent Antimicrobial Activity," American Chemical Society, Anaheim, CA, Mar 2004

"Facially Amphiphilic Polymers with Potent Antimicrobial Activity," American Chemical Society, Anaheim, CA, Mar 2004

"Bio-Inspired Materials," Becton-Dickinson, Franklin Lakes, NJ, May 2004

"Antimicrobial Polymers for Antifouling Materials," Office of Naval Research Workshop, San Francisco, CA, Jun 2004

"Chemically Rich Macromolecules," Laboratoire de Recherche Sur Les Polymères, Paris, France, July 2004

"Biomimetics to Supramolecular Polymers," Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland, July 2004

"Antimicrobial Polymers and Oligomers," GKSS Forschungszentrum, Geesthecht, Germany, July 2004

"Chemically Rich Macromolecules: Biomimetics to Supramolecular Materials," Eindhoven University of Technology, Eindhoven, The Netherlands, July 2004

"Proteomics to Antimicrobials," NIH, Bethesda, MD, July 2004

"Capturing Peptide Activity in Simple Oligomers: Access to New Markets and Opportunities," American Chemical Society, Philadelphia, PA, Aug 2004

"Novel Antimicrobial Biomimetics," American Chemical Society, Philadelphia, PA, Aug 2004. *Presentation as part of a Presidential Session.*

"Chemically Rich Macromolecules: Biomimetics to Supramolecular Materials," UMass-Lowell, Lowell, MA, Sep 2004

"Biomimetic Polymers," American Chemical Society Biennial, Savannah, GA, Oct 2004

"Merging Chemistry, Materials Science, and Biology to Create New Biomedical Materials," BEACON, Hartford, CN, Oct 2004

"Phenylene Ethynylene as a Versatile Biomimetic Backbone," Northeast Regional American Chemical Society Meeting, Rochester, NY, Nov 2004.

"Designing Antimicrobial Polymers," University of Mississippi, University, MS, Dec 2004

2005

"Antimicrobial Biomimetics," Office of Naval Research Workshop, Sedona, AZ, Jan 2005

"Antimicrobial Polymers and Surfaces," PolyMedix Board Meeting, Radnor, PA, Feb 2005

"Chemically Rich Macromolecules: Biomimetic Antimicrobials and Metal Functionalized Copolymers," Northwestern University, Evanston, IL, Mar 2005

"Biomimetics Based on Phenylene Ethynylene Structures," American Chemical Society, San Diego, CA, Mar 2005

"Novel Hydrogels for Degradable Polymers," American Chemical Society, San Diego, CA, Mar 2005

"Chemically Rich Macromolecules," North Dakota State University, Fargo, ND, Apr 2005

"Macromolecules for Supramolecular Polymer Science Containing Metal-Ligands in the Side Chains," Northeast Regional American Chemical Society Meeting, Newark, NJ, May 2005.

"Antimicrobial Materials," Army Research Labs, Aberdeen, MD, May 2005

"Bioinspiried Macromolecules," Materials at the Synthetic Biological Interface-MRSEC, Amherst, MA, May 2005

"Chemically Rich Macromolecules," Virginia Tech, Blacksburg, VA, June 2005

"Non-Fouling Biomimetics," Office of Naval Research Workshop, Baltimore, MD, June 2005

"Phenylene Ethynylene Structures as Versatile Biomimetics," I.E.C.B., Bordeaux, France, June 2005

"Antimicrobial Polymers and Films," Gordon Research Conference, New London, NH, July 2005

"Capturing the Activity of Natural Proteins in Simple Polymers," The Society of Polymer Science Japan, Fukuoka, Japan, July 2005

"Design Molecules with Increased Functionality," Kyushu University, Fukuoka, Japan, July 2005

"Antimicrobial Oligomers and Polymers," N.I.H., Bethesda, MD, Aug 2005

"Antimicrobial and Metal-Ligand Polymers," University of Connecticut, Storrs, CT, Sept 2005

"Designing Macromolecules with Increased Functionality," North Carolina State University, Raleigh, NC, Nov 2005

"Designing Macromolecules with Increased Functionality: Strong Similarities to Biology," University of North Carolina, Chapel Hill, NC, Nov 2005

"Designing Macromolecules with Increased Functionality: Strong Similarities to Biology," Massachusetts Institute of Technology, Cambridge, MA, Nov 2005

"Biomimetic Materials Design," University of Michigan, Ann Arbor, MI, Nov 2005

"Designing Macromolecules with Strong Similarities to Biology," Kyoto University, Kyoto, Japan, Dec 2005

"Antimicrobial Polymers and Supramolecular Materials," Hokkaido University, Sapporo, Japan, Dec 2005

"Designing Macromolecules with Strong Similarities to Biology," Tokyo University, Tokyo, Japan, Dec 2005

"Tethered Biocides," ONR Workshop, Maui, HI, Dec 2005

"Metal Ligand Polymers for Supramolecular Materials," Pacifichem 2005 Congress Conference, Honolulu, HI, Dec 2005

2006

"Metal Containing Polymers for Self Healing Applications," Self-Healing Materials Workshop, Chapel Hill, NC, Jan 2006

"Designing Macromolecules with Strong Similarities to Biology," University of Illinois, Urbana, IL, Feb 2006

"Designing Macromolecules with Strong Similarities to Biology," Carnegie Mellon University, Pittsburgh, PA, Feb 2006

"Designing Macromolecules with Strong Similarities to Biology," University of Toronto, Toronto, Canada, Mar 2006.

"Capturing Host Defense Peptide Activity in Simple Oligomers," American Chemical Society, Atlanta, GA, Mar 2006

"Designing Macromolecules with Strong Similarities to Biology," Clemson University, Greenville, SC, April 2006

"Designing Macromolecules for NanoBiotechnology," PR-LSAMP, Mayagüez, Puerto Rico, May 2006

"Probing the molecular interactions of antimicrobial peptide mimics with SFG", American Chemical Society, San Francisco, CA, Sep 2006

"Designing Macromolecules with Strong Similarities to Biology," The Polytechnic University, New York, NY, Sep 2006

2007

"Designing Macromolecules with Strong Similarities to Biology," Polymer West, Gordon Research Conference, Ventura, CA, Jan 2007

"Designing Macromolecules with Strong Similarities to Biology," University of Alabama at Huntsville Chemistry Seminar Series, Jan 2007

"Designing Macromolecules with Strong Similarities to Biology," Polytechnic University, Brooklyn, NY, Feb 2007

"Metal-Containing Polymers," American Chemical Society National Meeting, Chicago, IL, Mar 2007

"Designing Antimicrobial Mimics for Host Defense Peptides," American Physical Society, Denver, CO, Mar 2007

"Nanotechnology at UMass-Amherst," INC3 Nanotechnology Conference on Communication and Cooperation, Brussels, Belgium, Apr 2007

"How to Obtain That First Tenure Track Faculty Position," NOBBChE Annual Conference, Los Angeles, CA, Apr 2007

"Designing Antimicrobial Mimics for Host Defense Peptides," Gordon Conference, Pisa, Italy, Apr-May 2007

"Designing Macromolecules with Strong Similarities to Biology," IUMACRO 2007, Polytechnic University, Brooklyn, NY, Jun 2007

"Designing Macromolecules with Strong Similarities to Biology," American Chemical Society Fall Meeting, Boston, MA, Aug 2007

"Designing Macromolecules with Strong Similarities to Biology," Biosensing Summer School, Larmor-Baden, France, Aug 2007

"Phenylene Ethynylene are Versatile Scaffolds for Bio-Nanotechnology," Iowa State University Chemistry Seminar Speaker, Sep 2007

"Designing Macromolecules with Strong Similarities to Biology," 9th International Symposium on Polymers for Advanced Technologies (PAT), Shanghai, China, Oct 2007

"Designing Macromolecules with Strong Similarities to Biology," STIPOMAT Conference, Les Diablerets, Switzerland, Oct 2007

"Designing Polymers with Strong Similarities to Biology" Rutgers University, New Jersey, Nov 2007

"Antimicrobial ROMP Polymers" ONR Coating Workshop, Sedona, AZ, Dec 2007

2008

"Designing Polymers Similar to Biology" NEA Partner Science Day, University of Puerto Rico, Mayaguez, Feb 2008 **Keynote Speaker*

"Designing Macromolecules with Strong Similarities to Biology" NOBCChE 35th National Conference, Phila, PA, Mar 2008

"ENVR 138-Target of Synthetic Antimicrobial Oligomer in Bacterial Membranes," American Chemical Society Spring Meeting, New Orleans, LA, Apr 2008

"Membrane-Active Synthetic Mimics of Host Defense Peptides" American Chemical Society Spring Meeting, New Orleans, LA, Apr 2008

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials" Macromolecular Chemistry Symposia, 101st National Meeting of the Korean Chemical Society, Seoul, Korea, Apr 2008

"Designing Macromolecules with Strong Similarities to Biology" MACRO 2008, Taipei, Taiwan, Jun-July 2008

"Designing Macromolecules with Strong Similarities to Biology," American Chemical Society Fall Meeting, Phila., PA, Aug 2008

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," University of Florida-Gainsville, FL, Oct 2008

"Capturing Protein-like Activity in Synthetic Macromolecules," MACROMEX, Los Cabos, Mexico, Dec 2008

"Capturing Protein-like Activity in Synthetic Macromolecules," Eindhoven University, The Netherlands, Dec 2008

2009

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," University of New Hampshire, Durham, NH, Feb 2009

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," Global Center of Excellence, Kyushu University, Fukuoka, Japan, Apr 2009

"Landing Your First Tenure Track Faculty Position," NOBBChE 26th National Conference, St. Louis, MO, Apr 2009

"Novel Approaches to Non-Fouling Surfaces," Office of Naval Research Coatings Workshop, Portland, OR, Jun 2009

"Antimicrobial and Cell-Penetrating Peptide Mimics," 2009 Bioorganic Gordon Research Conference, Andover, NH, Jun 2009

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," 2009 Polymers Gordon Research Conference, Mt. Holyoke College, Hadley, MA, Jun 2009

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," University of Michigan, Sep 2009

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," First Federation of Asian Polymer Societies (FAPS), Nagoya, Japan, Oct 2009

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," Competence Centres for Excellent Technologies (COMET), Vienna, Austria, Oct 2009

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," Cardinal Health, Dublin, OH, Oct 2009

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," 11th Annual Pacific Polymer Conference, Cairns, Australia, Dec 2009

2010

"Polymedix from Conceptualization of Synthetic Biopolymers to Commercialization," American Chemical Society Spring Meeting, San Francisco, CA, Mar 2010

"Antimicrobial Polymers," Chemistry Dept. Seminar, University of Akron, Akron, OH, Mar 2010

"Antimicrobial Polymers," Polymer Chemistry 2010, Suzhou, China, Jun 2010

"Antimicrobial Polymers," IUPAC Macro 2010, Glasgow, Scotland, Jul 2010

"Designing Synthetic Macromolecules with Strong Similarities to Biology," Austrian-Slovenian Polymer Meeting, Leoben, Austria, Sep 2010

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," NCSU, Raleigh, NC, Sep 2010

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," The Jeffery Lectures, The University of New South Wales, Chemical Society, Sydney, AUS, Sep 2010

"Antimicrobial Polymers," AVS Technical Symposium, Albuquerque, NM, Oct 2010

"Capturing Protein Activity in Simple, Synthetic Polymers and Oligomers," Boston College, Nov 2010

"Antimicrobial Polymers," Pacifichem, Honolulu, Hawaii, Dec 2010

2011

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," Indo-US Science/Technology Forum, Trivandrum, India, Jan 2011

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," Bio-Inspired Self-Assembly of Macromolecules Symposium (ACS Fall), Anaheim, CA, Mar 2011

"Antimicrobial Polymers," ONR Coatings Workshop, New Orleans, LA, Jun 2011

"Antimicrobial Polymers," ONR Seacoat Workshop, Las Vegas, NV, Dec 2011

2012

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," University of Tennessee Dept. of Chemistry Seminar, Knoxville, TN, Jan 2012

"Chemically Rich Macromolecules: Biomimetics to Advanced Materials," Austrian-Slovenian Polymer Meeting, PCCL, Leoben, Austria, Jan 2012

Contributed Talks: (since 2002) (denotes student presentation)*

2002

"Simple Facially Amphiphilic Polymers as Peptide Mimics," American Chemical Society, Boston, MA, Aug 2002

*"Copolymers Containing Metal Binding Ligands for use in Supramolecular Materials: Toward Metal Induced Reversible Networks," American Chemical Society, Boston, MA, Aug 2002

*"Phenylene Ethynylene Polymers with Amphiphilic Structures," American Chemical Society, Boston, MA, Aug 2002

2003

"Facially Amphiphilic Phenylene Ethynylenes at the Air-Water Interface," Polymers West Gordon Research Conference, Ventura, CA, Jan 2003

*"Facially Amphiphilic Phenylene Ethynylenes," American Chemical Society, New Orleans, LA, Mar 2003

*"Amphiphilic Secondary Structure in Phenylene Ethynylenes," American Chemical Society, New Orleans, LA, Mar 2003

"Aggregation Studies of Novel, Facially Amphiphilic Phenylene Ethynylenes," American Chemical Society, New Orleans, LA, Mar 2003

"Ortho Phenylene Ethynylene Molecules Programmed to form Secondary and Tertiary Structures," Polymers East Gordon Research Conference, South Hadley, MA, Jun 2003

"Aggregation Studies of Novel, Facially Amphiphilic Phenylene Ethynylene Materials," Polymers East Gordon Research Conference, South Hadley, MA, Jun 2003

"Synthesis of Terpyridine Containing Polymers with Well Defined Architectures for Use in Supramoleculars Materials," Polymers East Gordon Research Conference, South Hadley, MA, Jun 2003

"Triblock PLA-PEO-PLA Hydrogels: Structure and Mechanical Properties," American Chemical Society, New York, NY, Sep 2003

"Strong Gels from Associative PLA-PEO-PLA Triblock Copolymers," Society of Rheology, Pittsburgh, PA, Oct 2003

2004

"Optical and X-ray Scattering Studies on a Semi-crystalline Triblock Copolymer," American Physical Society, Montreal, Canada, Mar 2004

"Designing Novel Hydrogels for Applications in Biology," MRSEC-CAFP Joint Meeting, Amherst, MA, Jun 2004

"Macromolecules Containing Terpyridine in the Side Chain for Use in Supramolecular Materials," IUPAC, Jul 2004

"Triblock PLLA-PEO-PLLA Hydrogels: Structure and Mechanical Properties," IUPAC, Jul 2004

"Facially Amphiphilic Phenylene Ethynylenes: New Amphiphilic Architectures and Potent Antimicrobial Activity," IUPAC, Jul 2004

"Synthesis of Polyurea Oligomers and their Antibacterial Study," American Chemical Society, Philadelphia, PA, Aug 2004

*"Cationic Facially Amphiphilic Phenylene Ethynylenes as Host Defense Peptide Mimics," American Chemical Society, Philadelphia, PA, Aug 2004

*"PLA-PEO-PLA Hydrogels from Triblock Copolymers," American Chemical Society, Philadelphia, PA, Aug 2004

*"Synthesis and Characterization of Substituted Ortho-phenylene Ethynylene Oligomers," American Chemical Society, Philadelphia, PA, Aug 2004

"Capturing Peptide Activity in Simple Oligomers: Access to New Markets and Opportunities," American Chemical Society, Philadelphia, PA, Aug 2004

"Synthesis and Characterization of Terpyridine-containing Polymer with Block-Random Architecture via Raft Polymerization," American Chemical Society, Philadelphia, PA, Aug 2004

*"Macromolecules with Side Chain Terpyridine Motifs for Use in Supramolecular Materials," American Chemical Society, Philadelphia, PA, Aug 2004

"Cationic Facially Amphiphilic Phenylene Ethynylenes as Host Defense Peptide Mimics," Materials Research Society, Boston, MA, Dec 2004

"PLA-PEO-PLA Hydrogels," Materials Research Society, Boston, MA, Dec 2004

2005

"Chemically Rich Macromolecules: Antimicrobial Biomimetics and Self-Assembling Metal Functionalized Polymers," Polymers West Gordon Research Conference, Ventura, CA, Jan 2005

*"Phenylene Ethynylene Structures as Versatile Biomimetic Scaffolds," American Chemical Soceity, San Diego, CA, Mar 2005

"Mechanical Properties of Triblock PLA-PEO-PLA Hydrogels," American Chemical Society, San Diego, CA, Mar 2005

"Novel Antimicrobial Agents," American Society of Microbiology, Atlanta, GA, Apr 2005

"Influence of an Antibacterial Polymer on the Phase Behavior of Phospholipids," Biophysics of Membrane-Permeabilising and Membrane-Translocating Peptides Workshop, Berlin, Germany, Apr 2005

"Supramolecular Architectures Based on Metal Complexes," Polymers East Gordon Research Conference, South Hadley, MA, Jun 2005

"Controlling Mechanical properties of Hydrogels through Crystalline Hydrophobic Domains," Gordon Research Conference, Polymers (East), South Hadley, MA, Jun 2005

"Folding of Ortho-Phenylene Ethynylene Oligomers Characterized by Solution NMR," Polymers East Gordon Research Conference, South Hadley, MA, Jun 2005

"Side Chain Terpyridine Polymers with Random and Blocky Architecture for Luminescence and 'Nano' Assembly Applications," Polymers East Gordon Research Conference, South Hadley, MA, Jun 2005

"Preventing Bacterial Colonization on Synthetic Polymer Surfaces," American Society of Microbiology, Hartford, CT, Jun 2005

"Antimicrobial Films and Coatings," Films and Coatings Gordon Research Conference, New London, NH, Jul 2005

*"Synthesis and Characterization of Electronic Variations of Ortho-Phenylene Ethynylene Oligomers," American Chemical Society, Washington, DC, Aug 2005

"Tunable Hydrogels from PLA-PEO-PLA Triblocks: Effect of Crystallinity of the PLA Block," Society of Rheology, Vancouver, British Columbia, Oct 2005

"Using Crystallinity to Control Structure and Rheology of PLA-PEO-PLA Hydrogels," AIChE Materials Engineering and Sciences Division Annual Meeting, Cincinnati, OH, Oct 2005

"Metal-Ligand Polymers Containing Lanthanide Ions," Materials Research Society, Boston, MA, Dec 2005

"Designing Polymers to Capture the Biological Activity of Host Defense Peptides," Materials Research Society, Boston, MA, Dec 2005

"Antimicrobial Biomimetic Molecules," Pacifichem 2005 Congress Conference, Honolulu, HI, Dec 2005

2006

"Designing Macromolecules with Strong Similarities to Biology," ACS Spring National Meeting, Atlanta, GA, Mar 2006

*"Unique Emission from Side Chain Terpyridine Polymer-based Lanthanide Alloys," American Chemical Society, Atlanta, GA, Mar 2006

"Influence of an Antibacterial Polymer on the Phase Behavior of Phospholipids," Small

Angle Scattering Conference SAS2006, Kyoto, Japan, Jun 2006

"Designing Antimicrobial Polymers as Host Defense Mimics," IUPAC, Macro 2006 World Polymer Conference, Rio De Janeiro, Brazil, Aug 2006

"Supramolecular Assembly of Polymers Containing Metal Ligands in the Side Chain," IUPAC, Macro 2006 World Polymer Conference, Rio De Janeiro, Brazil, Aug 2006

"Blocky Macromolecules Containing Terpyridine for Supramolecular Materials," American Chemical Society, San Francisco, CA, Sep 2006

"Designing Polymers for Biological Activity," American Chemical Society, San Francisco, CA, Sep 2006

"Novel Antibiotics for the Emerging Problem of Drug Resistant Bacteria," American Chemical Society, San Francisco, CA, Sep 2006

2007

"Synthesis and Activity of Novel Antimicrobial Surfaces," American Chemical Society, Boston, MA, Aug 2007

"Influence of Lipid Composition on Membrane Activity of Antimicrobial Oligomers," American Chemical Society, Boston, MA, Aug 2007

"1H NMR Characterization of Helical Folding in *ortho*-Phenylene Ethynylene Oligomers," American Chemical Society, Boston, MA, Aug 2007

"Sensing Chemical Warfare Agents with Terpyridine-based Macromolecules," American Chemical Society, Boston, MA, Aug 2007

"Side Chain Terpyridine Motifs for Supramolecular Materials," American Chemical Society, Boston, MA, Aug 2007

"Amphiphilic Polymers Endowed with Desirable Antimicrobial Properties," American Chemical Society, Boston, MA, Aug 2007

"Nanomagnetic Polymers," American Chemical Society, Boston, MA, Aug 2007

"Directed Self-Assembly of Polymers and Nanotubes into Air-Suspended Bridges," 13th Annual Kentucky EPSCOR Conference, Lexington, KY, Oct 2007

2009

*"Cell Penetrating Peptide Mimics: Guanidinium-Containing Polyoxanorbornenes," Gordon Research Conference-Polymers 2009, Hadley, MA, Jun 2009

*"ROMP Based Zwitterionic Polymers Carrying Dual Functionality," ONR Coatings/Biofoulings Program Review, Portland, OR, Jun 2009

*"ROMP Based Zwitterionic Polymers Carrying Dual Functionality," Gordon Research Conference-Polymers 2009, Hadley, MA, Jun 2009

*"ROMP Based Zwitterionic Polymers Carrying Dual Functionality," Gordon Research Seminar-Polymers 2009, Hadley, MA, Jun 2009

*"Synthetic Mimics of Antimicrobial Peptides as Immunomodulators," Northern Immunological Mountain Society (NIMS), Bolton Valley, VT, Sep 2009

*****"ROMP Based Zwitterionic Polymers Carrying Dual Functionality as Anti-Fouling Materials," CUMIRP-MRSEC Polymer Event, Amherst, MA, Oct 2009

*****"ROMP Based Zwitterionic Polymers Carrying Dual Functionality as Anti-Fouling Materials," International Workshop on Concepts & Strategies for Surface Engineering to Control Biofouling, St. Petersburg, FL, Dec 2009

2010

*"Cavitation, Elasticity and Fracture in Strong Hydrogels," American Physical Society Meeting, Portland, OR, Mar 2010

*"Elasticity in Strong Hydrogels and Cavitation Rheology on Biological Tissues," CUMIRP Meeting, Amherst, MA, May 2010

*****"Dually Functional ROMP Based Zwitterionic Materials for Non-Fouling Coatings," ONR Coatings/Biofoulings Program Review, Memphis, TN, Jun 2010

*"Protein Transduction Domain Mimics from Guanidinium Functionalized ROMP-Polymers," Cellular Delivery of Therapeutic Macromolecules, Cardiff, U.K., Jun 2010

*"Enhanced Intracellular Delivery by Guanidinium Functionalized ROMP-Polymers," 3rd International Cellular Delivery of Therapeutic Macromolecules (CDTM) Symposium, Cardiff, UK, Jun 2010

*"Novel Dually Functional Zwitterionic Polymers," Graduate Research Symposium, ACS Division of Organic Chemistry, Boston, MA, Jul 2010

*"Novel Dually Functional Zwitterionic Polymers as Non-Fouling Materials," 15th International Congress on Marine Corrosion and Fouling, Newcastle, U.K., Jul 2010

RESEARCH FUNDING

Raised $15,932,866 since starting at UMass in September 2001. Funding from federal agencies include NSF, NIH, ARO, and ONR. This does not include my efforts on major center and equipment grants; it only includes research dollars directly into my laboratory.
**indicates I am PI, where I am not PI only funds under my control are listed*
#direct cost only

Current

NIH U01* – "Antimicrobial Oligomers for BioDefense and Emerging Food-borne Infectious Disease" $8,681,382 (06/09-05/14)

NIH:UPENN (PI: Bill DeGrado) – "Antibacterial Foldamers" $500,000 (4/08-3/12)

ARO* – "Ferromagnetic Materials by Directed Self-Assembly of Novel Polymers" $450,000 (09/09-08/12)

NSF (PI: Maria Santore) – "Surfaces that Selectively Manipulate and Kill Bacteria" $225,000 (09/08-08/11)

CUMIRP Part I: Cluster B (PI: Jim Capistran) – "Novel Hydrogels" $27,000# (10/10-09/11)

NSF* – “Guanidine Rich Synthetic Macromolecules: Transduction Domain Mimics” $581,647 (06/09-05/12)

ARO* – “Novel Polymers Containing Metal Ligands in the Side Chain” $300,000 (07/09-3/12)

ONR* – “Novel Zwitteronic Materials for Nonfouling Coatings” $163,775 (03/10-02/13)

NSF: Polymedix (PI: Rick Scott) – “Antimicrobial Sutures” $40,000 (1/1/10-06/30/10)

UMass Medical School (PI: Gary Ostroff) – “Targeted Delivery of Novel Antimicrobial Peptide Mimics to TB” $50,000 (11/10-10/12)

Completed

CUMIRP Part II: Polymedix (PI: Rick Scott) – “Synthesis and Screening of Compounds as Antimicrobial and Anti-cancer Agents” $502,524 (01/04-11/09)

ARO* – “Novel, Complex Macromolecules: Their Synthesis and Characterization” (Equipment grant) $150,000 (4/09-4/10)

NSEC: CHM (PI-J. Watkins) – “Novel Water-based Assemblies” $15,000# (03/10-03/11)

NSEC: CHM-JUNTO (PI: J. Watkins) “Hydrogel Characterization” $23,250# (0)

MRSEC– NSF funded (PI-T. Emrick) - “Amphiphilic Block Copolymers” $33,000# (02/10-03/11)

GATES FOUNDATION* “Capturing Nature’s Weapons to Prevent Infectious Disease” $100,000# (5/1/09-04/30/10)

ONR: Polymedix (PI: R. Scott) – “STTR for N09-T033: Novel IV Antibiotic for Acinetobacter Infections” $35,600 (10/1/09-09/30/10)

ARO: Polymedix (PI: R. Scott) – “STTR for A09A-T004: Novel Antibiotics for MDR Biofilm Injections” $35,600 (10/1/09-9/30/10)

CUMIRP Part I: Cluster B (PI: J. Capistran) – “Novel Hydrogels” $27,000, 10/08-09/09

NSF/NIRT: University of Louisville (PI: B. Cohn) - “Directed Self-Assembly of Suspended Polymer Fibers in the Fabrication of 3-D Nanodevices” $345,981 (9/05-8/09)

ONR* - “Natural Immunity Approaches to Anti-Fouling Coatings” $464,722 (01/07-03/10)

NSF CAREER Award* - “Programming Molecules to Fold into Helical Structures” $515,000# (1/05-12/09)

ARO Young Investigator* Presidential Early Career Award for Scientists and Engineers - “Supramolecular Materials from Metal Functionalized Copolymers” $500,000 (6/04-5/09)

ARO-MURI (PI: Tom Russell) - "Bio-Directed Hierarchical Assembly of Multifunctional Materials" $300,000 (6/04-5/09)

MRSEC– NSF funded (PI: Tom Russell) - "ABC Triblock Copolymers" $27,000 (05/08-04/09)

PolyMedix Sponsored Research* - "Facially Amphiphilic Polymers for Self-Sterilizing Materials" $325,660 (10/03-08/08)

CUMIRP Part III: Bausch & Lomb* $7,000 (01/07-01/08)

E. I. DuPont De Nemours & Co. Young Faculty Grant* $75,000 (11/04-10/07)

NIH (PI: W. DeGrado) - "Proteomics to Biomimetic Polymers: Engineering Principles for Anti-Infective Agents" $411,785 (9/02-9/07)

ONR* - "Bioactive Surfaces" symposia support $4,000 (8/05-12/06)

ONR Young Investigator* - "Biomimetic Approaches to New Antifouling Materials" $380,000 (5/03-5/06)

CUMIRP- Cluster B-Polymers in the BioArena* - "Biodegradable Hydrogels" $90,000 (9/03-8/06)

Army Research Laboratory Center of Excellence on Polymers (PI-Sam Gido) – "Polymers for Supramolecular Materials" $71,588 (1/04-12/05)

NSF-IMR (PI: S. Thayumanavan) - "Acquisition of a Gel Permeation Chromatography with Multiple Detection System for Polymer Research and Education" $76,001 (1/04-12/05)

3M Nontenured Faculty Award* $45,000 (7/02-7/05)

Army Research Office DURIP* - "Macromolecular Sample Characterization" $99,966 (1/03-6/05)

MRSEC– NSF funded (PI: Tom Russell) - "Metal Ligand Containing Polymers" $75,000# (5/02-5/05)

NSF Research Site for Educators in Chemistry (PI: Tom McCarthy) - "Computational Prediction of Helical *ortho* Phenylene Vinylenes" $69,750 (5/02-5/05)

Army Research Laboratory Directors Research Initiative* - "Decontaminating Polyurethanes" $35,000 (1/04-12/04)

Army Research Laboratory - Center of Excellence on Polymers (PI: Sam Gido) – "Polymers for Supramolecular Materials" $28,635 (1/03-12/03)

University of Massachusetts Faculty Research Grant*- "Facially Amphiphilic Polymers" $15,000 (2/02-2/03)

Army Research Office Short Term Innovative Research* - "Biomimetic Polymers with Antimicrobial Activity" $30,000 (7/02-1/03)

Total: $15,932,866

TEACHING RECORD

Course No.	Course Title	Credits	Enrollment	Course Evaluation (out of 7)
2001-02 Academic Year				
-Fall Term-				
	No teaching assignment			
-Spring Term-				
PSE 760	Organic Polymerization Reactions	3	23	5.78
Chem 496	Undergraduate Lab Research	1	1	n/a
2002-03 Academic Year				
-Fall Term-				
PSE 603	Polymer Synthesis Laboratory	3	20	5.62
Chem 496	Undergraduate Lab Research	6	2	n/a
-Spring Term-				
PSE 760	Organic Polymerization Reactions	3	16	5.63
Chem 496	Undergraduate Lab Research	6	2	n/a
Chem 388	Undergraduate Research	3	1	n/a
2003-04 Academic Year				
-Fall Term-				
PSE 603	Polymer Synthesis Laboratory	3	22	5.55
Chem 496	Undergraduate Lab Research	6	6	n/a
-Spring Term-				
PSE 760	Organic Polymerization Reactions	3	21	5.01
2004-05 Academic Year				
-Fall Term-				
PSE 603	Polymer Synthesis Laboratory	3	22	5.88
Chem 496	Undergraduate Lab Research	6	3	n/a
MicBio 396 H	Microbiology Honors Independent Study		1	n/a
MicBio 696	Microbiology Independent Study		1	n/a
MicBio	Microbiology		1	n/a

796	Independent Study			
-Spring Term-				
PSE 760	Organic Polymerization Reactions	3	21	5.55
2005-06 Academic Year				
-Fall Term-				
PSE 607	Introduction to Polymer Chemistry	3	26	4.99
Chem 496	Undergraduate Lab Research	3	5	n/a
BioChem 396H	Biochemistry Honors Independent Study		2	5.23
-Spring Term-				
PSE 760	Organic Polymerization Reactions	3	18	5.23
PSE 797D	Scientific & Engineering Management	1	26	4.53
PSE 897T	Well-Defined Macromol Arch.	1-3	6	n/a
Chem 499T	Chemistry Honors Thesis		1	n/a
MicBio 396H	Microbiology Honors Independent Study		1	n/a
2006-07 Academic Year				
-Fall Term-				
PSE 607	Introduction to Polymer Chemistry	3	26	4.20
PSE 897T	Well-Defined Macromol Arch.	1-3	4	n/a
-Spring Term-				
PSE 760	Organic Polymerization Reactions	3	23	4.33
PSE 797D	Scientific & Engineering Management	1	14	4.64
PSE 897T	Well-Defined Macromol Arch.	1-3	6	n/a
2007-08 Academic Year				
-Fall Term-				
PSE 607	Introduction to Polymer Chemistry	3	29	4.20
PSE 897T	Well-Defined Macromol Arch.	1-3	5	n/a
BioChem 296H	Biochemistry Honors Independent Study		3	n/a
-Spring Term-				

PSE 897T	Well-Defined Macromol Arch.	1-3	9	n/a
2008-09 Academic Year				
-Fall Term-				
PSE 603	Polymer Synthesis Lab	3	30	4.08
PSE 897T	Well-Defined Macromol Arch.	1-3	6	n/a
-Spring Term-				
PSE 760	Organic Polymerization Reactions	3	24	4.10
PSE 797D	Scientific & Engineering Management	1	7	4.68
PSE 897T	Well-Defined Macromol Arch.	1-3	9	n/a
2009-2010 Academic Year				
-Fall Term-				
PSE 603	Polymer Syn Lab	3	21	3.83
PSE 897T	Well-Defined Macromol Arch.	1-3	7	n/a
-Spring Term-				
PSE 760	Organic Polymerization Reactions	3	16	4.08
PSE 897T	Well-Defined Macromol Arch.	1-3	10	n/a
2010-2011 Academic Year				
-Fall Term-				
PSE 603	Polymer Synthesis Lab	3	25	4.08
PSE 897T	Well-Defined Macromol Arch.	1-3		n/a
-Spring Term-				
PSE 760	Organic Polymerization Reactions	3	16	4.08
PSE 897T	Well-Defined Macromol Arch.	1-3	10	n/a

STUDENT THESIS COMMITTEES

Student	***Department***	***Thesis Type***	***Status***

Brittany Deronde	Polymer Science	PhD	Current
Katherine Gibney	Polymer Science	PhD	Current
Catherine Walker	Polymer Science	PhD	Current
Melissa Lackey	Polymer Science	PhD	Current
Michael Lis	Polymer Science	PhD	Current
Raghavendra Maddikeri	Polymer Science	PhD	Current
Arife O. Tezgel	Polymer Science	PhD	Current
Hitesh Thaker	Polymer Science	PhD	Current
Yongping Zha	Polymer Science	PhD	Current
Jun Cui	Polymer Science	PhD	Current
Semra Colak	Polymer Science	PhD	Current
Jeremy Rathfon	Polymer Science	PhD	Current
Adam Hathorne	Polymer Science	PhD	Current
Naomi Sanabria-DeLong	Polymer Science	PhD	Graduated
Sterling Alfred	Polymer Science	PhD	Graduated
Joanna Pool	Polymer Science	PhD	Graduated
Khaled Aamer	Polymer Science	PhD	Graduated
Ticora Jones	Polymer Science	PhD	Graduated
Firat Ilker	Polymer Science	PhD	Graduated
Lachelle Arnt	Polymer Science	PhD	Graduated
Roberto Laos	Polymer Science	PhD	Graduated
Sungkyun Sohn	Polymer Science	PhD	Graduated
Jason Rennie	Microbiology	MS	Graduated
Kyoung-sik Chin	Chemical Eng	PhD	Graduated
Praveen Sharma	Chemical Eng	PhD	Graduated
David Griffin	Chemical Eng	PhD	Current
Saugata Gon	Chemical Eng	PhD	Current
Diego F. A. Torres	Chemistry	PhD	Current
Chandrakant Popere	Chemistry	PhD	Current
Chae Kyu Kim	Chemistry	PhD	Current
Adrienne Carver	Chemistry	PhD	Current
Dipankar Basak	Chemistry	PhD	Current
Basar Gider	Chemistry	PhD	Graduated
Arlicia Grant	Chemistry	PhD	Graduated
Hao Xu	Chemistry	PhD	Graduated
Hiroshi Nakade	Chemistry	PhD	Graduated
Jitapa Sumranjit	Chemistry	PhD	Graduated
Kulandaivelu Sivanandan	Chemistry	PhD	Graduated
Jeff Martin	Chemistry	PhD	Graduated
Patrick Taylor	Chemistry	PhD	Graduated
Travis Benanti	Chemistry	PhD	Graduated
Safo Abaoku	Chemistry	PhD	Graduated
Kyrs Bronk	Chemistry	PhD	Graduated
Sarah Lyon	Chemistry	Undergraduate Honors	Graduated
Courtney McConoghy	Chemistry	Undergraduate Honors	Graduated
Katelyn Spillane	Chemistry	Undergraduate Honors	Graduated

Eric Turnberg	Chemistry	Undergraduate Honors	Graduated
Tatyana Shalapyonok	Chemistry	Undergraduate Honors	Graduated
Jeff Dabkowski	Microbiology	Undergraduate Honors	Graduated
Chris Nelson	Microbiology	Undergraduate Honors	Graduated

SERVICE CONTRIBUTIONS

To the University:

1. Faculty Participant, Materials Research Science and Engineering Center (MRSEC), 2001-present. The center coordinates collaborative polymer research efforts on campus under a multi-investigator NSF grant. Reviews are held on-campus twice annually as part of the renewal process. For the 2001-02 renewal, I was a major contributor to writing the final proposal as part of IRG III. This new IRG effort increased the MRSEC funding by 33% from past years. My role in outreach and diversity has increased as the Center's focus on this area has expanded.
2. Faculty Participant, Center for UMass-Industry Research on Polymers (CUMIRP), 2001-present. This center organizes polymer research between the university and industrial partners. Two on-campus reviews are held annually. I actively participated in the planning and formation of a new cluster (Cluster B- Polymers in the BioArena) which currently has three members that are entirely new to CUMIRP. These include Johnson & Johnson and Boston Scientific. Attracting new CUMIRP members is essential to expanding the financial base of this center as opposed to past trends in which new clusters were formed by moving companies from old clusters. I co-organized the 2002-2003 CUMIRP workshop, "Polymer Biomaterials" and the 2003 Fall poster session.
3. Executive Committee Member, Chemistry-Biology Interfaces Program (CBI), member since 2001, Executive Committee since 2003-present. This is a campus-wide NIH funded program to train students in the interdisciplinary interface of chemistry and biology. The program meets monthly with presentations by the active faculty and their students.
4. Recruiting Committee Chairman, Chemistry-Biology Interfaces Program (CBI) since 2003-2006. This committee is charge with recruiting responsibilities for the program including minority recruiting. Because this is a non-degree program, recruiting spills over into departmental efforts. There are representatives from Chemistry, Chemical Engineering, Polymer Science and Engineering, and Biochemistry. As chairman, I helped integrate this effort with the larger campus-wide NEAGEP.
5. Recruiting Committee Member, Chemistry-Biology Interfaces Program (CBI) since 2006-present.
6. Participant, Lunch Panel, "A Ph.D. is not Enough." This is a student-initiated effort to increase mentorship within the graduate student body on the UMass campus. It is generally in-line with a larger goal and, now, campus-wide mission to increase mentorship activities on Campus.
7. Member, Equal Access to the Sciences for All Genders and Ethnicities (EASAGE) committee since 2004-present. This is a College-wide committee to address greater diversity access in the physical sciences.

8. Faculty Mentor, NEAGEP, 2004-present.
9. Recruiting, Science, Engineering, and Health Professions Collaborative Symposium, January 19, 2006, University of Connecticut. A diversity event.
10. Speaker, IGERT presentation for PSE course 590A, "Nanotechnology from Lab to Product" to discuss translating research into technology.
11. Member, Stockroom Bid Committee, 2003. Our responsibility was to evaluate competing bids for the chemical stock room located in the basement of LGRT. This also included gathering feedback from my department on the need and use of this facility. We, the committee, proposed a recommendation and supervised the implementation of this recommendation. The stockroom was converted from VWR to Fischer and most patrons have expressed pleasure with the new stockroom.
12. Co-organized the 2002 Lenz symposium held at the Campus Center. Although this meeting was held to recognize a retired PSE faculty member, the committee raised money and organized an international symposium held on campus which highlighted the UMass scientific community.
13. I participated in the campus effort to establish the Security, Emergency Preparedness, and Response Institute (SEPRI), which assembles talent campus-wide to address current challenges in homeland defense. I was involved in the initial planning meetings with Vice Chancellor Fred Byron and presented at the kick-off meeting held on April 29-30, 2003.
14. My involvement with PolyMedix led to a term sheet with the University in which PolyMedix expects to contribute 1 million in research dollars to my lab over the next five years (as of January 2006 this total is $356,140). In addition, the University gains a 3% ownership in PolyMedix. This activity nicely illustrates the integrated scientific and technological aspects of my research and how they can benefit the University in multiple ways.
15. Active participant in the NEAGAP program on campus. This involves the targeted recruiting and development of minority science students for careers in academia. Other activities include screening, hosting, and interacting with undergraduates as part of the SPUR program run by NEA. My participation has built and strengthened PSE's recruiting and retention mission with the larger University effort on diversity. Attended the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) national annual meeting 2004, 2005, 2006, 2009.
16. Annual reviewer of abstracts for the Commonwealth Undergraduate Research Conference. This past year was the 10^{th} annual and my second term as a reviewer (2003-04).
17. Co-organizer, American Chemical Society Polymer Division 6^{th} National Graduate Student Research Conference. (also listed under Departmental service). Because this conference attracted national and international attention, it is listed as University service.

To the Polymer Science and Engineering Department:

1. Member, Departmental Awards Committee since 2002-present. This committee responsible for identifying, nominating, and pursuing awards for PSE faculty.

2. Member, Space and Facilities Committee since 2002-present. This committee is responsible for overseeing and allocating research and office space within the Conte building.
3. Member, Polymer Synthesis Curriculum Committee since 2003-present. This committee is responsible for updating and evaluating the synthetic polymer chemistry component of the department's graduate studies.
4. Member, Recruiting Committee since 2003-present. This committee is responsible for increasing the number and quality of graduate students admitted each year. Our first departmental recruiting material was developed, which is an 11x18 poster with tear off cards with departmental information. We have also created a trifold, single sheet flyer for mass mailing distribution. We changed our recruiting strategy to include a weekend recruiting event for prospective 1st years. Another change included eliminating the 'interview' process for the highest quality prospective students.
5. New website, co-organizer of the effort to launch a new PSE website.
6. PSE Faculty's Publications Book. I developed and created a single volume book that included all of the PSE faculty publications for 2004 and 2005. This was well received. The 2006 edition is in the final stages of printing.
7. Member, 2004-2005 Faculty Search Committee.
8. Co-organizer, American Chemical Society Polymer Division 6th National Graduate Student Research Conference. This conference is focused on graduate student presentations. In addition, special sessions were organized on Career Development and mentoring. This conference had the largest attendance to date. In addition, we had international participation.
9. Member, Panel for Scientific Management Class, 2004 and 2005. Participated on this panel to discuss 'my path to a tenure track faculty position.'

To the Professional Community:

External Educational and Professional Activities:

1. Presided, ACS National Meeting, Fall 2011, "Metal-Containing and Metallo-Supramolecular Polymers."
2. Member Scientific Community, Polymers for Advanced Technologies, Lodz, Poland, Oct 2-5, 2011.
3. Co-Organizer, Future Faculty Workshop: Diverse Leaders of Tomorrow, UMass Amherst, Jul 18-21, 2010.
4. Co-founder and Scientific Advisor Board member, Polymedix, Inc, Philadelphia, PA, 6/02-present.
5. Member, ACS Polymer Division board, 2002-current.
6. Alternate Councilor, ACS Polymer Division. 2005-current.
7. Program Committee, Polymers West Gordon Conference. 2006-2007.
8. Co-chair, Graduate Research Conference on Polymers, Gordon Conference, 2006-2007.
9. Member, Editorial Board, Polymers for Advanced Technologies, 2006-present.

10. Program Chair, ACS Polymer Division, 2009-2010.
11. Co-organizer, NOBCChE, April 2006. Workshop entitled "Landing Your First Tenure-Track Position." This workshop outlines the practical steps taken by recent young faculty to secure their positions.
12. Co-organizer, 2005 ACS Fall Meeting symposia entitled "Bioactive Surfaces and Their Applications."
13. Co-organizer, ACS Polymer Division 6th National Graduate Student Research Conference, June 2005.
14. Co-organizer, ACS Polymer Division 2004 Biennial, Oct 2004. This is the keynote meeting of the ACS Polymer Division. This symposium addresses current topics and aims to set the course for emerging and future areas of polymer research.
15. Session Chair, Polymers West Gordon Research Conference, 1/03. I was invited by the Conference Chair and co-Chair to moderate the morning session of presenters.
16. Chair, ACS National Fall Meeting, Biomacromolecules Session, 2002.
17. Secretary, Oak Ridge National Laboratory, Center for Nanoscale Materials Science Workshop, 2002
18. Volunteer, Encouraging Tomorrow's Chemists, Middle School Outreach, University of Illinois, Urbana, 8/96-12/98
19. Panelist, National Science Foundation Panel, VA, 08/08
20. Chair, ACS National Fall Meeting, Polymer Chemistry Session, 08/09

Reviews of Publications and Proposals*:*

Proposals

National Science Foundation (NSF) – Reviewer for the Divisions of Chemistry and Materials Research
1. Organic and Macromolecular Program
2. Polymer Program

NSF CAREER Panel
NSF Nanoscale Integration Research Team (NIRT)
Petroleum Research Fund
National Institutes of Health (NIH) special study section
Department of Energy, Center for Nanophase Materials Science, Proposal Review Committee

Journals

Listed in approximate order of frequency
Journal of the American Chemical Society
Macromolecules
Journal of Polymer Science-Polymer Chemistry-Part A
Chemistry: European Journal
Biomacromolecules
Journal of Organic Chemistry

Langmuir
Soft Matter
Angewandte Chemie Intl Edition
Journal of Physical Chemistry B
New Journal of Chemistry
Polymers for Advanced Technologies
Polymer
Advanced Functional Materials
Chemistry and Biology
Organic Letters
Molecular Crystals and Liquid Crystals
Proceedings of the National Academy of Sciences, USA
Tetrahedron Letters
Polymer International
Organic Biomolecular Chemistry
Chemical Communications
Chemical Materials
Accounts of Chemical Research
Antimicrobial Agents and Chemotherapy
Journal of Materials Chemistry
Biomaterials
Biopolymers
Current Opinion in Biotechnology
Macromolecular Chemistry and Physics
MRS Bulletin
Journal of Controlled Release
Journal of Industrial Microbiology & Biotechnology
Biochima et. Bio Physica. Acta
Microbiology-SGM
Journal of Materials Research
Macromolecular Chemistry and Physics
Macromolecules Rapid Communications

Consulting Activities:

Polymedix, Inc., Philadelphia, PA, 2002-present.
Pestaway Company, West Falmouth, MA, 2003-2004.

RESEARCH GROUP

Current Postdoctoral Research Fellows

Dr. Abhigyan Som
Dr. Ke Zhang
Dr. Federica Sgolastra

Current Graduate Students

Arife Ozgul Terife – 5th year

Jun Cui (with Al Crosby) – 5th year
Hitesh Thaker – 5th year
Yongping Zha – 5th year
Melissa Lackey –4rd year
Michael Lis – 4rd year
Catherine Walker – 3nd year
Katherine Gibney – 3nd year
Brittany Deronde – 2nd year
Joel Sarapas – 1st year
Madhura Pawar – 1st year

Group Alumni:

Raghavendra Maddikeri	graduate (Ph.D.)	GE
Semra Colak	graduate (Ph.D.)	3M
Jeremy Rathfon	graduate (Ph.D.)	Post-doc, Univ. of Louisville
Sterling Alfred	graduate (Ph.D.)	Post-doc, Duke University
Naomi Sanabria-DeLong	graduate (Ph.D.)	W. L. Gore & Associates
Khaled Aamer	graduate (Ph.D.)	NIST, Biomaterials Group
Ticora Jones	graduate (Ph.D.)	USAID
Lachelle Arnt	graduate (Ph.D.)	Clorox, Inc.
Jason Phillip	graduate (MBA)	University of the West Indies
Jason Rennie	graduate (M.S.)	UMass Worcester
Yan Li, Ph.D.	post-doc	seeo.com
Jing Jiang, Ph.D.	post-doc	General Electric
Ahmad Madkour, Ph.D.	post-doc	Dow Chemical
Karen Lienkamp. Ph.D.	post-doc	Univ. of Freiburg, Germany
Raja Shunmugam, Ph.D.	post-doc	I.I.S.E.R., Kolkata, India
Morris Slutsky, Ph.D.	post-doc	B.R.C., UMass Dartmouth
Gregory Gabriel, Ph.D.	post-doc	Kennesaw State University
Zoha AL-Badri, Ph.D.	post-doc	Ashland-Hercules, Inc.
Haizhong Tang, Ph.D.	post-doc	PolyMedix, Inc.
Jeff Dabkowski	graduate (M.S.)	Northeastern University
Kewei Zhang	undergraduate	UMass Amherst
Nikita Nayyar	undergraduate	UMass Amherst
Joshua Grolman	undergraduate	University of Illinois-UC
Avital Percher	undergraduate	
Kushi-Nidhi Kumar	undergraduate	UMass Amherst/PSE
Sarah Lyon	undergraduate	Massachusetts College of Pharmacy & Health Sciences
Chris Nelson	undergraduate	Massachusetts College of Pharmacy & Health Sciences
Katelyn Spillane	undergraduate	UC-Berkeley
Yelena Urgina	undergraduate	Westfield Electroplating Co.
Dannon Stigers	undergraduate	Univ. of New Hampshire
Jack Peters	undergraduate	Ion Corp
Tatyana Shalapyonok	undergraduate	N. E. School of Optometry

Katelyn Spillane	undergraduate	UC Berkeley
Debanti Sengupta*	undergraduate	Stanford

*j*oint w/Patricia B. O'Hara, Amherst*

Visiting Scholars

Dr. Min Zhang	PI	Guangzhou Institute of Chemistry, Chinese Academy of Sciences.
Amelie Koch	Ph.D. Candidate	Technical University of Munich, Germany
Federica Sgolastra	Ph.D. Candidate	Polytechnic University of Marche, Ancona, Italy

Undergraduate Summer Students (REU)

Joseph Fuentes	Cal State University Los Angeles
Coralie Backlund	Oregon State University
Timothy Omoniyi	San Jacinto College
Aaron Zimmerman	Swarthmore College
Jordan Gruskay	Amherst College
Aleksandr Gerasimenko	Oregon State University
Louis Perez	University of Florida
Yamalia Roberts	University of Connecticut
Yeon Choi	Columbia Univ. (current grad student UC Berkeley)
Adam Hathorne	University of Southern Mississippi
Cartney E. Smith	Brown University
Jesus Garcia	University of Puerto Rico, Mayaguez
Ashlan Musante	Wheaton College

Educator Summer Students (RET)

Elizabeth Radwilowicz	Belchertown High School
Angela Cote	Ralph C. Mahar Regional High School
Paralee King, Chemistry	Quabbin Regional High School

Undergraduate Research Exchange Students

Greta Becker, University of Mainz, Germany
Alper Canyaka, University of Mainz, Germany
Alexander Birke, University of Mainz, Germany
Desiree Weller, University of Mainz, Germany
Anika Reuters, University of Mainz, Germany
Henning Schafer, University of Mainz, Germany
Christoph Kins, University of Mainz, Germany
Sang Hyuk Seo, Seoul National University, South Korea
Helga Seyler, University of Mainz, Germany
Tom deGreef, University of Eindhoven, The Netherlands

Active Scientific Collaborations:

Prof. Gary Ostroff, University of Massachusetts-Worcester
Prof. Barbara Osborne, University of Massachusetts-Amherst
Prof. Juan Anguita, University of Massachusetts-Amherst
Prof. Surita Bhatia, University of Massachusetts-Amherst
Prof. William DeGrado, University of California, San Francisco
Prof. Michael Klein, University of Pennsylvania
Prof. Ka-Yee Lee, University of Chicago
Prof. Klaus Nüsslein, University of Massachusetts-Amherst
Prof. Susan Roberts, University of Massachusetts-Amherst
Dr. Regine Willumeit, GSSK, Germany
Prof. Zhan Chen, University of Michigan
Prof. Gerard Wong, University of California Los Angeles
Prof. Robert Cohn, University of Louisville
Prof. Robert Keynton, University of Louisville
Prof. Gareth McKinley, Massachusetts Institute of Technology
Prof. Ji-Young Chang, Seoul National University, Korea
Prof. Shen Ye, Hokkaido University, Japan

Non-Refereed Journals and Proceedings:

1 H. A. Klok, J. J. Hwang, S. Iyer, G. N. Tew, L. S. Li, S. I. Stupp, "Self-Assembling Biomaterials," *Polymer Preprints*, **39 (2)**, 166, (1998).

2 H. A. Berger, G. N. Tew, S. I. Stupp, "Synthesis of Derivatized Phenylene Vinylene Acids: A Calcium Dependant Switch," *Polymer Reprints*, (2001).

3 *K. J. Calzia, G. N. Tew, "Copolymers Containing Metal Binding Ligands for use in Supramolecular Materials: Toward Metal Induced Reversible Networks," *Polymer Preprints*, **43 (2)**, 593, (2002).

4 *L. Arnt, G. N. Tew, "Phenylene Ethynylene Polymers with Amphiphilic Structures," *Polymer Preprints*, **43 (2)**, 591, (2002).

5 *L. Arnt, G. N. Tew, "Facially Amphiphilic Phenylene Ethynylenes," *Polymer Preprints*, **44 (1)**, 683, (2003).

6 *L. Arnt, T. Jones, G. N. Tew, "Amphiphilic Secondary Structure in Phenylene Ethynylenes," *Polymer Preprints* **44 (1)**, 1266, (2003).

7 *R. Boudreaux Breitenkamp, G. N. Tew, "Aggregation Studies of Novel, Facially Amphiphilic Phenylene Ethynylenes," *Polymer Preprints*, **44 (1)**, 673, (2003).

8 *G. N. Tew, "Amphiphilic Phenylene Ethynylenes," *Polymer Preprints*, **44 (2)**, 452, (2003).

9 *G. N. Tew, K.A. Aamer, "Triblock PLA-PEO-PLA Hydrogels: Structure and Mechanical Properties," *Polymeric Materials: Science & Engineering*, **89**, 236, (2003).

10 *G. N. Tew, "Blocky Macromolecules Containing Terpyridine for Supramolecular Materials," *Polymer Preprints*, **45 (1)**, 380, (2004).

11 *G. N. Tew, "Facially Amphiphilic Phenylene Ethynylenes with Potent Antimicrobial Activity," *Polymer Preprints*, **45 (1)**, 548, (2004).

12 *H. Tang, G. N. Tew, "Synthesis of Polyurea Oligomers and their Antibacterial Study," *Polymer Preprints*, **45 (2)**, 323, (2004).

13 *L. Arnt, G. N. Tew, "Cationic Facially Amphiphilic Phenylene Ethynylenes as Host Defense Peptide Mimics," *Polymer Preprints*, **45 (2)**, 429, (2004).

14 *N. Sanabria-DeLong, S. K. Agrawal, K. Aamer, S. R. Bhatia, G. N. Tew, "PLA-PEO-PLA Hydrogels from Triblock Copolymers," *Polymer Preprints*, **45 (2)**, 483, (2004).

15 *T. Jones, R. Laos, G. N. Tew, "Synthesis and Characterization of Substituted Ortho-phenylene Ethynylene Oligomers," *Polymer Preprints*, **45 (2)**, 669, (2004).

16 *K. Aamer, G. N. Tew, "Synthesis and Characterization of Terpyridine-containing Polymer with Block-Random Architecture Via Raft Polymerization," *Polymer Preprints*, **45 (2)**, 679, (2004).

17 *R. Shunmugam, G. N. Tew, "Macromolecules with Side Chain Terpyridine Motifs for Use in Supramolecular Materials," *Polymer Preprints*, **45 (2)**, 780, (2004).

18 S. K. Agrawal, K. S. Chin, N. Sanabria-DeLong, K. A. Aamer, H. Sardinha, G. N. Tew, S. C. Roberts, S. R. Bhatia, "Rheology and Biocompatibility of Poly(lactide)-poly(ethylene oxide)-poly(lactide) Hydrogels," MRS Symp. Proc. v. 844 - Mechanical Properties of Bio-Inspired and Biological Materials, (2005), Y9.8.1-Y.9.8.6.

19 G. N. Tew, S. R. Bhatia, K.A. Aamer, S. Agrawal, N. Sanabria-DeLong, "Mechanical Properties of Triblock PLA-PEO-PLA Hydrogels," *Polymer Preprints*, **46 (1)**, 345, (2005).

20 *L. Arnt, T. V. Jones, G. N. Tew, "Phenylene Ethynylenes Structures as Versatile Biomimetic Scaffolds, *Polymer Preprints*, **46 (1)**, 159, (2005).

21 *T. V. Jones, M. M. Slutsky, G. N. Tew, "Synthesis and Characterization of Electronic Variations of Ortho-Phenylene Ethynylene Oligomers," *Polymer Preprints*, **46 (2)**, 1020, (2005).

22 *R. Shunmugam, G. N. Tew, "Unique Emission from Side Chain Terpyridine Polymer Based Lanthanide Alloys," *Polymeric Materials: Science & Engineering*, **94**, 457, (2006).

23 L. H. Yang, V. Gordon, A. Som, J. E. Cronan, G. N. Tew, G. C. L. Wong, "Target of Synthetic Antimicrobial Oligomer in Bacterial Membranes," *Polymer Preprints*, 235, (2008).

24 *A. Som, Y. Choi, G. N. Tew, "Monovalent Salt Effects on the Membrane Activity of Antimicrobial Polymers," *Macromol. Symp.*, 283-284, 319-325, (2009).

25 A. O. Tezgel, J. C. Telfer, G. N. Tew, "Enhanced Intracellular Delivery by Guanidinium Functionalized ROMP-Polymers," *Drug Discovery Today*, **15**, 23, (2010).

26 S. Harwood, G. N. Tew, S. R. Bhatia, "Effect of Gelation Temperature on PLA-PEO-PLA Physical Hydrogel Morphology," 35th Annual N.E. Bioeng. Conf., 204, (2009).