KAREN L. WOOLEY

W. T. Doherty-Welch Chair in Chemistry
University Distinguished Professor
Presidential Impact Fellow
Texas A&M University, Department of Chemistry
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Born July 9, 1966, Oakridge, Oregon, USA

Education:

Ph. D., Cornell University, Polymer/Organic Chemistry, August 1993
Advisor: Professor Jean M. J. Fréchet
Dissertation Title: "Design, Synthesis and Properties of Dendritic Macromolecules"
B. S., Oregon State University, Chemistry, May 1988
Advisor: Professor Steven J. Gould
Undergraduate Research Topic: "Synthesis of 6,7-Dimethoxyindole"

Professional History:

University Distinguished Professor, Texas A&M University, 2011 – present
W. T. Doherty-Welch Chair in Chemistry & Professor of Chemistry, Texas A&M University, 2009 – present; Professor of Chemical Engineering, Texas A&M University, 2009 – 2021; Professor of Biotechnology Program & Professor of Materials Science & Engineering, 2014 – present
Professor, Washington University, School of Medicine, Department of Radiology, 2007 – 2009
James S. McDonnell Distinguished University Professor of Arts & Sciences, Washington University, 2006 – 2009
Faculty member in the Center for Materials Innovation, Washington University, 2003 – 2009
Professor, Washington University, School of Arts & Sciences, Department of Chemistry, 1999 – 2009
Faculty member in the Division of Biological and Biomedical Sciences, Chemical Biology Program, Washington University, 1996 – 2005
Assistant Professor, Washington University, Department of Chemistry, August 1993 – 1999

Entrepreneurial Activities:

Chief Technology Officer of Teysha Technologies, Ltd. (April 2018 – present)
Co-Founder and President of Sugar Plastics, LLC (Dec. 2017 – present)

Teaching:

Texas A&M University. Chem228 Organic Chemistry II; Chem466 Polymer Chemistry; Chem470 Industrial Chemistry; Chem491 Research; Chem689 Special Topics: Nanomedicine; Chem690 Theory of Chemical Research; Chem691 Research
Washington University. CH251 and CH252 Organic Chemistry; CH257 Organic Chemistry Laboratory; CH358 Advanced Organic Chemistry Laboratory; CH452 Synthetic Polymer Chemistry; CH555 Special Topics in Organic Chemistry: Nanomedicine; Educ6009 Matter and Energy, an Outreach Course for K-8 Grade Teachers
Cornell University. Teaching Assistant for Organic Chemistry Laboratory
Oregon State University. Teaching Assistant for General Chemistry Laboratory and Recitation

Awards/Honors:

Professional Member, The New York Academy of Sciences (NYAS), 2025 – present
Citation Laureates 2023, Chemistry, "For the development of innovative drug and gene targeting and delivery methods", Clarivate Plc, 2023
Outstanding Career Award, College of Arts and Sciences, Texas A&M University, 2023
Eminent Scholar Award, Aggie Women Network, Texas A&M University, 2021
Affiliate Member of the Hagler Institute for Advanced Study, Texas A&M University, 2021 – present
SEC Professor of the Year, Southeastern Conference on behalf of Texas A&M University, 2021
SEC Faculty Achievement Award, Southeastern Conference on behalf of Texas A&M University, 2021
Fellow, American Association for the Advancement of Science (AAAS), 2020 – present
Member, Sigma Xi – The Scientific Research Honor Society, 2020 – present
Member, Texas Academy of Medicine, Engineering, Science & Technology (TAMEST), 2020 – present
Member, National Academy of Sciences (NAS), 2020 – present
ADVANCE Diversity Champion, Texas A&M University, 2020
Fellow, American Institute for Medical and Biological Engineering (AIMBE), 2020 – present
Fellow, National Academy of Inventors (NAI), 2019 – present
Nominee for the National Postdoctoral Association Garnett-Powers & Associates, Inc. Mentor Award, 2018
Presidential Impact Fellow, Lifetime Entitlement, Inaugural Class, Texas A&M University, 2017 – present
Distinguished Achievement College-Level Teaching Award, Texas A&M University Association of Former Students, 2016
Distinguished Research Achievement Award, Texas A&M University Association of Former Students, 2016
Fellow, American Academy of Arts & Sciences (AMACAD), 2015 – present
Oesper Award, University of Cincinnati, 2015
Honorary Fellow, Chinese Chemical Society, 2014 – present
Fellow, Royal Society of Chemistry (RSC), 2014 – present
Royal Society of Chemistry Centenary Prize, 2014
Texas A&M System Technology Commercialization Innovation Award, 2014
American Chemical Society Award in Polymer Chemistry, 2014
Oakridge High School Hall of Fame, 2013
National Institutes of Health NANO Study Section Chair, 2012 – 2014
Inaugural Featured Alumnus, Oregon State University, Department of Chemistry, Spring 2012
Texas A&M University Distinguished Professor, 2011 – present
American Chemical Society, Polymer Chemistry Division, Founding POLY Fellow, 2010 – present
W. T. Doherty-Welch Chair in Chemistry at Texas A&M University, 2009 – present
American Chemical Society, Polymer Chemistry Division, Herman F. Mark Scholar Award, 2009
NSF Division of Materials Research, American Competitiveness and Innovation (ACI) Fellow, 2008 – 2010
NSF Division of Materials Research, Special Creativity Extension, 2008 – 2010
Outstanding Faculty Mentor Award, Washington University, 2007
James S. McDonnell Distinguished Univ. Professor of Arts & Sciences, Washington Univ., 2006 – 2009
Distinguished Faculty Award, Washington University, 2005
NSF Division of Materials Research, Special Creativity Extension, 2002 – 2004
Arthur C. Cope Scholar Award in Organic Chemistry, 2002
Academy of Science of Saint Louis Innovation Award, 2002
Office of Naval Research Young Investigator Award, 1998 – 2001
Army Research Office Young Investigator Award, 1996 – 1999
DuPont Young Professor Grant, 1996 – 1999
National Science Foundation National Young Investigator Award, 1994 – 1999
Robert W. Work Award for Excellence in Polymer Chemistry, Cornell University, 1992
ACS Sherwin Williams Student Award Finalist, ACS Division of Polymer Chemistry, 1992
Department of Education Fellowship, Cornell University, 1991 – 1993
S. C. Johnson & Sons Fellowship, Cornell University, 1990 – 1991

Phi Lambda Upsilon Member, Oregon State University

Honorific/Named Lectureships:

Kennedy Lectureship, Department of Chemistry, Washington University in St. Louis, 2025
Martin Chemistry Legacy Lectureship, Department of Chemistry, University of South Florida, 2025
Distinguished Lectureship, Department of Chemistry and Biochemistry, University of California-Los Angeles, 2025
Nelson Lectureship, Department of Chemistry, University of Miami, 2024
James O. Stoffer Lectureship, Department of Chemistry, Missouri University of Science & Technology, 2024
James A. Morrison Lectureship, Brockhouse Institute for Materials Research (BIMR), McMaster University, 2024
43rd Musselman Lectureship, Department of Chemistry, Gettysburg College, 2024
Axalta Distinguished Lectureship, Department of Chemistry, University of Pennsylvania, 2024
TY Luh Lectureship, Department of Chemistry, National Taiwan University, 2024
Inaugural Greg L. Baker, Ph.D., Memorial Lectureship, Department of Chemistry, Michigan State University, 2023
Turner J. Alfrey Lectureship, MSU St. Andrews, Michigan State University, 2023
Sigma-Aldrich Lectureship, Department of Chemistry. University of Minnesota, 2023
Joseph Priestley Lectureship, Department of Chemistry. The Pennsylvania State University, 2023
Dains Memorial Lectureship, Department of Chemistry, University of Kansas, 2023
Smart Lectureship, Department of Chemistry, University of West Florida, 2023
Russell Lectureship, Department of Chemistry, Queen's University, 2022
Grandpierre Lectureship, Chandler Society for Undergraduate Chemistry, Columbia University, 2022
Eastman Lectureship, Carolina Colloquium Series, Department of Chemistry, University of North Carolina, Chapel Hill, 2022
Phil and Penny Knight Campus Distinguished Lectureship, University of Oregon, 2021
Inaugural Greg L. Baker Memorial Lectureship, Department of Chemistry, Michigan State University, Virtual *via* Zoom, 2021
Seminar of the Excellence Scientist, Seoul National University, South Korea, virtual *via* Zoom, 2021
Gladys Yee Peng Lectureship, Department of Chemistry, Virginia Tech, 2019
Alexander M. Cruickshank Lecturer, Gordon Research Conference on Polymers, Mount Holyoke College, 2019
Marple-Schweitzer Lecturer, Department of Chemistry, Northwestern University, 2019
Lansdowne Lecture Series Lecturer, Department of Chemistry, University of Victoria, Victoria, Canada, 2019
Stuart Rosenfeld Memorial Lecture, Smith College, 2019
30th Annual Frontiers in Chemistry Symposium Lecturer, The Scripps Research Institute, 2019
Xuetang Lectureship, Tsinghua University, Beijing, China, 2018
The Marino Xanthos Annual Memorial Lecturer, Newark College of Engineering, New Jersey Institute of Technology, 2018
15th Biennial Senter Symposium on Frontiers in Organic Chemistry Lecturer, University of Illinois at Urbana-Champaign, 2018
Distinguished Polymer Lecturer, Polymer Chemistry Initiative, Pittsburg State University, 2018
William G. Dauben Memorial Lecturer in Organic Chemistry, University of California, Berkeley, 2018
Stein-Covestro Honorary Lecturer in Polymer Science, University of Massachusetts-Amherst, 2017
Honorary Lecturer, The Xingda Lecture Series, Peking University, Beijing, China, 2017
20th Annual Robert W. Murray Lecturer, University of Missouri-St. Louis, 2017
Covestro Lecturer, The 2016-2017 Covestro Lectures, Cornell University, 2017
Distinguished Women in Science Seminar Series, Stanford University, 2016
Aldrich Materials Lecture, Massachusetts Institute of Technology, 2016

Peter Timms Lectureship, University of Bristol, United Kingdom, 2016
National Science Foundation Distinguished Lecture in Mathematical and Physical Sciences, 2016
Melville Lectureship, University of Cambridge, United Kingdom, 2016
Dow Lecturer on Sustainable Chemistry, Colorado State University, 2016
Inaugural Aldrich Lecture, Tulane University, 2016
Ethel Ashworth-Tsutsui Memorial Lecture, Texas A&M University, 2015
College of Science Distinguished Lecture Series, Oregon State University, 2015
Reilly Lectureship, University of Notre Dame, 2015
Molecular Science Forum, Institute of Chemistry, the Chinese Academy of Sciences, Beijing, China, 2015
Milkovich Lecture Series, University of Akron, 2012
Lilly-Brown Lecture, Purdue University, 2011
Butler Lectureship Series, Center for Macromolecular Science & Engineering, University of Florida, 2010
Cheetham Lecture, Materials Research Outreach Symposium, University of California, Santa Barbara, 2010
Chevron-Phillips Lecture, Macromolecular Interfaces Institute, Virginia Tech, 2010
Frontiers in Chemical Research Distinguished Lecturer, Texas A&M University, 2007
Bayer Distinguished Lecturer, University of Pittsburgh, 2007
Dow Lecturer in Organic Chemistry, Massachusetts Institute of Technology, 2007
Margaret C. Etter Memorial Lecturer, University of Minnesota, 2007
Phi Lambda Upsilon Lecturer, Kansas State University, Department of Chemistry, 2007
William H. Rauscher Lecturer, Rennselaer Polytechnic Institute, Department of Chemistry, 2006
Eastman Chemical Company Lecturer, University of Akron, Department of Polymer Science, 2000
Raychem Lecturer, University of California, Berkeley, Department of Chemistry, 1997

Professional Leadership & Service Activities, Nationally and Internationally:

Editorial Advisory Board (EAB) Member, Journal of Nanobiotechnology (2026 – 2027)
International External Advisory Board (EAB), Sustainable Chemicals and Materials Manufacturing (SCHEMA) Hub, a UK government Engineering and Physical Sciences Research Council (EPSRC) program (2024 – 2031)
Juror, Blavatnik National Awards for Young Scientists, Blavatnik Family Foundation and the New York Academy of Sciences (2024 – 2026)
Member, U.S. National Science Foundation (NSF) Directorate for Mathematical and Physical Sciences (MPS) Assistant Director Search Committee (2023 – 2024)
Member, Standing Committee for the American Chemical Society (ACS) Sustainable Futures Initiative Grant Program (2023 – 2025)
International Scientific Advisory Board (SAB), Interactive Polymer Materials (IPM) Research Center, Eindhoven University of Technology (2022 – 2032)
Member, Chemical Sciences Roundtable (CSR), National Academies of Sciences, Engineering and Medicine (NASEM) (2022 – 2024)
International Advisory Board (IAB), 14th International symposium on Ionic Polymerizations (IP'22) September 11-16, 2022, Ghent, Belgium (2022)
Member, Scientific Advisory Board, Center for Convergence of Bioscience and Medicine (CCBM), University of Alabama (2022 – 2023)
Member, National Academies of Sciences, Engineering and Medicine (NASEM) Committee to Study Recycled Plastics in Infrastructure: Current practices, understanding, and opportunities; Consensus Study Report (2021 – 2023)
Member, National Academies of Sciences, Engineering and Medicine (NASEM) Committee to Evaluate the National Science Foundation (NSF) Efforts to Achieve the Nation's Vision for the Materials Genome Initiative: Designing Materials to Revolutionize and Engineer Our Future (DMREF); Consensus Study Report (2021 – 2023)
External Advisory Board, National Science Foundation (NSF) Partnership for Research and Education in Materials Center for Intelligent Materials Assembly (PREM CIMA), Texas State University, San

Marcos, TX, a Research Collaboration with the University of Texas Center for Dynamics and Control of Materials (CDCM): an NSF Materials Research Science and Engineering Center (MRSEC), Austin, TX (2021 – 2027)

National Academy of Sciences (NAS) Award in Chemical Sciences Selection Committee (2021 – 2022)

Head, Jury for selection of Women Interactive Materials Award (WIMA), DWI – Leibniz Institute for Interactive Materials (Aachen, Germany) and Altana AG (Wesel, Germany) (2021)

Executive Editor (Jan. 2021 – Dec. 2021) and Associate Editor (Jan. 2014 – Dec. 2021), *Journal of the American Chemical Society*

American Chemical Society (ACS) National Award Selection Committee (2021 – 2023 Award Cycle)

Co-organizer, 262nd American Chemical Society National Meeting, Division of Polymeric Materials: Science and Engineering, "2021 Kathryn C. Hach Award for Entrepreneurial Success: Symposium in Honor of Craig J. Hawker" (2020 – 2021)

Editorial Board Member, *Journal of Nanobiotechnology* (2020 – 2025)

Editorial Advisory Board, *Aggregate* (2020 – present)

External Advisory Committee, BioPACIFIC National Science Foundation Materials Innovation Platform (NSF MIP) (2020 – 2030)

American Association for the Advancement of Science (AAAS) Officer, Chemistry, Electorate Nominating Committee (Feb. 21, 2020 – Feb. 20, 2023)

Editorial Advisory Board, *Materials Chemistry Frontiers* (2019 – 2020)

Scientific Advisory Board, Centre for Targeted Delivery for Hard-to-Treat Cancers, University of Cambridge, United Kingdom, an Interdisciplinary Research Collaboration with support from UK's Engineering and Physical Sciences Research Council (EPSRC IRC) (2018 – 2024)

Canvassing Committee, ACS *Central Science* Disrupters and Innovators Prize (2019 – 2020)

External Review Committee, Virginia Polytechnic Institute and State University (Virginia Tech), Department of Chemistry (2018 – 2019)

International Advisory Board, IUPAC Conference "Frontiers of Polymer Colloids: From Synthesis to Macro-Scale and Nano-Scale Applications" held at the Institute of Macromolecular Chemistry, Prague, Czech Republic, July 18-22, 2021 (2018 – 2021)

Co-organizer, Pacifichem 2020, "Precision Polymer Synthesis and Supramolecular Architectures for Designable Functionality" Symposium (2018 – 2020)

Editorial Board, *Progress in Polymer Science* (2018 – present)

American Chemical Society (ACS), Chemists Celebrate Earth Week (CCEW) Coordinator, Texas A&M Local Section (2018 – 2020)

Executive Committee (Co-Chair), 15th International Conference on Polymers for Advanced Technologies (PAT 2019) (2018 – 2019)

Board Member, Tosoh's "GPC 2019 Conference" Organizing Committee (2018 – 2019)

Scientific Committee, Bordeaux Polymer Conference, France (2018)

External Review Panel, Deutsche Forschungsgemeinschaft (DFG**)** German Research Foundation (2018)

Scientific Committee, International Conference on Organic and Polymer Synthesis April 6-9, 2018, Guangzhou, China (2017 – 2018)

External Review Panel, Deutsche Forschungsgemeinschaft (DFG) German Research Foundation (2017)

"Preliminary Communication" Committee, *J. Am. Chem. Soc.* (2017)

Chemical & Engineering News "Talented 12" Advisory Panel (2017)

Army Research Office Chemical Sciences Division Board of Visitors (2017)

Advisory Board, Oregon State University, Department of Chemistry (2017 – 2022)

Organizing Committee, National Science Foundation Nanoscale Science and Engineering Grantees Conference, December 12-13, (2016)

Participant, 2016 National Science Foundation, "Frontiers in Polymer Science and Engineering", Workshop and Report

Executive Scientific Advisory Board Member, NANO / Molecular Medicine and Engineering Conference, (NANOMED 2018) in Houston (2016)

External Member, University of Texas, San Antonio (UTSA) Welch Chair Committee (2015 – 2016)
Co-organizer, 251st American Chemical Society National Meeting, Division of Polymeric Materials: Science and Engineering, "2016 ACS Award in Applied Polymer Science in Honor of Thomas Russell" Symposium (2015 – 2016)
External Reviewer, Johns Hopkins University, Department of Chemistry (2015)
Editorial Advisory Board, *Nanotechnology, Science and Applications* (2015 – present)
Co-organizer, Pacifichem 2015, "Controlled Macromolecular and Supramolecular Architectures for Sustainability" Symposium (2014 – 2015)
Co-organizer, 14th Pacific Polymer Conference, "Polymer Synthetic Chemistry" Symposium (2014 – 2015)
Co-organizer, 249th American Chemical Society National Meeting, Division of Polymeric Materials: Science and Engineering, "Design Principles of Functional Macromolecular Materials" Symposium (2014 – 2015)
Scientific Advisory Group Member for the International Symposium on Polymer Analysis and Characterization (2014 – 2016)
Technical Advisory Board, Organics, Polymers, and Organometallics (OPO TAB), Dow Chemical Company (2014 – 2017)
Editorial Advisory Board, *Polymers for Advanced Technologies* (2014 – 2023)
External Advisory Board, Research Triangle Park Materials Research Science and Engineering Center (MRSEC) (2014 – 2018)
Scientific Committee for the 6th Biennial Heart Valve Biology & Tissue Engineering Meeting, Royal Society, London (2013 – 2014)
Selection Committee for the chair on polymer chemistry in the Department of Chemical Engineering & Chemistry at Eindhoven University of Technology (2013 – 2014)
External Advisory Board, University of Minnesota Center for Sustainable Polymers, an NSF Center for Chemical Innovation (2013 – 2014)
International Scientific Advisory Board, Max Planck Institute for Polymer Research (2013 – 2018)
International Advisory Committee, International Conference on Materials Chemistry, MC11, Royal Society of Chemistry (2012 – 2013)
Chair, NIH Nanotechnology Study Section Panel (2012 – 2014)
Co-organizer, 14th International IUPAC Conference on Polymers and Organic Chemistry (2011 – 2012)
Editorial Advisory Board, *Chemistry of Materials* (2011 – 2018)
International Advisory Committee, 44th International Symposium on Macromolecules – IUPAC World Polymer Congress (2011 – 2012)
Editorial Advisory Board, *Journal of Biotechnology and Biomaterials – Open Access* (2010 – 2013)
Co-organizer, 2011 American Association for Cancer Research Symposium, "Nano in Cancer: Linking chemistry, biology, and clinical applications *in vivo*" (2010 – 2011)
International Advisory Board, 20th IUPAC International Symposium on Ionic Polymerization (2010 – 2011)
External Advisory Committee, University of Delaware, Materials Science and Engineering Dept. (2010 – 2020)
Standing Member, NIH Nanotechnology Study Section Panel (2010 – 2014)
International Scientific Advisory Board, Dutch BioMedical Materials Program (2007 – 2014)
External Advisory Committee, NSF-PREM Program (2007 – 2011)
External Advisory Board, University of Nebraska NIH COBRE Center (2007 – 2015)
Editorial Advisory Board, *Journal of the American Chemical Society* (2007 – 2014)
Editorial Advisory Board, *Bioconjugate Chemistry* (2007 – 2018)
Chair, 2007 Polymers (East) Gordon Research Conference
Co-organizer, 2007 NSF Polymers Workshop and Report
Mitsubishi Technical Advisory Board (2006)
External Advisory Board, University of California-Santa Barbara, Materials Research Laboratory (2005 – 2015)
Advisory Board, Carnegie Mellon University, Department of Chemistry (2005)

Co-organizer, 2005 USA-Japan Forum: "Advances in Polymer Chemistry and their Impacts upon Society"
U.S. Area Coordinator for Materials Science and Nanotechnology for Pacifichem 2005
Vice Chair, 2005 Polymers (East) Gordon Research Conference
Editorial Advisory Board, *Langmuir* (2005 – 2007)
Editorial Advisory Board, *Soft Matter* (2005 – 2008)
Editorial Advisory Board, *International Journal of Nanomedicine* (2005 – present)
Extramural Scientific Advisory Panel for the NIH Nanomedicine Development Centers (2004 – 2009)
International Advisory Board for the Royal Society of Chemistry, Materials Chemistry 7 Conference
Advisory Board for the National Nanotechnology Infrastructure Network (NNIN) (2004 – 2008)
Editor, *Journal of Polymer Science, Part A: Polymer Chemistry* (2003 – 2014)
National Heart, Lung, and Blood Institute Nanotechnology Working Group (2003)
National Science Foundation Nanomaterials Workshop Steering Committee (2003)
NSF Steering Committee for Grand Challenges for Nanomaterials (2002)
Arthur C. Cope Young Scholar Canvassing Committee for the ACS (2001 – 2004)
Editorial Advisory Board, *Macromolecules* (2001 – 2004)
Editorial Advisory Board, *Nano Letters* (2001 – 2006)
Editorial Advisory Board, *Journal of Polymer Science, Part A: Polymer Chemistry* (2000 – 2003)
Editorial Advisory Board, *Journal of Supramolecular Chemistr*y (2000 – 2003)
Alternate Councilor, American Chemical Society, Division of Polymer Chemistry (2000 – 2005)
Research Corporation Program Advisory Committee (2000 – 2003)
Publications Chair, American Chemical Society Division of Polymer Chemistry (1999 – 2003)

Professional Committee Activities within Texas A&M University:

Department of Chemistry

Member (Organic), Executive Committee (2026 – 2028)
Member (Organic), Promotion & Tenure Committee (2022 – 2025)
Member, Vacant Chair Committee (2021 – present)
Co-Chair, CRI/GURI Faculty Recruitment Committee (2021 – present)
Co-Chair, Strengths, Opportunities, Aspirations, Results (SOAR) Analysis Committee (2020 – 2021)
Chair, Self-Study Committee for the 2019-2020 External Academic Program Review (2018 – 2020)
Member, Research Infrastructure Committee (2019 – present)
Member, F. A. Cotton Medal Jury (2018 – 2021)
Member, Chemistry New Building Vision Committee (2018 – 2019)
Co-Chair, Organic Faculty Search Committee (2017 – 2018)
Member, Chemistry Mass Spectrometry Facility User Committee (2017 – present)
Advisor, Inaugural PAC Faculty, Startup of Postdoctoral Association of Chemistry (PAC) (2017 – 2022)
Member, Post-tenure Review Committee (2017 – 2019)
Member (Organic), Executive Committee (2017 – 2019)
Member, Department of Chemistry Head Search Advisory Committee (2016)
Member, Chair/Professorship Advisory/Selection Committee (2014 & 2015)
Chair, Organic Faculty Search Committee (2014 – 2015)
Member, Academic Operations Committee (2014 – 2016)
Chair, Division of Organic Chemistry (2014 – 2016)
Member (organic), Promotion & Tenure Committee (2014 – 2016); Chair, Promotion & Tenure Committee (2016 – 2017)
Member, Chemistry Department Head Search Advisory Committee (2013 – 2014)
Unit Coordinator, State Employee Charitable Campaign (2012)
Member, Academic Program Review Internal Self-Study Committee to prepare for Provost's External Review of Chemistry Dept. (2012 – 2013)
Member, Chemistry Nuclear Magnetic Resonance Spectroscopy User Group (2010 – present)
Member (at-large), Executive Committee (2009 – 2012)

Member, Faculty Search Committee, Department of Chemistry (2010 – 2012)
Chair, Chemistry Department Joint Appointments Committee (2011 – 2015)

College of Arts & Sciences and/or Texas A&M University and/or Texas A&M University System Level

Member, Texas A&M University College of Arts & Sciences Dean Search Advisory Committee (2025 – 2026)
Member, Review and Selection Committee for Nominations to the Global Young Scientists Summit (GYSS) for Texas A&M University (2025)
Member, Faculty Advisory Board of the Hagler Institute for Advanced Study (HIAS) (2024 – 2027)
Member, Texas A&M Faculty Senate (2023 – 2025), Personnel & Welfare Committee (2023 – 2024), Budget Information Committee (2024 – 2025)
Mentor to the Office of Faculty Affairs and potential candidates for nomination to the national academies (2023 – present)
Member, Texas A&M University College of Arts & Sciences Dean Search Advisory Committee (2023)
Member, Texas A&M Innovation, Council of Inventors (2023 – 2025)
Member, Texas A&M University College of Arts & Sciences, National Academies CRI/GURI Faculty Recruitment Committee (2022 – present)
Member, working group titled Formation of the College of Arts and Sciences (2022)
Member, Eminent Scholar Selection Committee (2022 – 2023)
Member, Texas A&M University Commission on Diversity, Equity and Inclusion (CDEI) Pathways to Doctorate Implementation Team (2021 – 2023)
Member, Texas A&M University Presidential Search Committee (2020 – 2021)
Member, Texas A&M University Commission on Diversity, Equity and Inclusion (CDEI) (July 2020 – January 2021)
Co-Chair, College of Science Strategic Development Committee (June 2020 – 2021)
Affiliate, Faculty Liaison to the Hagler Institute of Advanced Study (HIAS) (Sept. 2020 – Aug. 2021)
Member, ADVANCE Program Committee (2020 – 2022)
Member, Faculty Advisory Board of the Hagler Institute of Advanced Study (HIAS) (2019 – 2023)
Mentor, College of Science ADVANCE Science Scholars Program (2018 – 2022)
Member, Evaluation Committee, TAMU Microscopy and Imaging Center, Soft-matter Electron and Cryo-EM Core Research Scientist Position (2017)
Member, Executive Committee, Interdisciplinary Soft Matter Facility (SoMF) (2016 – present)
Chair, Joint College of Engineering-College of Science Curriculum Committee (JC^4) (2016 – 2017)
Member, Sponsored Research Services (SRS) Transition and Services Operations Committee (TSOC) (2015 – 2022)
Chair and Member, Covestro Lectureship Committee, Department of Chemistry, w/membership also from the College of Engineering (Departments of Chemical Engineering and Mechanical Engineering) (2015 – present, Chair 2015 – 2017)
Member, Imaging Working Group (2015 – 2020)
Member, Research Development Fund Advisory Committee (2015 – 2016)
Member, Vice President of Research Search Committee (2012 – 2013)
Member, F. A. Cotton Medal Jury (2012 – 2015)
Member, Texas A&M Institute for Advanced Study (TIAS) Administrative Council (2011 – 2013)
Member, ADVANCE-IT Project, Departmental Mini-Grants Subcommittee (2011 – 2015)
Member, Faculty Search Committee, Marine Sciences Department, Texas A&M University at Galveston (2011 – 2012)
Chair, Bayer Lectureship Committee, Department of Chemistry, w/membership also from the College of Engineering (Departments of Chemical Engineering and Mechanical Engineering) (2010 – 2015)
Member, Faculty Search Committee, Department of Nuclear Engineering, Life Sciences Radiochemistry (2010 – 2013)
Member, Strengthen Graduate Programs Imperative Study Team, Vision 2020 Task Force (2010 – 2012)

Member, Faculty Search Committee, Department of Nuclear Engineering, Nuclear Forensics, Nonproliferation, and/or Nuclear Security Risk Analysis (2010 – 2012)
Member, Faculty Search Committee, Department of Biochemistry and Biophysics (2010 – 2011)

Professional Committee Activities within Washington University:

Department of Chemistry

Laboratory Oversight Committee (2005 – 2009)
Chair, Chemistry Graduate Recruitment Committee (2000 – 2002)
Graduate Work Committee (2000 – 2009)
Organizer and host for Bayer Distinguished Lectureship (2000 – 2009)
Graduate Admissions and Recruitment Committees (1999 – 2007)
McMillen Laboratory Renovations Committee (1998 – 2000)
Faculty search committees (1995 – 2000, 2002 – 2004)
Graduate Recruitment Committee (1994 – 2007)
Safety Committee (1994 – 2009)

Washington University

Advisory Committee on the Appointment of the Dean of the Faculty of Arts & Sciences (2008)
Committee on the Appointment of the Interim Dean of Engineering (2008)
Faculty Advisory Committee (2007)
Review Committee on Faculty Personnel Procedures (2007 – 2009)
Office for Technology Management Directorship Search Committee (2006 – 2007)
McKelvey Professorship Search Committee (2006 – 2007)
Chair, School of Engineering, Faculty member tenure and promotion committee (2006 – 2007)
Siteman Cancer Center Strategic Planning Group (Spring 2006)
Joint Chemistry/Biology Faculty Search Committee (2005 – 2006)
Nanotechnology Advisory Group (2004 – 2009)
Kauffman Entrepreneurship Pathway (DBBS) Advisory Committee (2004 – 2009)
Compton/Ferguson Lectures Committee (2003 – 2009)
Animal Studies Committee (2003 – 2006)
Steering Committee for Beckman Scholars Program (2002 – 2009)
Task Force Sub-committee for Materials (2002 – 2003)
Dean's Advisory Committee on Tenure, Promotion and Personnel (2001 – 2004)
Division of Biology and Biomedical Sciences Internal Review Committee (2001 – 2002)
Olin Fellowship Selection Committee (2000)
Chemistry-Biology Interface Steering Committee (2000 – 2006)
Physics Biological/Biomedical Faculty Search Committee (1999)
Committee for Faculty Oversight of Technology Transfer (1999 – 2009)
Educational Policy Committee of the Board of Trustees (1999 – 2001)

Membership in Professional and Honorary Societies:

American Academy of Arts and Sciences (AMACAD, Elected Fellow); American Association for the Advancement of Science (AAAS, Elected Fellow; Officer for the Chemistry Electorate Nominating Committee (2020 – 2023)); American Chemical Society (ACS); ACS Division of Polymer Chemistry (Publications Chair (1999 – 2003) and Alternate Councilor (2000 – 2005)); ACS Division of Polymeric Materials: Science and Engineering; Student Affiliates of the ACS at Oregon State Univ. (President, 1986); American Institute for Medical and Biological Engineering (AIMBE, Elected Fellow); National Academy of Inventors (NAI, Elected Fellow); National Academy of Sciences (NAS, Elected Fellow); New York Academy of Sciences (Professional Member); Royal Society of Chemistry (RSC, Elected Fellow); Texas Academy of Medicine, Engineering, Science & Technology (TAMEST, Member)

Research Interests:

Research interests include the synthesis and characterization of degradable polymers derived from natural products, unique macromolecular architectures, complex polymer assemblies, and well-defined nanostructured materials. Particular activities focus upon the design of synthetic strategies to harness the rich compositional, regiochemical and stereochemical complexity of natural products for the construction of hydrolytically-degradable polymers, which have impact toward sustainability, reduction of reliance on petrochemicals, and production of biologically-beneficial and environmentally-benign natural products upon degradation – these materials are being advanced fundamentally to impact global issues and aggressive work is underway to translate them commercially to overcome global challenges.

Publications (peer-reviewed):

Submitted—

In press—

Published—

373. Getzler, Y. D. Y. L.; Davidson, E. C.; Hartwig, J. F.; Wooley, K. L.; Romain, C.; Kalčíková, G.; Plajer, A. J.; Wurm, F. R.; Gao, L.; Unni, A. B. "Voices: Breakthroughs toward sustainable polymers", *One Earth* (A Cell Press Journal), **2025**, *8*(11), November 21, 2025, 1-5, DOI: 10.1016/j.oneear.2025.101522.
372. Hsieh, C.-M.; Sengoden, M.; Lim, S.-M.; Smolen, J. A.; Ahmed, N.; Wooley, K. L.; Darensbourg, D. J.; Pentzer, E. B.; Wei, P. "Bioderived, 3D-Printable, and Biocompatible Polycarbonate/ Hydroxyapatite Composite Scaffolds", *ACS Sustain. Chem. Eng.,* **2025**, *13(41),* 17496-17509, DOI: 10.1021/acssuschemeng.5c06987.
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Patents:

22. "Compositions Containing Sugar-based Bisphenol A Polycarbonate Analogs and Methods of Manufacture and Use Thereof", Boopathi, Senthil K.; Jahnke, Ashlee A.; Wooley, Karen L.; U.S.

Provisional Patent Application No. 63/683,806, filed August 16, 2024. PCT International Application No. PCT/US2025/042324, filed August 17, 2025.

21. "Polymer" (copolymers – TAMU 6187B), Boopathi, Senthil K.; Jahnke, Ashlee A.; Sun, Guorong; Taylor, Stephen John C.; Wooley, Karen L.; U.S. Provisional Patent Application No. 63/509,979, filed June 23, 2023.U.S. Non-Provisional Patent Application No. 18/749,879, filed June 21, 2024. PCT International Application No. PCT/US2024/034925, filed June 21, 2024. ***WO 2024/263854 A1, issued December 26, 2024. U.S. Patent Application Publication US 2025/0011536 A1, published January 9, 2025.***
20. "Polymer" (homopolymers – TAMU 6187A), Boopathi, Senthil K.; Jahnke, Ashlee A.; Sun, Guorong; Taylor, Stephen John C.; Wang, Hai.; Wooley, Karen L.; U.S. Provisional Patent Application No. 63/509,994, filed June 23, 2023. U.S. Non-Provisional Patent Application No. 18/749,963, filed June 21, 2024. PCT International Application No. PCT/US2024/034940, filed June 21, 2024. ***WO 2024/263862 A1, issued December 26, 2024. U.S. Patent Application Publication US 2025/0002646 A1, published January 2, 2025.***
19. "Degradable Polycarbonate Sport Fishing Materials", Wooley, Karen L.; Felder, Simcha E.; Versaw, Brooke A.; Jahnke, Ashlee A.; Link, Lauren A.; Wooley, Mark W.; Hinton, Charles A.; Howell, Jr., William R.; ***WO 2018/013892 A1, issued January 18, 2018. U.S. Patent 10,329,381 B2, issued June 25, 2019. European Patent EP3484942B1, issued June 11, 2025.***
18. "Functional, Cross-Linked Nanostructures For Tandem Optical Imaging and Therapy", Neumann, William L.; Dorshow, Richard B., Freskos, John N.; Wooley, Karen L.; Lee, Nam S.; Lin, Lily Y.; Sun, Guorong; ***WO 2011/143524 A2, issued November 17, 2011. U.S. Patent 9,662,387 B2, issued May 30, 2017.***
17. "Ternary Antifouling Compositions and Methods", Wooley, Karen L.; Raymond, Jeffery E.; Pollack, Kevin A; Imbesi, Philip M; ***WO 2013/192529 A1, issued December 27, 2013. U.S. Patent 9,422,433 B2, issued August 23, 2016.***
16. "Self-Assembled Structures, Method of Manufacture Thereof and Articles Comprising The Same", Cho, Sangho; Sun, Guorong; Wooley, Karen L.; Thackeray, James W.; Trefonas, III, Peter; ***U.S. Patent 9,405,189 B2, issued August 2, 2016.***
15. "Self-Assembled Structures, Method of Manufacture Thereof and Articles Comprising The Same", Cho, Sangho; Sun, Guorong; Wooley, Karen L.; Thackeray, James W.; Trefonas, III, Peter; ***U.S. Patent 10,078,261 B2, issued September 18, 2018.***
14. "Self-Assembled Structures, Method of Manufacture Thereof and Articles Comprising The Same", Cho, Sangho; Sun, Guorong; Wooley, Karen L.; Thackeray, James W.; Trefonas, III, Peter; ***U.S. Patent 8,822,130 B2, issued September 2, 2014.***
13. "Self-Assembled Structures, Method of Manufacture Thereof and Articles Comprising The Same", Cho, Sangho; Sun, Guorong; Wooley, Karen L.; Thackeray, James W.; Trefonas, III, Peter; ***U.S. Patent 9,223,214 B2, issued December 29, 2015.***
12. "Self-Assembled Structures, Method of Manufacture Thereof and Articles Comprising The Same", Cho, Sangho; Sun, Guorong; Wooley, Karen L.; Thackeray, James W.; Trefonas, III, Peter; U.S. Non-Provisional Patent Application No. 13/681,012, filed November 19, 2012. ***U.S. Patent Application Publication US 2014/0142252 A1, published May 22, 2014.***
11. "Self-Assembled Structures, Method of Manufacture Thereof and Articles Comprising The Same", Cho, Sangho; Sun, Guorong; Wooley, Karen L.; Thackeray, James W.; Trefonas, III, Peter; U.S. ***Patent 9,447,220 B2, issued September 20, 2016.***
10. "Polymer-Drug Systems", Wooley, Karen L.; Zou, Jiong; El Sabahy, Mahmoud; Zhang, Shiyi; Zhang, Fuwu; U.S. ***Patent 9,545,447 issued January 17, 2017***.
9 "Brush Copolymers", Cheng, Chong; Khoshdel, Ezat; Wooley, Karen L.; WO 2008/064973 A1, issued June 5, 2008. ***U.S. Patent 7,960,479 B2 issued June 14, 2011***.
8. "Uniform, Functionalized, Cross-Linked Nanostructures for Monitoring pH", Wooley, Karen L.; Dorshow, Richard B.; Freskos, John N.; Neumann, William L.; Shieh, Jeng J.; Lee, Nam S.; Lin, Yun; Sun, Guorong; U.S. Provisional Patent Application No. 61/334,723, filed May 14, 2010. U.S. Non-

Provisional Patent Application No. 16/381,988, filed April 11, 2019. PCT International Application No. PCT/US2011/036411, filed May 13, 2011. ***WO 2011/143540 A1, issued November 17, 2011. U.S. Patent Application Publication US 2019 / 0302026 A1, published October 3, 2019.***

7. "Degradable Polycarbonates", Wooley, Karen L; Besset, Celine J.; Lonnecker, Alexander T; Streff, Jennifer M.; Kristufek, Samantha L.; Hearon, Michael K.; U.S. Provisional Patent Application No. 61/392,893, filed October 13, 2010. ***WO 2012/051448 A1, issued April 19, 2012. European Patent EP2627691B1, issued November 25, 2020.***
6. "Composition Comprising Brush Copolymer For Treating Hair", Burry, Jason Shaun; Cheng, Chong; Evans, Richard Livesey; Khoshdel, Ezat; Wooley, Karen Lynn; ***WO 2008/064973 A1, issued June 5, 2008. European Patent EP2097468 B1, issued August 25, 2010.***
5. "Photonic Shell-Core Cross Linked and Functionalized Nanostructures for Biological Applications", Neumann, William L.; Rajagopalan, Raghavan; Dorshow, Richard B.; Shieh, J. J.; Wooley, Karen L.; Lee, Nam S.; U.S. Provisional Patent Application No. 60/986,171, filed November 7, 2007. U.S. Non-Provisional Patent Application No. 12/740,476, filed November 7, 2008. PCT International Application No. PCT/US2008/012575, filed November 7, 2008. ***WO 2009/061473 A3, issued May 14, 2009. U.S. Patent Application Publication US 2010/0311903 A1, published December 9, 2010.***
4. "Dendritic-based Macromolecules and Method of Production", Fréchet, Jean M. J.; Hawker, Craig J.; Wooley, Karen L.; ***WO 93/21259 A1, issued October 28, 1993.***
3. "Cell-permeable Nanoconjugates of Shell-crosslinked Knedel (SCK) and Peptide Nucleic Acids ("PNAs") with uniquely expressed or over-expressed mRNA-targeting Sequences for Early Diagnosis and Therapy of Cancer", Becker, Matthew L.; Fang, Huafeng; Li, Xiaoxu; Pan, Dipanjan; Rossin, Raffaella; Sun, Xiankai; Taylor, John-Stephen; Turner, Jeffrey L.; Welch, Michael J.; Wooley, Karen L.; WO 2006/044716 A2, issued April 27, 2006. ***U.S. Patent 8,354,093 B2 issued January 15, 2013***.
2. "Particles Comprising Amphiphilic Copolymers, Having a Cross-linked Shell Domain and an Interior Core Domain, Useful for Pharmaceutical and Other Applications", Wooley, K. L.; Thurmond II, K. Bruce; Huang, Haiyong; ***WO 97/49387 A1, issued December 31, 1997. U.S. Patent 6,383,500 B1 issued May 7, 2002.***
1. "Dendritic-based Macromolecules", Fréchet, Jean M. J.; Hawker, Craig J.; Wooley, Karen L.; ***U.S. Patent 7,101,937 B1 issued September 5, 2006.***

Seminar Presentations (invited):

"Synthetic Methodology Development Toward Commercial Translation of Carbohydrate-based Degradable Polymers", Pacifichem 2025, Recent Progress in Glycoconjugates and Glycomaterials Symposium, Honolulu, HI, December 19, 2025.

"A Chemical Transition Driven by Sourcing and Resourcing of Complex Chemical Products from Diverse Renewable and Waste Feedstocks", Pacifichem 2025, Towards A Circular Materials Economy: Design for Renewable, Degradable and Recyclable Polymers Symposium, Honolulu, HI, December 15, 2025.

"Synthetic Methodologies by which to Transform Carbohydrates, Nucleic Acids, Amino Acids and/or Other Natural Products into Sustainable, Degradable/Digestible Functional Polymer Materials", 2025 Kennedy Lecture #2, Department of Chemistry, Washington University in St. Louis, MO, November 21, 2025.

"A History of Polymer Chemistry Innovation Drivers: From topological control to nanoscopic macromolecular frameworks to conscientious attention to sustainability", 2025 Kennedy Lecture #1, Department of Chemistry, Washington University in St. Louis, MO, November 20, 2025.

"Sugar Plastics", Cell Symposium: Chemical solutions for a sustainable plastics future, Amsterdam, NL, October 15, 2025.

"Sugar Plastics as Part of a Larger Chemical Transition Initiative Throughout the State of Texas of the U.S.", Sustainable Chemicals and Materials Manufacturing (SCHEMA) Hub Autumn Conference, University of Oxford, UK, September 15, 2025.

"Sugar Plastics: An evolution of carbohydrate-derived synthetic polymers from nanoparticle targets to structural and morphological metamorphoses to commercial translation", 19th Pacific Polymer Conference (PPC19), Kitakyushu, Fukuoka, Japan, July 8, 2025.

"Sugar Plastics: An evolution of carbohydrate-derived synthetic polymers from nanoparticle targets to structural and morphological metamorphoses to commercial translation", 49th National Organic Symposium (100-yr anniversary), Rensselaer Polytechnic Institute (RPI), Troy, NY, June 24, 2025.

"Cellulose as a Model and Inspiration for Carbohydrate-derived Polycarbonates: Next-generation, degradable, sustainable and diverse engineering plastics", Wallenberg Wood Science Center (WWSC) International Conference 2025, KTH Royal Institute of Technology, Stockholm, Sweden, June 17, 2025.

"An Evolution of Carbohydrate-derived Synthetic Polymers: From nanoparticle targets to surprising structural and morphological metamorphoses to commercial translation", 2025 Martin Chemistry Legacy Lecture, Department of Chemistry, University of South Florida, Tampa, FL, April 9, 2025.

"Transformation of Carbohydrates into Complex Polymer Structures with Study and Manipulation of their Supramolecular Assembly-Disassembly Characteristics", Jeremiah A. Johnson's Carl S. Marvel Award Symposium, American Chemical Society Spring 2025 Meeting, San Diego, CA, March 25, 2025.

"A Decades-Long Evolution, with Reality Checks and Pivots, Toward Sustainable Anti-fouling Coatings Materials", Joseph M. DeSimone's 60th Birthday Celebration, American Chemical Society Spring 2025 Meeting, San Diego, CA, March 24, 2025.

"An Evolution of Carbohydrate-derived Synthetic Polymers: From nanoparticle targets to surprising structural and morphological metamorphoses to commercial translation", Distinguished Lecture Series, Department of Chemistry and Biochemistry, University of California-Los Angeles, Los Angeles, CA, February 20, 2025.

"An Evolution of Carbohydrate-derived Synthetic Polymers: From nanoparticle targets to surprising structural and morphological metamorphoses to commercial translation", Department of Chemistry, Princeton University, Princeton, NJ, February 18, 2025.

"An Evolution of Carbohydrate-derived Synthetic Polymers: From nanoparticle targets to surprising structural and morphological metamorphoses to commercial translation", Interactive Polymer Materials (IPM) Annual Meeting, Veldhoven, Netherlands, December 6, 2024.

"Synthetic Methodologies by which to Transform Carbohydrates or Nucleic Acids into Sustainable, Next-generation, Degradable/Digestible Functional Polymer Materials", 2024 Nelson Lecture, Department of Chemistry, University of Miami, Miami, FL, November 8, 2024.

"Lessons Learned During My Thirty-year Journey Expanding the Scopes of Synthetic Organic and Polymer Chemistries: From natural product total synthesis to Nanomaterials & nanoparticle technologies to Natural product-based sustainable next-generation plastics", James O. Stoffer Lecture, Department of Chemistry, Missouri University of Science & Technology, Rolla, MO, October 25, 2024.

"Synthetic Methodologies by which to Transform Carbohydrates or Nucleic Acids into Sustainable, Next-generation, Degradable/Digestible Functional Polymer Materials", Department of Chemistry, Organic Seminar Series, University of California-Irvine, Irvine, CA, October 23, 2024.

"The Future of Polymer Materials as the World Progresses Along the Energy Transition – Dynamically-reconfigurable systems to unconventional sourcing of feedstocks", James A. Morrison Lecture, Brockhouse Institute for Materials Research (BIMR), McMaster University, Hamilton, Ontario, Canada, October 18, 2024.

"Synthetic Strategies by Which to Afford Natural Product-derived Functional Polymer Materials that Address Health-Food-Energy-Water Challenges: An emphasis on nanomaterials for biomedical and environmental applications", James A. Morrison Lecture, Brockhouse Institute for Materials Research (BIMR), McMaster University, Hamilton, Ontario, Canada, October 17, 2024.

"An Introduction to Polymer Chemistry with an Emphasis on the Evolution from Traditional Materials that have Enabled Societal Progress and Technological Advances to Commercial Translation of Innovative Directions that will be Critical to a Sustainable Future", James A. Morrison Lecture, Brockhouse Institute for Materials Research (BIMR), McMaster University, Hamilton, Ontario, Canada, October 16, 2024.

"Design, Synthesis, Study and Development of Amino Acid-and Other Naturally-sourced Polymer Materials at the Intersections of Recyclable Batteries, Electronic Materials, and Biomedical Devices", Fall 2024 American Chemical Society Symposium in Honor of Heather Maynard's Mark Senior Scholar Award, Denver, CO, August 21, 2024.

"Carbohydrate Small Molecules, Macrocycles and Polymers Transformed into Environmental and Biomedical Materials", Fall 2024 American Chemical Society Symposium in Honor of Zak Page's Mark Young Scholar Award, Denver, CO, August 18, 2024.

"From Nanomedical Devices to Natural Product-based Functional Polymer Materials", Fall 2024 American Chemical Society Symposium for the 25th Anniversary of ACS Biomacromolecules Journal, Denver, CO, August 18, 2024.

"Grand Challenges in Polymer Science & Soft Matter: Wooley's emphasis on strategies to afford natural product-based polymer materials with consideration of the end game", 3rd Beckman New England Macromolecular Science Workshop, Boston College, Boston, MA, August 6, 2024.

"Lessons Learned During My Thirty-year Journey Expanding the Scopes of Synthetic Organic and Polymer Chemistries: From natural product total synthesis to nanoparticle technologies to natural product-based sustainable next-generation plastics", Inaugural Polymer Women Empowerment and Research conference (PoWER), Northwestern University, Evanston, IL, July 12, 2024.

"Synthetic Methodologies by which to Transform Carbohydrates, Nucleic Acids or Amino Acids into Sustainable, Next-generation, Degradable Functional Polymer Materials", Keynote lecture at the 50th Annual IUPAC MACRO World Polymer Congress, Warwick University, United Kingdom, July 1, 2024.

"Design of Polypeptide Materials at the Intersections of Recyclable Batteries, Electronic Materials, and Biomedical Devices", 3rd Annual Bio-Inspired Green (BIG) Science & Technology Symposium, Advanced Science Research Center, The City College of New York, New York, NY, April 19, 2024.

"Design of Polypeptide Materials at the Intersections of Recyclable Batteries, Electronic Materials, and Biomedical Devices", 43rd Musselman Visiting Scientist, Department of Chemistry, Gettysburg College, Gettysburg, PA, April 12, 2024.

"The Future of Polymer Materials as the World Progresses Along the Energy Transition – Dynamically-reconfigurable systems to unconventional sourcing of feedstocks", 43rd Musselman Visiting Scientist, Department of Chemistry, Gettysburg College, Gettysburg, PA, April 11, 2024.

"Synthetic Strategies by Which to Afford Natural Product-derived Functional Polymer Materials that Address Health-Food-Energy-Water Challenges: An emphasis on nanomaterials for biomedical and environmental applications", 43rd Musselman Visiting Scientist, Department of Chemistry, Gettysburg College, Gettysburg, PA, April 11, 2024.

"An Introduction to Polymer Chemistry with an Emphasis on the Evolution from Traditional Materials that have Enabled Societal Progress and Technological Advances to Commercial Translation of Innovative Directions that will be Critical to a Sustainable Future", 43rd Musselman Visiting Scientist, Department of Chemistry, Gettysburg College, Gettysburg, PA, April 10, 2024.

"The Future of Polymer Materials as the World Progresses Along the Energy Transition – Dynamically-reconfigurable systems to commercial translation of sustainable next-generation plastics to unconventional sourcing of feedstocks", Department of Chemistry & Biochemistry, University of Alabama, Tuscaloosa, AL, April 4, 2024.

"The Future of Polymer Materials as the World Progresses Along the Energy Transition – Dynamically-reconfigurable systems to commercial translation to unconventional sourcing of feedstocks", Department of Chemistry, University of Texas at Austin, Austin, TX, March 29, 2024.

"Two Decades of Fundamental Studies and Developments Involving Polycarbonates: From Byers' contributions to understanding chain packing and dynamics of linear and hyperbranched bisphenol A polycarbonate analogs to next-generation polycarbonates derived from carbohydrates", Jeffery Byers Memorial Symposium, Division of Inorganic Chemistry, Spring 2024 American Chemical Society National Meeting, New Orleans, LA, March 19, 2024.

"The Future of Polymer Materials as the World Progresses Along the Energy Transition – Dynamically-reconfigurable systems to commercial translation to unconventional sourcing of feedstocks", Axalta Distinguished Lecture, Department of Chemistry, University of Pennsylvania, Philadelphia, March 7, 2024.

"Synthetic Methodologies by which to Transform Carbohydrates, Nucleic Acids or Amino Acids into Sustainable, Next-generation, Degradable and Digestible Functional Polymer Materials", PME Distinguished Colloquium, University of Chicago, Chicago, IL, February 23, 2024.

"The Future of Polymer Materials as the World Progresses Along the Energy Transition – Dynamically-reconfigurable systems to commercial translation to unconventional sourcing of feedstocks", National Yang Ming Chiao Tung University, Hsinchu, Taiwan, Taiwan, January 10, 2024.

"Design of Polypeptide Materials at the Intersections of Recyclable Batteries, Electronic Materials, and Biomedical Devices", *TY Luh Lectureship & Symposium on Polymer Science,* National Taiwan University, Taipei, Taiwan, January 9, 2024.

"Sustainable Plastics from Sugar: From commercial translation of carbohydrate-derived, next-generation, degradable and digestible plastics to harvesting building blocks from insect feedstocks", *2023 Southwest Regional American Chemical Society Meeting*, Oklahoma City, OK, November 15, 2023.

"The Future of Polymer Materials as the World Progresses Along the Energy Transition – Dynamically-reconfigurable systems to unconventional sourcing of feedstocks", *2023 Southwest Regional American Chemical Society Meeting*, Oklahoma City, OK, November 15, 2023.

"Design and Development of Next-generation, Sustainably-sourced and Digestible Plastics", *2023 Japan-US Seminar on Polymer Chemistry*, Okinawa Institute of Science and Technology OIST, Okinawa, Japan, November 1, 2023.

"Sugar Plastics as Designer Next-Gen Sustainable Materials", *66th Welch Conference on Chemical Research, "Living in a Material World"*, Houston, TX, October 24, 2023.

"Sugar Plastics: From commercial translation of carbohydrate-derived, next-generation, sustainably-sourced and digestible plastics to harvesting of building blocks from insect feedstocks", *Community of Faculty Retirees,* Texas A&M University, College Station, TX, October 4, 2023.

"Sugar Plastics, Part 2: From commercial translation of carbohydrate-derived degradable plastics to harvesting building blocks from insect feedstocks for transformation into carbohydrate-derived superabsorbent hydrogels (among other applications)", *Inaugural Greg L. Baker, Ph.D., Memorial Lectureship,* Department of Chemistry, Michigan State University, East Lansing, MI, September 28, 2023.

"Sugar Plastics, Part 1: Natural Product-based Polymers that Address Health-Food-Energy-Water Challenges: Structural, topological and morphological diversities for sustainable, degradable polymers derived from carbohydrates", *Inaugural Greg L. Baker, Ph.D., Memorial Lectureship,* Department of Chemistry, Michigan State University, East Lansing, MI, September 27, 2023.

"Diverse Polymer Research @ TAMU, with an Emphasis on Academic to Industrial Translation of Sustainable, Degradable Polymers Derived from Carbohydrates & an Introduction to RESURGE", *Arkema, Inc. Technical Center*, King of Prussia, PA, September 26, 2023.

"Harvesting building blocks from insect feedstocks for transformation into carbohydrate-derived superabsorbent hydrogels (among other applications)", *Journal of Polymer Science* Innovation Award in Honor of Emily Pentzer, Fall 2023 American Chemical Society National Meeting, San Francisco, CA, August 14, 2023.

"Recycling of current petrochemically-sourced plastics *vs* design and development of next-generation sustainably-sourced and digestible plastics", Gordon Research Conference: Plastics Recycling and Upcycling, Manchester, NH, July 12, 2023.

"SRS-RN: Track 2: Reimagining the Chemical Heartland: Closing the loop on the oil-plastics-recycling nexus to forge a resilient circular economy", NSF SRS Awardees Conference, Alexandria, VA, June 8, 2023.

"The Future of Polymer Materials as the World Progresses Along the Energy Transition – Dynamically-reconfigurable systems to unconventional sourcing of feedstocks", 2023 Turner J. Alfrey Visiting Professorship Lecture Series (Lecture #5), Michigan State University St. Andrews, Midland, MI, June 6, 2023.

"Design of Polypeptide Materials at the Intersections of Recyclable Batteries, Electronic Materials, and Biomedical Devices", 2023 Turner J. Alfrey Visiting Professorship Lecture Series (Lecture #4), Michigan State University St. Andrews, Midland, MI, June 6, 2023.

"Synthetic Strategies by Which to Afford Natural Product-derived Functional Polymer Materials that Address Health-Food-Energy-Water Challenges: An emphasis on nanomaterials for biomedical and environmental applications", 2023 Turner J. Alfrey Visiting Professorship Lecture Series (Lecture #2), Michigan State University St. Andrews, Midland, MI, June 6, 2023.

"An Overview and Thirty-Year History of Wooley's Research Program – A dimensional evolution from Constructing well-defined polymer architectures to assembly of nanostructured polymer materials", 2023 Turner J. Alfrey Visiting Professorship Lecture Series (Lecture #1), Michigan State University St. Andrews, Midland, MI, June 6, 2023.

"Sugar Plastics Derived From Conventional and Non-conventional Biomass Feedstocks", Gordon Research Conference: Biomass to Biobased Chemicals & Materials, Newry, ME, June 1, 2023.

"Sugar Plastics: From commercial translation of carbohydrate-derived degradable plastics to harvesting of building blocks from insect feedstocks", National Science Foundation Center for Environmental Sustainability through Insect Farming Symposium, College Station, TX, May 17, 2023.

"Natural Product-based Polymers That Address Health-Food-Energy-Water Challenges: Structural, topological and morphological diversities for sustainable, degradable polymers derived from carbohydrates", Student Hosted Organic Seminar, University of Southern California, Department of Chemistry, Los Angeles, CA, April 19, 2023.

"Structural, Topological and Morphological Diversities for Sustainable, Digestible polymers derived from carbohydrates as Natural Product-based Polymers that Address Health-Food-Energy-Water Challenges: A story of pivots to overcome adversities while pursuing ambitions", Colorado State University, Department of Chemistry, Fort Collins, CO, April 17, 2023.

"Structural, Topological and Morphological Diversities for Sustainable, Digestible polymers derived from carbohydrates as Natural Product-based Polymers that Address Health-Food-Energy-Water Challenges: A story of pivots to overcome adversities while pursuing ambitions", Sigma-Aldrich Seminar, University of Minnesota, Department of Chemistry, Minneapolis, MN, April 4, 2023.

"Transformation of natural products into polymers that are capable of performing as bio-based batteries to anti-biofouling materials", Polymers at the Interface with Biology, Division of Polymer Chemistry (POLY), Spring 2023 American Chemical Society National Meeting, Indianapolis, IN, March 28, 2023.

"From commercial translation of carbohydrate-derived degradable plastics to harvesting of building blocks from insect feedstocks", Advances in Biomass-based Biodegradable Polymers, Division of Polymer Chemistry (POLY), Spring 2023 American Chemical Society National Meeting, Indianapolis, IN, March 26, 2023.

"Structural, Topological and Morphological Diversities for Sustainable, Digestible polymers derived from carbohydrates as Natural Product-based Polymers that Address Health-Food-Energy-Water Challenges: A story of pivots to overcome adversities while pursuing ambitions", Joseph Priestley Lecture, The Pennsylvania State University, Department of Chemistry, State College, PA, February 21, 2023.

"Structural, Topological and Morphological Diversities for Sustainable, Digestible polymers derived from carbohydrates as Natural Product-based Polymers that Address Health-Food-Energy-Water Challenges: A story of pivots to overcome adversities while pursuing ambitions", 71st Dains Memorial Lecture, University of Kansas Department of Chemistry, Lawrence, KS, February 17, 2023.

"Sugar Plastics, Part 2: Structural, topological and morphological diversities for sustainable, degradable polymers derived from carbohydrates", William D. Smart Seminar #2, University of West Florida (UWF) Department of Chemistry, Pensacola, FL, February 3, 2023.

"Sugar Plastics, Part 1: From commercial translation of carbohydrate-derived degradable plastics to harvesting of building blocks from insect feedstocks.", William D. Smart Seminar #1, University of West Florida (UWF) Department of Chemistry, Pensacola, FL, February 2, 2023.

"Sugar Plastics: From the complexities of fundamental synthetic chemistry to their commercial development as next-generation sustainable materials.", Georgia Tech School of Materials Science and Engineering (MSE) Seminar Series, Atlanta, GA, January 30, 2023.

"Design of Polypeptide Materials at the Intersections of Recyclable Batteries, Electronic Materials, and Biomedical Devices.", Gordon Research Conference: Peptide Materials, Galveston, TX, January 17, 2023.

"Metamorphic Structural Diversity for Sustainable, Digestible Polymers Derived from Carbohydrates & An Introduction to RESURGE: A story of pivots to overcome adversities while pursuing ambitions", 2022 American Chemical Society Western Regional Meeting, Las Vegas, NV, October 21, 2022.

"Structural Diversity for Sustainable, Degradable Polymers Derived from Carbohydrates & An Introduction to RESURGE", 59th Society of Engineering Science Annual Technical Meeting, College Station, TX, October 17, 2022.

"Natural Product-Based Polymers that Address Health-Food-Energy-Water Challenges: Structural, topological and morphological diversities for sustainable, degradable polymers derived from carbohydrates", Russell Lecture at Queen's University, Department of Chemistry, Kingston, ON, Canada September 30, 2022.

"Natural Product-Derived Functional Polymer Materials that Address Health-Food-Energy-Water Challenges: An Emphasis on Biomaterials and Nanomedicines", Texas Tech. University Health Sciences Center, Distinguished Speaker Series, Amarillo, TX, September 16, 2022.

"Diverse Polymer Research @ TAMU, with an Emphasis on Academic to Industrial Translation of Sustainable, Degradable Polymers Derived from Carbohydrates & An Introduction to RESURGE", 2022 Energy Polymer Group Fall Technical Meeting, Houston, TX, September 15, 2022.

"Structural Diversity for Sustainable, Degradable Polymers Derived from Carbohydrates: Foci on glucose- and xylose-based cyclic monomer building blocks with finding of structural metamorphoses *in-situ* during polymerizations", Green Polymer Chemistry and Sustainability Symposium, Division of Polymer Chemistry (POLY), Fall 2022 American Chemical Society National Meeting, Chicago, IL, August 24, 2022.

"Degradation-Induced Disassembly (DIDA): A revolutionary approach to access complex nanoscopic polymer topologies and morphologies", Symposium in honor of Frank Leibfarth's *Journal of Polymer Science* Innovation Award, Division of Polymeric Materials: Science and Engineering (PMSE), Fall 2022 American Chemical Society National Meeting, Chicago, IL, August 22, 2022.

"Natural Product-based Polymers That Address Health-Food-Energy-Water Challenges: Transformation of Carbohydrates into Well-defined Macromolecular Topologies with Hierarchical Assembly to Advance Knowledge and Address Societal Needs", 84th Prague Meeting on Macromolecules – Frontiers of Polymer Colloids, Prague, Czech Republic, July 27, 2022.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment & A Few Lessons from Bob", ACS Research Conference: Chemistry and Chemical Engineering in the Middle East and North Africa (MENA), ACS MENA 2022, Doha, Qatar, May 10, 2022.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Collaboration for Unprecedented Success and Excellence (CUSE) Biomaterials Seminar Series, Syracuse University, Syracuse, NY, April 6, 2022.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", SABIC, Sugar Land, TX, April 1, 2022

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Department of Chemical & Biomolecular Engineering, University of Houston, Houston, TX, April 1, 2022.

"Transformation of Carbohydrates and Carbon Dioxide (or other C1 Feedstocks) into Sustainable Polycarbonates *via* Transition Metal- and Organobase-catalyzed Synthetic Routes: With chemical diversity, and structural metamorphoses-driven compositional and regiochemical outcomes", ACS

Award in Polymer Chemistry in Honor of Robert Waymouth, ACS Spring 2022, San Diego, CA, March 23, 2022.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Department of Chemistry, University of Tennessee, Knoxville, TN, March 3, 2022.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Grandpierre Lecture, Chandler Society for Undergraduate Chemistry, Columbia University, New York, NY, February 17, 2022.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Eastman Lectureship, Carolina Colloquium Series, Department of Chemistry, University of North Carolina, Chapel Hill, NC, February 10, 2022.

"JACS in Conversation with Professor Karen L. Wooley", a special 18.5 minute interview that has been disseminated broadly after launching on YouTube on January 27, 2022 https://www.youtube.com/watch?v=i_HDS_gtpis as a casual and inspirational discussion of experiences, including insightful advice for future generations of scientists.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", TAMU – PVAMU Chemistry Discussion, Texas A&M University, College Station, TX, November 20, 2021.

"Complex Nanostructured Materials Enabled by Controlled Radical Polymerization", ACS Division of Polymer Chemistry, Controlled Radical Polymerization Conference, Charleston, SC, November 15, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Chemistry Club Lecture Series, University of Evansville, Evansville, IN, November 12, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Adaptive Polymer Synthesis Methodologies, Dresden Polymer Discussion 17 Conference, Meissen, Germany, October 25, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Macromolecular Chemistry, Virtual *via* Zoom, University of Bayreuth, Bayreuth, Germany, October 20, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Phil and Penny Knight Campus Distinguished Lecture Series, Online *via* YouTube and in person, University of Oregon, Eugene, OR, October 12, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", BioInterface Workshop: Medical Device Pioneers, 'Leading the Surface Science Industry for More Than 20 Years' Series, Surfaces in Biomaterials Foundation, Virtual *via* Zoom, September 8, 2021.

"Transformation of carbohydrate-based small molecules and polymers into environmental and biomedical materials", 2021 Henkel Award for Outstanding Graduate Research in Polymer Science & Engineering Symposium in Honor of Austin M. Evans, Virtual, 262nd ACS National Meeting, Atlanta, GA, August 25, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", 2021 *Journal of Polymer Science* Innovation Award Symposium in Honor of Garret M. Miyake, Virtual, 262nd ACS National Meeting, Atlanta, GA, August 24, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", CiTQ Multidisciplinary Seminar, Universitat Rovira i Virgili, Virtual *via* Microsoft Teams, Tarragona, Spain, July 15, 2021.

Featured Faculty Panel Member, "Women, Wealth & Wisdom Program", hosted annually by Texas A&M Foundation, Virtual *via* Zoom, College Station, TX, June 2, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Department of Chemistry and Chemical Biology Seminar Series, McMaster University, Virtual *via* Zoom, Hamilton, Ontario, Canada, May 13, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", American Chemical Society-affiliated POLY PMSE Graduate Student Chapters Macromolecular Summer Seminar Series, Virtual *via* Zoom, May 11, 2021.

"Grand Challenges in Polymer Science & Soft Matter – MANY Diverse Possibilities (sociopolitical, educational, technological, technical…): Strategies to Afford Natural Product-based Polymer Materials with Consideration of the End Game", Grand Challenges in Polymer Science & Soft Matter, Virtual Webinar, *ACS Au Journals*, April 29, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", National Academy of Sciences (NAS) Chemistry Section 14 Meeting, Virtual *via* Zoom, April 22, 2021.

"My Academic Journey and Current Research Developing Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", A Discussion with Chemistry Capstone Students, Department of Chemistry & Biochemistry, Southwestern University, Virtual *via* RingCentral, Georgetown, TX, April 19, 2021.

Panel Member, "TAMU Female Faculty Advising, Department of Chemistry, Session I", hosted by Women in Science and Engineering (WISE), Texas A&M University, Virtual *via* Zoom, College Station, TX, March 22, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Inaugural Greg L. Baker Memorial Lectureship, Department of Chemistry, Michigan State University, Virtual *via* Zoom, East Lansing, MI, March 18, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Chemical Science Graduate Seminar, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia, Virtual *via* Zoom, January 24, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Seminar of the Excellence Scientist, Seoul National University, Seoul, South Korea, Virtual Program *via* Zoom, January 14, 2021.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Applied Polymer Technology Extension Consortium (APTEC) 8th Annual Research Symposium, *via* Gather and Zoom, November 6, 2020.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", Texas A&M University-Los Alamos National Laboratory (TAMU-LANL) Polymer Science / Soft Matter Seminar Series, *via* WebEx, July 27, 2020.

Panel Member for the "Scientific Publishing" topic as part of the "TAMU Chemistry Graduate School Seminar Series" for undergraduate students, as a substitute for the Research Experiences for Undergraduates program due to COVID-19, *via* Zoom, June 23, 2020.

"Congratulations, 2020 Class of Texas A&M University Chemistry Majors!!", Texas A&M University, Department of Chemistry conferral of degrees ceremony, broadcast *via* zoom (TAMU internal link: https://zoom.us/j/95465487839, external link: https://ttvn.tamus.edu/live/single-event/265244), May 8, 2020.

"Natural Product-derived Functional Polymer Materials that Address Health-Food-Energy-Water Challenges", Department of Chemistry, Sam Houston State University, Huntsville, TX, February 21, 2020.

"Natural Product-derived Functional Polymer Materials that Address Health-Food-Energy-Water Challenges: Biomaterials emphasis", Nanyang Technological University, School of Chemical and Biomedical Engineering, Singapore, November 19, 2019.

"Natural Product-derived Functional Polymer Materials that Address Health-Food-Energy-Water Challenges: Biomaterials emphasis", ACS Publications Symposium Innovation in Materials Science & Technology, Singapore, November 16, 2019.

"Natural Product-derived Functional Polymers that Address Health-Food-Energy-Water Challenges", Gladys Yee Peng Lectureship, "Highlands in Chemistry" Seminar Series, Virginia Tech, Blacksburg, VA, November 8, 2019.

"Natural Product-derived Functional Polymers that Address Health-Food-Energy-Water Challenges", Dow, Technical Community Organization, The Dow Chemical Company, Collegeville, PA, October 10, 2019.

"The diversity of polypeptide materials: From fundamental linear homopolymer synthesis to bottlebrush architectures, polyelectrolytes, block polymer hydrogels, to applied drug delivery systems, conductive composite materials and organic radical polymers", PMSE Symposium: Design, Synthesis & Engineering of Polypeptides for Biological & Biomedical Application, 258th ACS National Meeting, San Diego, CA, August 26, 2019.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials, with attention to sustainability and degradability", Texas A&M MD/PhD Summer Seminar Series-Bryan, College Station, Houston and Temple Campuses, Texas A&M Health Science Center, Bryan, TX, July 31, 2019.

"Three Decades of Examples Illustrating the Importance of Rigorous Characterization Studies: Understanding mechanistic details for the construction of macromolecular systems (many times, taking advantage of challenges, side reactions, failures), and Determining their composition, structure, properties, and performance parameters; Designing Materials to Meet Societal Needs", Gel Permeation Chromatography - GPC2019, New Orleans, LA, July 10, 2019.

"Synthetic Strategies by which to Afford Natural Product-based Polymer Materials: Impacts on sustainability, life, health and the environment", 2019 US-Japan Symposium on Polymer Chemistry, Stanford University, Stanford, CA, June 18, 2019.

"Natural Product-Derived Functional Polymer Materials", Alexander M. Cruickshank Lecturer, Polymers Gordon Research Conference, Mount Holyoke College, South Hadley, MA, June 13, 2019.

"Natural Product-based Polymers that Address Health-Food-Energy-Water Challenges: Utilization of the inherent stereochemical and functional diversities of natural products to produce functional materials", 2019 Marple-Schweitzer Lecture, Department of Chemistry Northwestern University, Evanston, IL, May 22, 2019.

"Natural Product-based Polymers that Address Food-Energy-Water Challenges: Utilization of the inherent stereochemical and functional diversities of natural products to produce functional materials", 59th High Polymer Research Group Conference, Pott Shrigley, UK, April 29, 2019.

"Celebration of the Accomplishments of Matthew L. Becker: From peptide-polymer conjugates and peptide-functionalized shell crosslinked knedel-like nanoparticles (SCKs) as a Ph.D. student to a diverse range of biologically-active functional polymer materials", POLY Symposium: Carl S. Marvel Award for Creative Polymer Chemistry in Honor of Matthew L. Becker, 257th ACS National Meeting, Orlando, FL, April 2, 2019.

"Utilization of the Inherent Stereochemical and Functional Diversities of Peptide or Carbohydrate Natural Products to Produce Unique Biomimetic Materials", PMSE Symposium: Biomimetic Materials, 257th ACS National Meeting, Orlando, FL, April 2, 2019.

"Functional Hybrid Inorganic-Organic Nanomaterials (HIONs) Designed for Advanced Applications and Sustainability", PMSE Symposium: Hybrid Functional Materials from Controlled Assembly of Polymer & Inorganic Nanoparticles, 257th ACS National Meeting, Orlando, FL, April 1, 2019.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", Senior Class Speaker, Department of Chemistry, Colby College, Waterville, Maine, March 22, 2019.

"The Development of Synthetic Methodologies for the Transformation of Regiochemically- and Stereochemically-diverse Natural Products into Functional Polymer Systems, Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials", Lansdowne Lecture, Technical Seminar, Department of Chemistry, University of Victoria, Victoria, Canada, March 14, 2019.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", Lansdowne Lecture, Department of Chemistry, University of Victoria, Victoria, Canada, March 13, 2019.

"The Development of Synthetic Methodologies for the Transformation of Regiochemically- and Stereochemically-diverse Natural Products into Functional Polymer Systems", Department of Chemistry, University of British Columbia, Vancouver, Canada, March 12, 2019.

"The Development of Synthetic Methodologies for the Transformation of Regiochemically- and Stereochemically-diverse Natural Products into Functional Polymer Systems", Department of Chemistry, Simon Fraser University, Vancouver, Canada, March 11, 2019.

"The Power of Polymer Chemistry to Unleash the Potential of Functionally-sophisticated Nanoscopic Macromolecules with Attention to the Environment, Health and Sustainability", Department of Chemistry, Portland State University, Portland, OR, March 8, 2019.

"My Journey from a Small Town in Oregon to the W. T. Doherty-Welch Chair in Chemistry, University Distinguished Professor and Presidential Impact Fellow at Texas A&M University", Student Affiliates of the American Chemical Society, Department of Chemistry, Texas A&M University, College Station, TX, February 27, 2019.

"The Power of Polymer Chemistry to Unleash the Potential of Functionally-sophisticated Nanoscopic Macromolecules with Attention to the Environment, Health and Sustainability", Stuart Rosenfeld Memorial Lecture, Department of Chemistry, Smith College, Northampton, MA, February 19, 2019.

"The Power of Polymer Chemistry to Unleash the Potential of Functionally-sophisticated Nanoscopic Macromolecules with Attention to the Environment, Health and Sustainability", Department of Chemistry, Hendrix College, Conway, AR, February 11, 2019.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials", 30th Annual Frontiers in Chemistry Symposium, The Scripps Research Institute, La Jolla, CA, February 8, 2019.

"The Power of Polymer Chemistry to Unleash the Potential of Functionally-sophisticated Nanoscopic Macromolecules with Attention to the Environment, Health and Sustainability", College of Science Friday Seminar Series, Texas A&M University, College Station, TX, February 1, 2019.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce functional polymer materials designed for advanced applications and sustainability", Xuetang Lecture, Department of Chemistry, Tsinghua University, Beijing, China, December 19, 2018.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", 2018 Marino Xanthos Memorial Lecture, Department of Chemical Engineering, New Jersey Institute of Technology, Newark, NJ, October 24, 2018.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials", 15th Biennial Senter Symposium on Frontiers in Organic Chemistry, Department of Chemical & Biomolecular Engineering, University of Illinois at Urbana-Champaign, Urbana, IL, October 20, 2018.

"Interface-promoted assembly and disassembly processes for rapid manufacture and transport of complex hybrid nanomaterials, originating from natural products with designs for advanced applications and sustainability", Department of Chemistry, Trinity University, San Antonio, TX, September 20, 2018.

"Complex, amphiphilic hyperbranched fluoropolymer poly(ethylene glycol) crosslinked networks: Unique characteristics for broad applications from anti-biofouling coatings, to hosts for promoted guest release, to anti-icing materials", 2018 *Biomacromolecules/Macromolecules* Young Investigator Award in Honor of Matthew Gibson and Jeremiah Johnson, 256th ACS National Meeting, Boston, MA, August 22, 2018.

"Interface-promoted assembly and disassembly processes for rapid manufacture and transport of complex hybrid nanomaterials", POLY TOSOH Lectures, 256th ACS National Meeting, Boston, MA, August 21, 2018.

"Challenges and Opportunities: How to Succeed in Research and *Enjoy* a *Productive* Academic Career-Balancing teaching, research and service with "me" time", PMSE Future Faculty Symposium, 256th ACS National Meeting, Boston, MA, August 21, 2018.

"A celebration of the accomplishments of Rachel O'Reilly: Click functionalization of nanostructures as a postdoc to designer polymer nanostructures *via* biomimetic templating and crystallization-driven supramolecular assembly", Rachel K. O'Reilly, *J. Polym. Sci.* Innovation Award, PMSE Symposium, 256th ACS National Meeting, Boston, MA, August 19, 2018.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials", Sun Yat-sen University, Guangzhou, China, August 2, 2018.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", Department of Chemical and Environmental Engineering, Institute for Advanced Study (IAS) Distinguished Lecture, Hong Kong University of Science and Technology, Hong Kong, China, August 1, 2018.

"Unique Behaviors for Molecular Bottlebrush Block Polymers vs. Linear Analogs: Solution- vs substrate-mediated assembly behaviors", 13th International Symposium on Macrocyclic and Supramolecular Chemistry, Quebec City, Canada, July 8, 2018.

"Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials; Goals toward beneficial health and environmental impacts", National Graduate Research Polymer Conference, University of Minnesota, Minneapolis, MN, June 12, 2018.

"Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials; Goals toward beneficial health and environmental impacts", 2018 Bordeaux Polymer Conference, Bordeaux, France, May 30, 2018.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials", Molecular Discovery Seminar Series, National Cancer Institute, Center for Cancer Research, Frederick, MD, April 19, 2018.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", Department of Chemical and Environmental Engineering, Yale University, New Haven, CT, April 4, 2018.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", Department of Chemistry, Boston University, Boston, MA, April 2, 2018.

"DMREF: Collaborative Research: Interface-promoted Assembly and Disassembly Processes for Rapid Manufacture and Transport of Complex Hybrid Nanomaterials", Materials Genome Initiative Principal Investigators Meeting, University of Maryland, College Park, MD, March 26, 2018.

"Unique Behaviors for Molecular Bottlebrush Block Polymers vs. Linear Analogs: Solution- vs substrate-mediated assembly behaviors", PMSE Polymers with Complex Architecture, 255th ACS National Meeting, New Orleans, LA, March 20, 2018.

"Transformation of Natural Products into Functional Polymer Systems, with guidance by Biomedical Application Targets: Utilization of the inherent stereochemical and functional diversities of natural products while also regenerating those natural products upon hydrolytic degradation", POLY International Symposium on Biorelated Polymers, 255th ACS National Meeting, New Orleans, LA, March 20, 2018.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials", Chemistry and Biochemistry Seminar Series, University of Texas at Dallas, Richardson, TX, March 9, 2018.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", Distinguished Polymer Lecturer Series, Polymer Chemistry Initiative, Department of Chemistry, Pittsburg State University, Pittsburg, KS, March 2, 2018.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials", Kansas Polymer Research Center, Pittsburg State University, Pittsburg, KS, March 1, 2018.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials",

William G. Dauben Memorial Lecture in Organic Chemistry, Department of Chemistry, University of California, Berkeley, Berkeley, CA, February 6, 2018

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", Department of Chemistry, Stony Brook University, Stony Brook, NY, January 25, 2018.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", Department of Fibre and Polymer Technology, KTH Royal Institute of Technology, Stockholm, Sweden, December 14, 2017.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials", Stein-Covestro Honorary Seminar in Polymer Science, University of Massachusetts-Amherst, Amherst, MA, November 30, 2017.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", The Xingda Lecture Series, College of Chemistry & Molecular Engineering, Peking University, Beijing, China, November 10, 2017.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials", Department of Biomedical Engineering, Peking University, Beijing, China, November 9, 2017.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique biomedical materials", Department of Biomedical Engineering, Shanghai Jiao Tong University, Shanghai, China, November 8, 2017.

"Translation of Fundamental Chemistry to Functional Nanoscopic Macromolecules Designed for Advanced Applications", Department of Chemistry, Shanghai Jiao Tong University, Shanghai, China, November 7, 2017.

"Translation of Fundamental Chemistry to Functional Nanoscopic Macromolecules Designed for Advanced Applications", Bernard L. Feringa Advanced Chemistry Lecture, East China University of Science & Technology, Shanghai, China, November 7, 2017.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", Graduate Seminar, Department of Chemical & Biomedical Engineering, Florida A&M University-Florida State University, Tallahassee, FL, September 29, 2017.

"Functional Polymer Materials Designed for Advanced Applications and Sustainability", ACS POLY PMSE Student Chapter Seminar, University of Minnesota, Minneapolis, MN, September 12, 2017.

"Functional Polymer Materials Designed for Environmental Remediation and Sustainability", 3rd Functional Polymeric Materials Conference, Rome, Italy, July 9, 2017.

"Polypeptide-based Supramolecular Functional Systems", Chemistry Beyond the Mechanical Bond Symposium, in Honor of Sir J. Fraser Stoddart, Jesus College, University of Cambridge, Cambridge, UK, July 7, 2017.

"Functional Polymer Materials Designed for Environmental Remediation and Sustainability", Four Decades of Research in Honor of Samuel I. Stupp Symposium, Departments of Materials Science & Engineering, Chemistry, Medicine, Biomedical Engineering, Northwestern University, Evanston, IL, June 23-25, 2017.

"Translation of Fundamental Chemistry to Materials Designed for Advanced Applications", Research Experiences for Undergraduates (REU) Presentation, Department of Chemistry, Texas A&M University, College Station, TX, June 1, 2017.

"Functional Polymer Materials Designed for Environmental Remediation and Sustainability", 20th Annual Robert W. Murray Lecture, Department of Chemistry & Biochemistry, University of Missouri-St. Louis, St. Louis, MO, April 17, 2017.

"Translation of Fundamental Chemistry to Materials Designed for Advanced Applications", Departments of Chemical Engineering and Chemistry, University of Texas at Austin, Austin, TX, April 12, 2017.

"Functionally-versatile Polypeptide Materials", Polymer Chemistry (RSC) Lectureship in Honor of Feihe Huang, 253rd ACS National Meeting, San Francisco, CA, April 4, 2017.

"Historical Evolution of Degradable Polymers in the Wooley Laboratory: From poly(silyl ester)s to natural product-based polycarbonates", 50th Anniversary Celebration of *Macromolecules*, 253rd ACS National Meeting, San Francisco, CA, April 3, 2017.

"Magnetically-Active Hybrid Inorganic-organic Network Materials", PMSE Young Investigator Symposium, 253rd ACS National Meeting, San Francisco, CA, April 3, 2017.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique materials", Covestro Lecturer, The 2016-2017 Covestro Lectures, Department of Chemistry and Chemical Biology, Cornell University, Ithaca, NY, March 1-2, 2017.

"Translation of Fundamental Chemistry to Functional Nanoscopic Macromolecules Designed for Advanced Applications", The 2016-2017 Covestro Lectures, Department of Chemistry and Chemical Biology, Cornell University, Ithaca, NY, March 1-2, 2017.

"Environmental Remediation and Sustainability", International Symposium on Visionary Trends in Molecular Science, Tianjin University, Tianjin, China, February 24-26, 2017

"Environmental Remediation and Sustainability", Department of Chemistry Colloquium, Dartmouth College, Hanover, NH, January 12, 2017.

"Environmental Remediation and Sustainability", Nanoscale Science and Engineering Grantees Conference, National Science Foundation, Arlington, VA, December 12, 2016.

"Translation of Fundamental Chemistry to Functional Nanoscopic Macromolecules Designed for Advanced Applications", Distinguished Women in Science Seminar Series, Stanford University, Stanford, CA, November 7, 2016.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique materials", Department of Chemistry Colloquium, The Pennsylvania State University, State College, PA, October 27, 2016.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique materials", Fall 2016 IMX "Advances in Materials" Seminar Series, École Polytechnique Fédérale De Lausanne, Lausanne, Switzerland, October 10, 2016.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique materials", Aldrich Materials Lecturer, MIT Program for Polymer Science and Soft Matter, Massachusetts Institute of Technology, Cambridge, MA, September 21, 2016.

"Translation of Fundamental Chemistry to Functional Nanoscopic Macromolecules Designed for Advanced Applications", 2016 Chemistry Seminar Series, Boston College, Chestnut Hill, MA, September 20, 2016.

"Expanding the Scopes of Synthetic Organic and Polymer Chemistries: Utilization of the inherent stereochemical and functional diversities of natural products to produce unique materials", Stereochemistry Gordon Research Conference, Salve Regina University, Newport, RI, July 27, 2016.

"Advanced Applications for Sophisticated Nanoscopic Devices (Realized by the power of chemistry, with attention to sustainability)", 2016 Japan-USA Seminar on Polymer Synthesis, Niseko Village, Hokkaido, Japan, June 26, 2016.

"Translation of Fundamental Chemistry to Functional Nanoscopic Macromolecules Designed for Advanced Applications", Peter Timms Lectureship, University of Bristol, Bristol, UK, May 25, 2016.

"Early Career Path into Science How to Succeed in Research and Enjoy a Productive Academic Career: Balancing teaching, research and service with 'me' time", Informal Presentation for Post-doctoral and Doctoral Students, University of Bristol, Bristol, UK, May 25, 2016.

"Translation of Fundamental Chemistry to Materials Designed for Advanced Applications", National Science Foundation Distinguished Lecture Series in Mathematical and Physical Sciences, Arlington, VA, May 23, 2016.

"Translation of Fundamental Chemistry to Functional Nanoscopic Macromolecules Designed for Advanced Applications", Melville Lectureship, University of Cambridge, Cambridge, UK, May 5, 2016.

"Natural Product-based Engineering Polymers: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", Melville Lectureship, University of Cambridge, Cambridge, UK, May 3, 2016.

"Early Career Path into Science How to Succeed in Research and Enjoy a Productive Academic Career: Balancing teaching, research and service with 'me' time", Informal Presentation for Post-doctoral and Doctoral Students, University of Cambridge, Cambridge, UK, May 3, 2016.

"Translation of Fundamental Chemistry to Functional Nanoscopic Macromolecules Designed for Advanced Applications", University of Texas San Antonio, San Antonio, TX, April 15, 2016.

"History of SCKs as an interdisciplinary educational tool, including the Butler Laboratory" 2016 Paul J. Flory Award in Polymer Education Award Symposium in honor of Kenneth Wagener, 251st ACS National Meeting, San Diego, CA, March 13, 2016.

"Stimuli-responsive polymers, nanostructures and macroscopic crosslinked networks", 251st ACS National Meeting, San Diego, CA, March 13, 2016.

"Synthetic Methodologies and Advanced Applications for Sophisticated Nanoscopic Devices", Dow Lecturer on Sustainable Chemistry, Colorado State University, Department of Chemistry Colloquium, Fort Collins, CO, February 26, 2016.

"Translation of Fundamental Chemistry to Functional Nanoscopic Macromolecules Designed for Advanced Applications", Cherry Emerson Colloquium Seminar, Georgia Institute of Technology, Atlanta, GA, February 18, 2016.

"Translation of Fundamental Chemistry to Functional Nanoscopic Macromolecules Designed for Advanced Applications", Plenary lecture at the Nanoscience and Nanotechnology Institute (NNI) 2016 Winter Symposium, University of Iowa, Iowa City, IA, February 12, 2016.

"Translation of Fundamental Chemistry to Materials Designed for Advanced Applications", Inaugural Aldrich Lecture, Tulane University, New Orleans, LA, February 1, 2016.

"Translation of Fundamental Chemistry to Materials Designed for Advanced Applications" , Waseda University, Tokyo, Japan, January 15, 2016.

"Therapeutic polymer nanoparticles designed for treatment of pulmonary and urinary tract diseases", Pacifichem 2015, Honolulu, HI, December 19, 2015.

"The importance of the intricate linkage of the needs of particular biomedical applications to the design characteristics of functionally-sophisticated nanoscopic macromolecules to achieve efficacy", Pacifichem 2015, Honolulu, HI, December 18, 2015.

"Strategies toward functional polymer materials and nanoscopic devices derived from natural products", 14th Pacific Polymer Conference, Kauai, HI, December 10, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", Ethel Ashworth-Tsutsui Memorial Lecture, Texas A&M University, College Station, TX, November 19, 2015.

"Natural Product-based Engineering Polymers: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", Ralph and Helen Oesper Award Symposium, University of Cincinnati, Cincinnati, OH, November 13, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", Procter & Gamble, Cincinnati, OH, November 12, 2015.

"Natural Product-based Engineering Polymers: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", Oregon State University, Department of Chemistry, Corvallis, OR, November 5, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices (Realized by the Power of Chemistry)", Oregon State University, College of Science Distinguished Lecture Series, Corvallis, OR, November 4, 2015.

"Natural Product-based Engineering Polymers: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", University of Washington, Molecular Engineering & Sciences Institute, Seattle, WA, October 20, 2015.

"The Power of Chemistry to Unleash the Potential of Functionally-sophisticated Nanoscopic Macromolecules", The First-Year Program in Chemistry Lecture Series, Texas A&M University, College Station, TX, October 13, 2015.

"Natural Product-based Engineering Polymers: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", Reilly Lectureship, University of Notre Dame, Notre Dame, IN, September 30, 2015.

"The importance to link needs of particular biomedical applications to the design characteristics of functionally-sophisticated nanoscopic macromolecules to achieve efficacy", Reilly Lectureship, University of Notre Dame, Notre Dame, IN, September 29, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", Reilly Lectureship, University of Notre Dame, Notre Dame, IN, September 28, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", DuPont Experimental Station, Wilmington, DE, September 2, 2015.

"Strategies toward functional polymer materials and nanoscopic devices derived from natural products", 250th ACS National Meeting, Boston, MA, August 17, 2015.

"Targeted Applications as Inspirations to Develop Strategies toward Functionally-Sophisticated Nanoscopic Macromolecules with Diverse Compositions, Structures, and Properties", Plenary lecture at the 250th ACS National Meeting, Boston, MA, August 16, 2015, https://www.dropbox.com/sh/a50e13qbi976cka/AABVL96It9lhmjLpuPI_S_NTa/ACS%20Meetings%20-%202015%20Boston/1-Sunday%208-16-2015/D-ACS%20Plenary%20Symposium%EF%80%A2BCEC%EF%80%A2Ballroom%20West?dl=0.

"The importance to link needs of particular biomedical applications to the design characteristics of functionally-sophisticated nanoscopic macromolecules to achieve efficacy", Keynote lecture at the IUPAC-2015 45th World Chemistry Congress, Bexco, Busan, Korea, August 10, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", Keynote lecture at the 12th International Conference on Materials Chemistry (MC12), University of York, UK, July 20, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", National Science Foundation-Research Experiences for Undergraduates (NSF-REU), Texas A&M University, College Station, TX, July 2, 2015.

"The importance to link the needs of biomedical applications to the design characteristics of functionally-sophisticated nanoscopic macromolecules to achieve efficacy", Plenary lecture at the European Polymer Congress, EPF2015, Dresden, Germany, June 26, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", Molecular Science Forum, Institute of Chemistry, the Chinese Academy of Sciences, Beijing, China, May 27, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", University of Science and Technology of China, Hefei, China, May 25, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", Zhejiang University, Hangzhou, China, May 22, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", Fudan University, Shanghai, China, May 20, 2015.

RSC Centenary Prize Tour:

"The importance to link the needs of biomedical applications to the design characteristics of functionally-sophisticated nanoscopic macromolecules to achieve efficacy", University of Warwick, Coventry, UK, May 8, 2015.

"Natural Product-based Engineering Polymers: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", University of Sheffield, Sheffield, UK, May 7, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", University of Leeds, Leeds, UK, May 5, 2015.

"Advanced Applications for Sophisticated Nanoscopic Devices", University College Dublin, Dublin, Ireland, April 30, 2015.

"Targeted Applications as Inspirations to Develop Strategies toward Functionally-Sophisticated Nanoscopic Macromolecules with Diverse Compositions, Structures, and Properties", an outreach event with Silsbee High School visitors, Texas A&M University, April 20, 2015.

"A Celebration of the Award Winners", POLY/PMSE Plenary Lecture and Awards Reception, 249th ACS National Meeting, Denver, CO, March 25, 2015.

"Advance of sequential controlled polymerizations for the design of molecular brush block copolymers: Sophisticated functional single molecule materials and hierarchically-assembled cluster properties", Symposium in Honor of Nikos Hadjichristidis, ACS Award in Polymer Chemistry, 249th ACS National Meeting, Denver, CO, March 24, 2015.

"Importance of the intricate linkage of the needs of particular biomedical applications to the design characteristics of functionally-sophisticated nanoscopic macromolecules to achieve efficacy", Symposium in Honor of Todd Emrick, Carl Marvel Creative Polymer Chemistry Award, 249th ACS National Meeting, Denver, CO, March 24, 2015.

"Targeted applications as inspirations to develop strategies toward polymer materials and nanoscopic devices derived from natural products", Symposium in Honor of Geoff Coates, ACS Award in Applied Polymer Science, 249th ACS National Meeting, Denver, CO, March 22, 2015.

"Targeted Applications as Inspirations to Develop Strategies toward Functionally-sophisticated Nanoscopic Macromolecules with Diverse Compositions, Structures, and Properties", University of Colorado at Boulder, Boulder, CO, February 9, 2015.

"Targeted Applications as Inspirations to Develop Strategies toward Functionally-sophisticated Nanoscopic Macromolecules with Diverse Compositions, Structures, and Properties", University of North Texas, Denton, TX, November 14, 2014.

"Therapeutic Polymer Nanoparticles Designed for Treatment of Pulmonary and Urinary Tract Diseases", Center for Targeted Therapeutics and Translational Nanomedicine, 2014 Symposium, University of Pennsylvania, Philadelphia, PA, November 12, 2014.

"Natural Product-based Engineering Polymers: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", Tufts University, Medford, MA, November 3, 2014.

"Advanced Applications for Sophisticated Nanoscopic Devices", Texas Christian University, Fort Worth, TX, October 23, 2014.

"Natural Product-based Engineering Polymers: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", Case Western Reserve University, Frontiers in Chemistry Seminar, Cleveland, OH, October 9, 2014.

"Simple Strategies to Afford Functionally-sophisticated Nanoscopic Macromolecules as Discrete Objects and Hierarchical Supramolecular Assemblies", The National Aeronautics and Space Administration Glenn Research Center, Cleveland, OH, October 9, 2014.

"Advanced Applications for Sophisticated Nanoscopic Devices", Case Western Reserve University, ACES + Seminar, Cleveland, OH, October 8, 2014.

"Simple Strategies to Afford Functionally-sophisticated Nanoscopic Macromolecules as Discrete Objects and Hierarchical Supramolecular Assemblies", Dow Chemical Company, Freeport, TX, September 30, 2014.

"Design of Polymeric Carriers for Pulmonary Medicine", National Heart, Lung, and Blood Institute Workshop: Precision Therapeutics Delivery for Lung Diseases: State-of-the-art technologies and lung biology, Bethesda, MD, September 25, 2014.

"Multi-functional, Stimuli-responsive Polymer-based Technologies Derived from Natural Products", 6th Biennial Heart Valve Biology & Tissue Engineering Meeting, The Society for Heart Valve Disease, London, UK, September 11, 2014.

"Therapeutic Polymer Nanoparticles Designed for Treatment of Pulmonary and Urinary Tract Diseases", Gordon Research Conference, Drug Carriers in Medicine & Biology, Waterville Valley, NH, August 20, 2014.

"Multi-functional, Stimuli-responsive Nanoparticle Technologies Derived from Natural Products: Innovative strategies for their construction and utilization as theranostic agents", Frontiers of Polymer Colloids: From Synthesis to Macro-Scale and Nano-Scale Applications, Prague, Czech Republic, July 23, 2014.

"Simple Strategies to Afford Functionally-sophisticated Nanoscopic Macromolecules as Discrete Objects and Hierarchical Supramolecular Assemblies", ExxonMobil Chemical Company, Baytown, TX, May 16, 2014.

"Design of Polymer Nanoparticles for Treatment of Pulmonary Infections or Cancers" and "The Transformation of Natural Products into Engineering Polymers and Functional Nanoscopic Objects: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", University of Wisconsin, School of Pharmacy, Drug Delivery Colloquium, April 11, 2014.

"Work Life Balance", Roadmap for a Successful Academic Career Workshop, Texas A&M University ADVANCE Center, April 7, 2014.

"Targeted Applications as Inspirations to Develop Strategies toward Functionally-sophisticated Nanoscopic Macromolecules with Diverse Compositions, Structures, and Properties", 247th American Chemical Society National Meeting, ACS Award in Polymer Chemistry award address, Dallas, TX, March 17, 2014.

"The Transformation of Natural Products into Engineering Polymers and Functional Nanoscopic Objects: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", Triangle MRSEC Seminar, Duke University, March 6, 2014.

"The Transformation of Natural Products into Engineering Polymers and Functional Nanoscopic Objects: A special emphasis toward (degradable) materials for orthopedic, drug delivery and other applications", Materials Research Outreach Program, University of California, Santa Barbara, CA, February 5, 2014.

"Simple Strategies to Afford Functionally-sophisticated Nanoscopic Macromolecules as Discrete Objects and Hierarchical Supramolecular Assemblies", King Abdullah University of Science and Technology (KAUST), Saudi Arabia, December 10, 2013.

"Simple Strategies to Afford Functionally-sophisticated Nanoscopic Macromolecules as Discrete Objects and Hierarchical Supramolecular Assemblies", University of South Carolina, Department of Chemistry, ACS POLY Student Chapter Seminar and Division of Organic Chemistry Seminar, Columbia, SC, November 14, 2013.

"Simple Strategies to Afford Functionally-sophisticated Nanoscopic Macromolecules as Discrete Objects and Hierarchical Supramolecular Assemblies", Johns Hopkins University, Department of Materials Science & Engineering, Baltimore, MD, October 16, 2013.

"Simple Strategies to Afford Functionally-sophisticated Nanoscopic Macromolecules as Discrete Objects and Hierarchical Supramolecular Assemblies", Polymers for Advanced Technologies Conference, Berlin, Germany, September 30, 2013.

"Simple Strategies to Afford Functionally-sophisticated Nanoscopic Macromolecules as Discrete Objects and Supramolecular Assemblies", 246th American Chemical Society National Meeting, Indianapolis, IN, September 10, 2013.

"The Importance of Chemical Control to Afford Functionally-sophisticated and Biologically-active Nanoscopic Macromolecules as Discrete Objects and Supramolecular Assemblies", Texas Soft Matter Meeting, Texas A&M University, College Station, TX, August 12, 2013.

"Synthetic Methodology Development Leading to Magnetic Oil Recovery Systems, Anti-biofouling/Anti-icing Coatings, Natural Product-based Engineering Materials, and Advanced Photoresist Technologies", The Dow Chemical Company, Freeport, TX, August 5, 2013.

"Wooley Laboratory Overview: Diverse opportunities—from materials to medicine—for well-defined polymer chemistry", NSF-REU Student Summer Research Presentation, Texas A&M University, June 20, 2013.

"Simple Strategies to Afford Functionally-sophisticated Nanoscopic Macromolecules as Discrete Objects and Supramolecular Assemblies", 245th American Chemical Society National Meeting, ACS Award in Applied Polymer Science Symposium in Honor of Mitch Winnik, April 8, 2013.

"Polyphosphoesters as a Platform for the Rapid, Efficient and Versatile Production of Functional, Biologically-active Nanomaterials", Macromolecular Materials Gordon Research Conference, Ventura, CA, January 7, 2013.

"The Development of Non-toxic Anti-fouling Coatings Based Upon Nanoscopic Surface Complexities, and Conceptual Extension to *in vivo* Imaging and Therapeutic Agents", University of Tokyo, Tokyo, Japan, December 14, 2012.

"Degradable Polymers Derived from Polyhydroxyl Natural Products and/or Incorporated into Functional Nanoscopic Objects: A special emphasis toward degradable materials for orthopedic, drug delivery and other applications", 9th SPSJ International Polymer Conference, Kobe, Japan, December 12, 2012.

"Simple Strategies to Afford Functionally-sophisticated Nanoscopic Macromolecules as Discrete Objects and Supramolecular Assemblies: Iterative combinations of covalent and supramolecular chemistries", 2012 USA-Japan Seminar on Polymer Synthesis, Santa Barbara, CA, December 2, 2012.

"The Development of Non-toxic Anti-fouling Coatings Based Upon Nanoscopic Surface Complexities, and Conceptual Extension to *in vivo* Imaging and Therapeutic Agents: Hyperbranched fluoropolymer/oligo(ethylene glycol)-based amphiphilic materials", BASF, Committee for Scientific Innovation & Interaction (CSI^2) Seminar, Wyandotte, MI, November 20, 2012.

"How to Succeed in Research and Enjoy a Productive Academic Career: Balancing teaching, research and service with "me" time ", Texas A&M University, Women's Faculty Network, College Station, TX, November 15, 2012.

"Sophisticated Plastics: Diverse opportunities – from materials to medicine – for well-defined polymer chemistry", College of Charleston, Charleston, SC, October 18, 2012.

"Nanoscopic Polymer Objects of Unique Shapes and Morphologies, and Well-defined Structures and Dimensions as Controlled Drug Delivery Devices: Design of nanostructures for treatment of cancer, infectious diseases, or acute lung injury", Nebraska Research & Innovation Conference, Lincoln, NE, October 9, 2012.

"Degradable Engineering Polycarbonates Derived from Polyhydroxyl Natural Products", State University of New York, Buffalo, NY, September 19, 2012.

"Combinations of Covalent and Non-covalent Interactions, Applied Iteratively in Various Sequences, to Achieve Unique, Nanoscopic Macromolecular Structures: An emphasis toward polymer nanomedical devices of controlled dimensions, shapes and morphologies", McMaster University, Hamilton, Ontario, Canada, September 17, 2012.

"Bacterial Adhesion Protein-conjugated Polymer Nanoparticles as Antimicrobial Nanodevices that Utilize Bacterial Modes of Epithelial Cell Entry for Effective Treatment Strategies", 244th American Chemical Society Meeting, Philadelphia, PA, August 22, 2012.

"Degradable Polymers Derived from Polyhydroxyl Natural Products and/or Incorporated into Functional Nanoscopic Objects: A special emphasis toward degradable materials for orthopedic, drug delivery and other applications", ACS Division of Organic Chemistry Graduate Research Symposium, Boulder, CO, July 27, 2012.

"Nanoscopic Polymer Objects of Unique Shapes and Morphologies and Well-defined Structures and Dimensions as Controlled Drug Delivery Devices", Warwick Polymers 2012, University of Warwick, Coventry, UK, July 10, 2012.

"Wooley Laboratory Overview: Diverse opportunities—from materials to medicine—for well-defined polymer chemistry", NSF-REU Student Summer Research Presentation, Texas A&M University, July 5, 2012.

"The Development of Non-toxic Anti-fouling Coatings Based Upon Nanoscopic Surface Complexities", Office of Naval Research Biofouling/Coatings Program Review, Seattle, WA, June 22, 2012.

"Degradable Polymers Derived from Polyhydroxyl Natural Products and/or Incorporated into Functional Nanoscopic Objects: A special emphasis toward degradable materials for orthopedic, drug delivery and other applications", Eldgenössische Technische Hochschule Zürich; Swiss Federal Institute of Technology Zurich, Switzerland, May 14, 2012.

"Nanoscopic Polymer Objects of Unique Shapes and Morphologies, and Well-defined Structures and Dimensions as Controlled Drug Delivery Devices: Design of nanostructures for treatment of cancer or infectious diseases", Louisiana State University, Baton Rouge, LA, April 20, 2012.

"Sophisticated Plastics: Diverse opportunities--from materials to medicine--for well-defined polymer chemistry", St. Edward's University, Austin, TX, April 13, 2012.

"Polycarbonates Derived from Polyhydroxyl Natural Products", 243rd American Chemical Society Meeting, San Diego, CA, March 28, 2012.

"Domain-selective Stimuli-responsive Nanostructures from Stimuli-responsive Block Copolymers and Block Brush Copolymers", 243rd American Chemical Society Meeting, San Diego, CA, March 26, 2012.

"Degradable Polymers: Derived from polyhydroxyl natural products and/or incorporated into functional nanoscopic objects", Cornell University, Ithaca, NY, March 15, 2012.

"Nanoscopic Polymer Objects of Unique Shapes and Morphologies, and Well-defined Structures and Dimensions as Controlled Drug Delivery Devices: Design of nanostructures for treatment of cancer or infectious diseases", University of Technology, Eindhoven, The Netherlands, March 13, 2012.

"Polycarbonates from Polyhydroxy Natural Products", Dutch Polymer Days 2012, Lunteren, The Netherlands, March 13, 2012.

"Strategies Toward Increasingly-complex Polymer Nanostructures: The synthesis, assembly and study of multi-functional, responsive and degradable linear multi-block copolymers to molecular brush architectures", University of Houston, Houston, TX, February 28, 2012.

"Hyperbranched Fluoropolymer/oligo(ethylene glycol)-based Amphiphilic Materials: From multi-compartment nanoparticles to complex nanostructured, non-toxic, anti-biofouling coatings", Texas A&M University at Galveston, Galveston, TX February 27, 2012.

"Degradable Engineering Polycarbonates Derived from Polyhydroxyl Natural Products", University of Akron Milkovich Lecture Series, Akron, OH, February 17, 2012.

"Nanoscopic Polymer Objects of Unique Shapes and Morphologies and Well-defined Structures and Dimensions as Controlled Drug Delivery Devices", University of Akron Milkovich Lecture Series, Akron, OH, February 16, 2012.

"Nanoscopic Polymer Objects of Unique Shapes and Morphologies and Well-defined Structures and Dimensions As Controlled Drug Delivery Devices", 14th Annual International Union of Pure and Applied Chemistry Conference on Polymers and Organic Chemistry, Doha, Qatar, January 9, 2012.

"Strategies Toward Increasingly-complex Polymer Nanostructures: The synthesis, assembly and study of multi-functional, responsive and degradable linear multi-block copolymers to molecular brush architectures", Aquitaine 2011 Polymers Conference, Arcachon, France, October 19, 2011.

"Degradable Engineering Polycarbonates Derived from Polyhydroxyl Natural Products: A special emphasis toward degradable materials for orthopedic applications", Lilly-Brown Lecture 2011, Purdue University, West Lafayette, IN, September 27, 2011.

"Degradable Engineering Polycarbonates Derived from Polyhydroxy Natural Products - A special emphasis toward degradable materials for orthopedic applications", Bayreuth Polymer Symposium '11, Bayreuth, Germany, September 13, 2011.

"Combinations of Covalent and Non-covalent Interactions, Applied Iteratively in Various Sequences, to Achieve Unique, Nanoscopic Macromolecular Structures", The University of North Carolina at Chapel Hill, Chapel Hill, NC, September 9, 2011.

"Power of Polymer Chemistry to Produce Intricate Nanostructures for Advanced Medicine: Nanoscopic polymer objects of unique shapes, morphologies and dimensions as controlled drug delivery devices—(cancer, bladder infections, and lung infections)", American Chemical Society National Meeting, Denver, CO, August 30, 2011.

"Controlled Polymerization of Functional Monomers as a Path to Multi-functional Nanomaterials", American Chemical Society National Meeting, Denver, CO, August 29, 2011.

"Challenges and Opportunities in Academia: How to succeed in research, teaching and service, and enjoy a productive career (with an emphasis on chemistry/science)", Texas A&M University, New Faculty Orientation, College Station, TX, August 22, 2011.

"Wooley Laboratory Overview: Diverse opportunities—from materials to medicine—for well-defined polymer chemistry", Research Experiences for Undergraduate Student Summer Research Presentation, Texas A&M University, College Station, TX, July 7, 2011.

"Challenges and Opportunities in Science: How to succeed in research and enjoy a productive scientific career", Women's Innovation Network Seminar Event at The Dow Chemical Company, Marlborough, MA, June 30, 2011.

"Combinations of Covalent and Non-covalent Interactions, Applied Iteratively in Various Sequences, to Achieve Unique, Nanoscopic Macromolecular Structures: Optical and assembly effects that arise from the placement of active units within stimuli-responsive nanoscopic polymer frameworks", The Dow Chemical Company, Marlborough, MA, June 30, 2011.

"The Development of Non-toxic Anti-fouling Coatings Based Upon Nanoscopic Surface Complexities", Office of Naval Research Biofouling/Coatings Program Review, New Orleans, LA, June 7, 2011.

"Challenges in Science: How to succeed in research and enjoy a productive scientific career", Research Experiences for Undergraduates Career Development Seminar Series, Texas A&M University, College Station, TX, May 31, 2011.

"Tailoring of Nanoscopic Devices through Chemistry: Nanoscopic polymer objects of unique shapes, morphologies and dimensions as controlled drug delivery devices", Dutch BioMedical Materials Annual Meeting, Ermelo, The Netherlands, May 26, 2011.

"Combinations of Covalent and Non-covalent Interactions, Applied Iteratively in Various Sequences, to Achieve Unique, Nanoscopic Macromolecular Assemblies in Solution", Oklahoma State University, Stillwater, OK, April 29, 2011.

"Unique Optical and Assembly Effects that Arise from the Placement of Active Units within Stimuli-responsive Nanoscopic Polymer Frameworks", UK High Polymer Research Group Conference, Pott Shrigley, UK, April 19, 2011.

"Degradable Polycarbonates Designed for Orthopedic Applications", Polymer Technology Center Consortium Meeting, Texas A&M University, College Station, TX, April 8, 2011.

"Degradable Polycarbonates Designed for Orthopedic Applications", The F. A. Cotton Medal for Excellence in Chemical Research Symposium, Texas A&M University, College Station, TX, April 6, 2011.

"Hyperbranched Fluoropolymer/oligo(ethylene glycol)-based Amphiphilic Materials: From multi-compartment nanoparticles to complex nanostructured coatings", American Chemical Society National Meeting, Anaheim, CA, March 30, 2011.

"Degradable Engineering Polycarbonates Derived from Polyhydroxy Natural Products", American Chemical Society National Meeting, Anaheim, CA, March 27, 2011.

"Combinations of Covalent and Non-covalent Interactions, Applied Iteratively in Various Sequences, to Achieve Unique, Nanoscopic Macromolecular Assemblies in Solution", American Chemical Society National Meeting, Anaheim, CA, March 27, 2011.

"Tailoring of Nanoscopic Devices through Chemistry", American Association for Cancer Research Symposium: Nano in Cancer: Linking chemistry, biology, and clinical applications *in vivo*, Miami, FL, January 13, 2011.

"Combinations of Polymerization Strategies and Self Assembly Processes to Afford Functional Polymers and Regioselectively-functionalized Nanoscopic Objects: Complex materials from hierarchical assembly", PacifiChem 2010, Honolulu, HI, December 15, 2010.

"Hyperbranched Fluoropolymer/oligo(ethylene glycol)-based Amphiphilic Materials: From multi-compartment nanoparticles to complex nanostructured coatings", PacifiChem 2010, Honolulu, HI, December 16, 2010.

"Sophisticated Plastics: Diverse opportunities – from materials to medicine – for well-defined polymer chemistry", Hope College, Department of Chemistry, Holland, MI, December 3, 2010.

"Well-defined, Biologically Inspired Nanoscopic Objects Derived from Synthetic Polymer Building Blocks", University of Texas at Dallas, Department of Chemistry, Richardson, TX, November 12, 2010.

"Sophisticated Plastics: Diverse opportunities – from materials to medicine – for well-defined polymer chemistry", Trinity University, Department of Chemistry, San Antonio, TX, November 11, 2010.

"Complex Macromolecular and Nanoscale Structures by Combinations of Living Radical and Ring Opening Polymerizations", 2010 Aldrich Symposium in Materials Science, University of Michigan, Ann Arbor, MI, November 8, 2010.

"Hierarchical Construction of Increasingly Complex, Functional Nanostructures", University of Texas, Department of Chemistry and Biochemistry, Austin, TX, November 5, 2010.

"Sophisticated Plastics: Diverse opportunities – from materials to medicine – for well-defined polymer chemistry", Texas A&M University Society of Plastic Engineers, Texas A&M University, College Station, TX, November 1, 2010.

"Retrosynthetic Analyses of Increasingly Complex Macromolecular Structures", 7th Butler Lectureship Series (a series of ten lectures), Center for Macromolecular Science & Engineering, University of Florida, Gainesville, FL, October 2010.

"Sophisticated Plastics: Diverse opportunities – from materials to medicine – for well-defined polymer chemistry", Indiana State University, Department of Chemistry and Physics, Terre Haute, IA, September 21, 2010.

"Nanoscopic Polymer Objects of Unique Shapes and Morphologies and Well-defined Structures and Dimensions as Controlled Drug Delivery Devices", Symposium on Innovative Polymers for Controlled Delivery, Suzhou, China, September 15, 2010.

"Combinations of Polymerization Strategies to Afford Functional Polymers and Regioselectively-functionalized Nanoscopic Objects", Unilever Global, Shanghai, China, September 8, 2010.

"Well-defined, Biologically Inspired Nanoscopic Objects Derived from Synthetic Polymer Building Blocks", 3rd International NanoBio Conference, Zurich, Switzerland, August 26, 2010.

"Nanoscopically-complex, Amphiphilic, Non-toxic Antifouling Marine Coatings: From hyperbranched fluoropolymer-poly(ethylene glycol)-derived networks to new generation materials", 15th International Congress for Marine Corrosion and Fouling, Newcastle, UK, July 27, 2010.

"Combinations of Polymerization Strategies to Afford Functional Polymers and Regioselectively-functionalized Nanoscopic Objects", 12th Dresden Polymer Discussion, Meiβen, Germany, April 19, 2010.

"Diverse Opportunities—From Materials to Medicine—For Well-defined Polymer Chemistry", Texas A&M University College of Science External Advisory and Development Council Meeting, College Station, TX, March 25, 2010.

"Increasing the Complexity of Materials by Designing Polymer Nanostructures for Hierarchical Assembly: Increasingly-complex nanostructured materials from increasingly-sophisticated macromolecular building blocks", ACS National Meeting, San Francisco, CA, March 23, 2010.

"Combinations of Polymerization Strategies to Afford Functional Polymers and Regioselectively-functionalized Nanoscopic Objects: Complex materials from hierarchical assembly", Virginia Tech, Chevron-Phillips Chemical Company-sponsored Lecture, March 3, 2010.

"Strategic Design of Polymers as Well-defined Materials for Nanomedicine", Texas A&M University Biomaterials Day, College Station, TX, February 22, 2010.

"Strategic Design of Polymers as Well-defined Materials for Nanomedicine", St. Louis Institute for Nanomedicine Symposium, St. Louis, MO, February 13, 2010.

"Increasing the Complexity of Materials by Designing Polymer Nanostructures for Hierarchical Assembly", Cheetham Lecturer, Materials Research Outreach Program Symposium, Santa Barbara, CA, February 3, 2010.

"Hyperbranched Fluoropolymers: From antifouling marine coatings to *in vivo* imaging and therapeutic agents", 11th Pacific Polymer Conference, Cairns, Australia, December 6, 2009.

"Support and Stategies for the Development of Functional Macromolecules and Nanostructures", Texas A&M University Research System Strategic Planning Meeting, College Station, TX, September 30, 2009.

"Synthetic Methodologies for the Preparation of Functional Macromolecules and Nanostructures", 238th American Chemical Society National Meeting, Washington, DC, August 18, 2009; Award address for receipt of the 2009 Herman F. Mark Scholar Award, from the American Chemical Society Division of Polymer Chemistry, sponsored by Elsevier.

"Hyperbranched Fluoropolymers: From antifouling marine coatings to cancer imaging and therapeutic agents", 42nd IUPAC Congress: Chemistry Solutions, Glasgow, UK, August 5, 2009.

"Strategic Design of Polymers as Well-defined Materials for Nanomedicine", 2009 Polymers Gordon Research Conference, Mt. Holyoke College, South Hadley, MA, June 25, 2009.

"Hyperbranched Fluoropolymers: From antifouling marine coatings to cancer imaging and therapeutic agents", 6th International Dendrimer Symposium, Stockholm, Sweden, June 15, 2009.

"Antifouling Accomplished *via* Topographically Complex Polymer Surfaces", ONR Coatings/Biofouling Program Review, Portland, OR, June 11, 2009.

"Overview of Targeted Nanoparticles for Imaging", Symposium on Multimodality Cardiovascular Molecular Imaging, SNM Molecular Imaging Center of Excellence, Bethesda, MD, April 30, 2009.

"Complex Nanoscale Objects as Diverse Carrier Systems for Broad Applications in Nanomedicine", 237th American Chemical Society National Meeting, Salt Lake City, Utah, March 24, 2009.

"Multistage Hierarchical Assembly of Polymers and Nanostructures to Afford Well-defined, Stimulus-responsive and/or Reactive Nanostructures", 237th American Chemical Society National Meeting, Salt Lake City, Utah, March 23, 2009.

"Complex Nanostructures for Imaging and Therapeutic Delivery in the Diagnosis and Treatment of High-grade Gliomas in Children", 237th American Chemical Society National Meeting, Salt Lake City, Utah, March 23, 2009.

"Nanostructures for Imaging and Therapy of Pediatric Brain Cancers: A story of the background and fundamental development of nanotechnologies for medicine", Special Emphasis Pathway in Cancer Biology, Washington University, Department of Pediatrics, St. Louis, MO, February 24, 2009.

"Targeted Delivery Nano-devices for Imaging Probes", 24th Transatlantic Airway Conference: Imaging pulmonary pathology and target molecular signature, Lucerne, Switzerland, January 22, 2009.

"Intricacies with Synthetic Methodology and Nanoparticle Structure in Designing Nanostructured Materials for *in vivo* Imaging and Therapeutic Delivery", Kanagawa University, Symposium on Creation of Nano-Space from Polymer, Yokohama, Japan, December 18, 2008.

"Hyperbranched Fluoropolymers: From antifouling marine coatings to cancer imaging and therapeutic agents:, 2008 Japan-USA Seminar on Polymer Synthesis, Awaji, Hyogo, Japan, December 14, 2008.

"Polymer Chemistry as Applied to the Emerging Field of Nanotechnology: An emphasis on devices for nanomedicine", University of Georgia, Department of Chemistry, Athens, GA, November 18, 2008.

"Polymer Chemistry as Applied to the Emerging Field of Nanotechnology: An emphasis on devices for nanomedicine", University of Connecticut, Polymer Program of the Institute of Materials Science, Storrs, CT, November 7, 2008.

"Hyperbranched Fluoropolymers: From antifouling marine coatings to cancer imaging and therapeutic agents", University of Michigan, Department of Chemistry, Ann Arbor, MI, October 28, 2008.

"The Application of Synthetic Organic Chemistry Concepts toward the Preparation of Well-defined Nanostructures, and Their Transformation into Functional Devices for Nanomedicine", Wayne State University, Frontiers in Chemistry Seminar, Detroit, MI, October 27, 2008.

"Polymer Chemistry as Applied to the Emerging Field of Nanotechnology: An emphasis on devices for nanomedicine", 2008 BMES Annual Fall Meeting, St. Louis, MO, October 3, 2008.

"Polymer Chemistry as Applied to the Emerging Field of Nanotechnology: An emphasis on devices for nanomedicine", Haverford College, Haverford, PA, September 19, 2008.

"Polymer Chemistry as Applied to the Emerging Field of Nanotechnology: An emphasis on devices for nanomedicine", Illinois Wesleyan University, Natural Science Colloquium, Bloomington, IL, September 12, 2008.

"Advances with Regioselective Functionalization of Core-shell Nanostructures: Taking advantage of living polymerizations of functional monomers and efficient, orthogonal chemistries" 236th American Chemical Society National Meeting, Philadelphia, PA, August 18, 2008.

"Polymer Chemistry as Applied to the Emerging Field of Nanotechnology: With an emphasis on devices for nanomedicine", 48th Microsymposium; Polymer Colloids: From Design to Biomedical and Industrial Applications, Prague, Czech Republic, July 22, 2008.

"Functional Nanostructures *via* a Combination of Strategies Involving Functionalized Polymers and Post-assembly Manipulations", the 42nd World Polymer Congress (Macro 2008), Polymers at Frontiers of Science and Technology, Taipei, Taiwan, June 30, 2008.

"Polymer Chemistry as Applied to the Emerging Field of Nanotechnology: With an emphasis on devices for nanomedicine", Rhodia, Inc., Bristol, PA, June 23, 2008.

"Living Radical Polymerization Techniques for Controlled Chain Topology, Designed Bulk Morphology and Surface Topography Applied to Anti-biofouling Coatings", Unilever Research China, Shanghai, China, June 2, 2008.

"What is Nano and Why is it Important?", Nanofuture: You and the Environment Series, Saint Louis Science Center and the Academy of Science of St. Louis, St. Louis, MO, May 6, 2008.

"Polymer Chemistry as Applied to the Emerging Field of Nanotechnology: With an emphasis on devices for nanomedicine", Central Michigan University, Mt. Pleasant, MI, April 23, 2008.

"Synthesis and Characterization of Well-defined Poly(acrylic acid)-containing Homo- and Block (Co)polymers", The Mitsubishi Chemical Corporation, Tokyo, Japan, April 21, 2008.

"RAFT Polymerization of Functional Monomers", 235th American Chemical Society National Meeting, New Orleans, LA, April 6, 2008.

"Shell Crosslinked Knedel-like (SCK) Nanoparticles and Hyperbranched Fluoropolymers (HBFP)", Johns Hopkins University, Department of Chemistry, Baltimore, MD, April 1, 2008.

"Amphiphilic, Nanoscopically Resolved Crosslinked Networks: Unusual surface anti-fouling character, sub-surface host behavior, and bulk modulus property", Rice University, Department of Chemistry, Houston, TX, March 28, 2008.

"Shell Crosslinked Nanoparticles and Hyperbranched Fluoropolymers, Each Designed as Complex Nanostructures for Imaging and Therapeutic Delivery in the Diagnosis and Treatment of Pediatric Brain Cancers", Pediatrics Weekly Department Forum, Washington University, St. Louis, MO, March 25, 2008.

"Polymer Chemistry as Applied to the Emerging Field of Nanotechnology: With emphasis on devices for nanomedicine", University of California-Irvine, Department of Chemistry, Irvine, CA, March 12, 2008.

"Synthetic Methods for the Preparation of Well-defined Nanostructures, Designed as Versatile Scaffolds for Imaging and Therapy of Acute Vascular Injury, Cancer, and other Targets", Institute for Environmental Medicine, University of Pennsylvania Medical Center, Philadelphia, PA, February 8, 2008.

"Polymer Chemistry as Applied to the Emerging Field of Nanotechnology", Society of the Professors Emeriti, Washington University, St. Louis, MO, January 14, 2008.

"Versatility of Polymer Chemistry in Designing Anti-biofouling Surfaces and Materials", Procter & Gamble, Cincinnati, OH, December 17, 2007.

"Integration of Syntheses, Physicochemical Characterization, and Biological Testing *in vitro* and *in vivo* to Address Significant Medical Needs", Frontiers in Chemical Research Distinguished Lecture Series, Texas A&M University, College Station, TX, November 28, 2007.

"Synthetic Methodologies for the Preparation of Polymers and Nanoscale Objects II", Frontiers in Chemical Research Distinguished Lecture Series, Texas A&M University, College Station, TX, November 27, 2007.

"Synthetic Methodologies for the Preparation of Polymers and Nanoscale Objects I", Frontiers in Chemical Research Distinguished Lecture Series, Texas A&M University, College Station, TX, November 26, 2007.

"Synthetic Methodologies for the Preparation of Polymers and Nanoscale Objects", 29th Annual Bayer Lecture Series, University of Pittsburgh, Pittsburgh, PA, November 16, 2007.

"Roles for Polymer Chemistry in Designing Anti-biofouling Surfaces", 29th Annual Bayer Lecture Series, University of Pittsburgh, Pittsburgh, PA, November 15, 2007.

"Nanoscopically-resolved Amphiphilic Surface Features as Non-toxic, Treacherous Terrain to Inhibit Marine Biofouling", AVS 54th International Symposium, Control of Marine Bioadhesion, Seattle WA, October 15, 2007.

"Amphiphilic, Nanoscopically Resolved Crosslinked Networks: Unusual surface anti-fouling character, sub-surface host behavior, and bulk modulus property", AMBIO and BASF Symposium: Progress and Perspectives in Nanostructured Coatings for Biofouling, Mannheim, Germany, September 27, 2007.

"The Transformation of Block Copolymers into Bulk Composite Materials that Present Complex Features and into Discrete Nanoscale Objects", 3M ESPE Dental Products, St. Paul, MN, September 18, 2007.

"From Dendrimers to Supramolecular and Covalent Nanostructures", 234th American Chemical Society National Meeting, Boston, MA, August 19, 2007.

"The Transformation of Block Copolymers into Bulk Composite Materials that Present Complex Features and into Discrete Nanoscale Objects", Milliken Research Corporation, Spartanburg, SC, August 3, 2007.

"Current Research in Nanotechnology and Its Applications to Medicine", Cornerstone Life Science Connections Program, Washington University, St. Louis, MO, June 25, 2007.

"Amphiphilic, Nanoscopically Resolved Crosslinked Networks: Unusual surface anti-fouling character, sub-surface host behavior, and bulk modulus property", The Young(-ish!) Giants of Chemistry – A symposium to celebrate the 65th birthday of Sir J. Fraser Stoddart, School of Chemistry, University of Edinburgh, Edinburgh, Scotland, June 8, 2007.

"Application of Synthetic Organic Chemistry Concepts and Methodologies Toward the Construction of Nanoscopic Target Molecules", 40th National Organic Chemistry Symposium, Duke University, Durham, NC, June 5, 2007.

"Advancing Synthetic Organic Chemistry Concepts Toward Nanoparticles and Nanocages: Convergent and divergent approaches, originating from well-defined block copolymers and brush block copolymers, respectively", Dow Lecturer in Organic Chemistry, Massachusetts Institute of Technology, Department of Chemistry, Cambridge, MA, May 4, 2007.

"Crafting Organic Nanostructures with Well-defined Size, Shape, Structure and Properties", Smith College, Department of Chemistry, Northampton, MA, April 26, 2007.

"Nanoscopically-resolved Amphiphilic Polymer Networks and Their Unique Properties", Mount Holyoke College, Department of Chemistry, South Hadley, MA, April 25, 2007.

"Robust Nanostructured Materials for Fundamental Studies and Applications in Nanomedicine", Etter Memorial Lectureship in Chemistry, University of Minnesota, Department of Chemistry, Minneapolis, MN, April 12, 2007.

"Amphiphilic, Nanoscopically Resolved Crosslinked Networks: Unusual surface anti-fouling character, sub-surface host behavior, and bulk modulus property", 7th Southern School on Computational Chemistry and Materials Science, Jackson State University, Jackson, MS, April 7, 2007.

"Fundamental Aspects of the Preparation and Study of Discrete Nanoscale Objects, Designed for Biomedical Applications", Phi Lambda Upsilon Lectureship, Kansas State University, Department of Chemistry, Manhattan, Kansas, April 5, 2007.

"Nanoparticles and Nanocages Originating from Well-defined Brush Block Copolymers", 233rd American Chemical Society National Meeting, Chicago, IL, March 28, 2007.

"Complex Constructs Having Nanoscale Features by Combining Incompatible Polymer Components", 233rd American Chemical Society National Meeting, Chicago, IL, March 25, 2007.

"Crafting Organic Nanostructures with Well-defined Size, Shape, Structure and Properties", University of Illinois, Urbana-Champaign, Chemistry-Biology Interface Seminar, Urbana, IL, March 12, 2007.

"The Promise of Nanotechnology in Medicine", Frontiers in Human Pathobiology Seminar Series, Washington University School of Medicine, St. Louis, MO, February 14, 2007.

"Complex, Amphiphilic Polymer Nanostructures, Originating from Combinations of Living Polymerizations, Supramolecular Assembly and Regioselective Crosslinking", Columbia University, Department of Chemistry, New York, NY, February 1, 2007.

"The Transformation of Block Copolymers into Bulk Composite Materials that Present Complex Features and into Discrete Nanoscale Objects", Northwestern University, Department of Chemistry, Evanston, IL, November 17, 2006.

"Shell Crosslinked Block Copolymer Micelles: Robust nanostructured materials for fundamental studies and applications in nanomedicine", Center for Drug Delivery and Nanomedicine, University of Nebraska Medical Center, College of Pharmacy, Omaha, NE, November 16, 2006.

"The Development of Well-defined Nanoscale Objects for Biomedical Applications (with tissue selective targeting) *in vivo*", American Heart Association Scientific Sessions 2006, Chicago, IL, November 12, 2006.

"The Transformation of Block Copolymers into Discrete Nanoscale Objects and into Bulk Composite Materials that Present Complex Features, Each with Consideration of Biomedical Applications", University of Missouri-Kansas City, Department of Chemistry, Kansas City, MO, November 2, 2006.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks", 2006 Xerox Distinguished Lecture Series, Mississauga, ON, Canada, October 20, 2006.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks", Indiana University, Department of Chemistry, Bloomington, IN, October 4, 2006.

"The Development of Shell Crosslinked Nanoparticles for Biomedical Applications *in vivo*", 232nd American Chemical Society National Meeting, San Francisco, CA, September 10, 2006.

"Shaped Core-shell Morphologies Assembled Intramolecularly within Brush Block Copolymers and Intermolecularly between Linear Block Copolymers", 232nd American Chemical Society National Meeting, San Francisco, CA, September 10, 2006.

"The Development of Shell Crosslinked Nanoparticles for Biomedical Applications *in vivo*", 2nd International Conference on Bioengineering and Nanotechnology, Santa Barbara, CA, September 5-7, 2006.

"The Transformation of Block Copolymers into Discrete Nanoscale Objects and into Bulk Composite Materials that Present Complex Features", Mitsubishi Chemical Corporation Technical Advisory Board on Polymer Nanocomposites, Tokyo, Japan, August 30-September 1, 2006.

"Well-defined Nanostructures Facilitated by Living Polymerization and Supramolecular Assembly", Macro Group UK International Conference on Polymer Synthesis, University of Warwick, UK, July 31, 2006.

"Non-toxic Anti-fouling Coatings Based upon Nanoscopic Surface Complexities", Office of Naval Research Review Meeting, Baltimore, MD, June 12, 2006.

"The Syntheses and Studies of Nanoscale Polymer-based Objects Originating from Block Copolymer Self Assembly, Brush Block Copolymer Construction, or Cellulose Nanocrystal Templating", Unilever Research China, Shanghai, China, June 7, 2006.

"The Development of Shell Crosslinked Nanoparticles for Biomedical Applications *in vivo*", Kodak Emerging Technologies Symposium, Eastman Kodak Company, Rochester, NY, May 12, 2006.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks…and study of their unique host behaviors", University of Massachusetts, Department of Chemistry, Amherst, MA, May 11, 2006.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks", University of Delaware, Department of Materials Science and Engineering, Newark, DE, May 3, 2006.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks", University of Florida, Department of Chemistry and Center for Macromolecular Science & Engineering, Gainesville, FL, April 20, 2006.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically-resolved crosslinked networks…and study of their unique host behaviors", New York University, New York, NY, April 14, 2006.

"The Development of Shell Crosslinked Nanoparticles for Biomedical Applications *in vivo*" Eindhoven University of Technology, Eindhoven, The Netherlands, April 7, 2006.

"The Development of Shell Crosslinked Nanoparticles for Biomedical Applications *in vivo*" Philips, Amsterdam, The Netherlands, April 6, 2006.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks", New York University, Department of Chemistry, New York, NY, April 14, 2006.

"Nanoparticles Decorated for Development as Synthetic Vaccines", 231st American Chemical Society National Meeting, Atlanta, GA, March 27, 2006.

"Hyperbranched Polymers as Vessel-like Components in Complex Networks: Lessons from Meijer's 'dendritic box'," 231st American Chemical Society National Meeting, Atlanta, GA, March 26, 2006.

"Nanoscale Objects Having Unusual Structures: Cages and rings", 231st American Chemical Society National Meeting, Atlanta, GA, March 26, 2006.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks", Purdue University, Weldon School of Biomedical Engineering, West Lafayette, IN, March 1, 2006.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically-resolved crosslinked networks, and study of their unique host behaviors", William H. Rauscher Lectureship, Rennselaer Polytechnic Institute, Department of Chemistry, Troy, NY, February 14, 2006.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically-resolved crosslinked networks, and study of their unique host behaviors", University of Utah, Department of Chemistry, Salt Lake City, UT, February 2, 2006.

"Nanoobjects Having Complex Shapes, Facilitated During Assembly and *via* Subsequent Manipulation", Pacifichem 2005, Honolulu, HI, December 20, 2005.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks", Pacifichem 2005, Honolulu, HI, December 18, 2005.

"The Preparation, Characterization, and Manipulation of Well-defined Nanoscopic Objects", Pacific Polymer Federation IX, Novel Synthetic Routes, Maui, HI, December 12, 2005.

"Surface and Sub-surface Structure and Properties for Composite Amphiphilic Networks and Their Exploitation for Minimally-adhesive and Host-guest Applications", Pacific Polymer Federation IX, Polymers in the Marine Environment, Maui, HI, December 12, 2005.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks, and their development as host vessels", DuPont, Wilmington, DE, November 29, 2005.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks", University of Washington, Seattle, WA, November 8, 2005.

"Amphiphilic Nanoscopically-resolved Crosslinked Networks Composed of Hyperbranched Fluoropolymers and Linear Poly(ethylene glycol)s: Surface reorganization in the presence of water and sub-surface guest uptake and release characteristics", University of Southern Mississippi, MRSEC Graduate Research Symposium, Hattiesburg, MS, November 2, 2005.

"Discrete Nanoobjects and Nanoscopically-resolved Macroscopic Objects, Each Designed for Selective Packaging and Release of Active Agents", University of Montreal, Pharmacy GSK Lecturer, Montreal, Canada, October 28, 2005.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks", Georgia Institute of Technology, Cherry Emerson Seminar, Atlanta, GA, October 18, 2005.

"Challenges in Science", Georgia Institute of Technology, Women in Chemistry Symposium, Atlanta, GA, October 18, 2005.

"Advanced Targets for the New Era of Synthetic Polymer Chemistry", University of California San Diego, Fall 2005 Lecture Series, San Diego, CA, October 3, 2005.

"Advanced Targets for the New Era of Synthetic Polymer Chemistry", University of Wisconsin, Department of Chemistry, Madison, WI, September 26, 2005.

"Advanced Targets for the New Era of Synthetic Polymer Chemistry", Biophysical Evening Lecture, Washington University, St. Louis, MO, September 6, 2005.

"Hyperbranched Fluoropolymer (HBFP)-Poly(ethylene glycol) (PEG) Composite Coatings, Designed as Amphiphilic, Complex Surfaces that Inhibit Protein and Whole Organism adsorption and Their Unique Host Behaviors", 230th American Chemical Society National Meeting, Washington, D.C., August 31, 2005.

"PNA-directed Solution-and Surface-Assembly of Shell Crosslinked (SCK) Nanoparticle Conjugates", 230th American Chemical Society National Meeting, Washington, D.C., August 29, 2005.

"Peptide Nucleic Acid-decorated Shell Crosslinked Nanoparticles and Their Intracellularly-directed Molecular Recognition *in vitro* and *in vivo*", 230th American Chemical Society National Meeting, Washington, D.C., August 28, 2005.

"Nanoscale Objects Having Unusual Structures: Cages and rings (and other shapes)", SPSJ (The Society of Polymer Science, Japan) International Polymer Conference (IPC 2005), Fukuoka, Japan, July 29, 2005.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically-resolved crosslinked networks, designed as host vessels for partitioning of guests", 2005 USA-Japan Forum: "Advances in Polymer Chemistry and Their Impacts upon Society", South Lake Tahoe, CA June 28, 2005.

"Biologically-active Nanostructures Derived from Functionalized Polymerization Initiators and Incorporating Dendritic Macromolecules via "Click" Chemistry", International Dendrimer Symposium 4, Mount Pleasant, Michigan, May 19, 2005.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically resolved crosslinked networks", Arkema, King of Prussia, Pennsylvania, May 12, 2005.

"Nanoparticles: Chemistry, structure and function", Tutorial presented as part of the Nanotechnology and Nanomedicine: Applications for Vision Workshop in advance of the Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, April 30, 2005.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically-resolved crosslinked networks, designed as host vessels for partitioning of guests", University of Kyoto-University of California Santa Barbara Workshop, "Prospects in New Materials Science," Kyoto University, Kyoto, Japan, April 25-27, 2005.

"Shell Crosslinked Knedel-like (SCK) Nanoparticles as Well-defined Nanoscale Objects and Their Development for Medical Applications: Optimization of size, shape, structure and surface chemistry for mediation of biological interactions", Washington University, Immunology Discussion Group, Saint Louis, MO, April 11, 2005.

"Nanoobjects Having Complex Shapes, Facilitated During Assembly and *via* Subsequent (Physical) Manipulation", Unilever, Port Sunlight, United Kingdom, April 4, 2005.

"Well-defined Nanostructured Materials: Discrete nanoobjects and nanoscopically-resolved crosslinked networks, designed as host vessels for partitioning of guests", National Starch R&D Meeting, Bridgewater, NJ, March 31, 2005.

"Biologically-active Nanostructures Derived from Functionalized Polymerization Initiators: Optimization of size, shape, structure and surface chemistry for mediation of biological interactions", American Chemical Society, 229th National Meeting, San Diego, CA, March 15, 2005.

"Nanoobjects Having Complex Shapes, Facilitated During Assembly and *via* Subsequent (Physical) Manipulation", American Chemical Society, 229th National Meeting, San Diego, CA, March 14, 2005.

"Nanostructured Materials Designed as Host Vessels for Partitioning of Guests: Discrete nanoobjects and nanoscopically-resolved crosslinked networks", American Chemical Society, 229th National Meeting, San Diego, CA, March 13, 2005.

"Discrete Nanoobjects and Nanoscopically-resolved Crosslinked Networks: Nanoparticles and nanochannels designed as intricate vessels for guest sequestration, packaging and release", University of Illinois, Champaign-Urbana, Department of Chemistry, March 7, 2005.

"Robust Core-shell Nanostructures Crafted as Vessels for Selective Uptake and Release of Small and Large Guests", 12th International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, UT, Feb 21-24, 2005.

"Shell Crosslinked Knedel-like (SCK) Nanoparticles as Well-defined Nanoscale Objects and Their Development for Medical Applications: Optimization of size, shape, structure and surface chemistry for mediation of biological interactions", American Institute for Medical and Biological Engineering, 14th Annual Meeting, National Academy of Sciences, Washington, DC, February 17, 2005.

"Polymer Structures as Delivery Systems: Nanoparticles and nanochannels designed as intricate vessels for guest sequestration, packaging and release", University of Texas, Center for Nano and Molecular Science and Technology, Austin, TX, January 26, 2005.

"Fundamental Design, Synthesis and Characterization of Nanostructured Materials, Including their Potential for *in vivo* Detection and Therapy: Optimization of size, shape and surface chemistry to mediate biological interactions", Washington University, Pulmonary Research Conference, Saint Louis, MO, January 3, 2005.

"Manipulation of Nanoscopic Core-shell Materials Originating from Block Copolymers", Washington University, Biomedical Engineering Seminar, Saint Louis, MO, December 6, 2004.

"Manipulation of Nanoscopic Core-shell Materials Originating from Block Copolymers", Materials Research Society meeting, Boston, MA, November 30, 2004.

"Biologically-active Nanostructures Derived from Functionalized Polymerization Initiators and Incorporating Dendritic Macromolecules via 'Click' Chemistry", Materials Research Society meeting, Boston, MA, November 30, 2004.

"Synthetic Methodologies for the Preparation of Biologically-active Nanostructures Derived from Functionalized Polymerization Initiators", The Welch Foundation 48th Conference on Chemical Research, on the topic of "Chemistry of Self-Organized and Hybrid Materials", Houston, TX, October 25-26, 2004.

"Novel Materials for Delivery", Unilever Corporation SPARK Workshop in Biomaterials Science, Port Sunlight, UK, September 30-October 1, 2004.

"The Dimensional Evolution of Synthetic Organic Chemistry Toward Nanoscale Natural Products Targets", The James D. White Symposium, Oregon State University, Corvallis, OR, September 25, 2004.

"Polymer Structures as Delivery Systems: Nanoparticles and nanochannels designed as intricate vessels for guest sequestration, packaging and release", Gordon Research Conference, Drug Carriers in Medicine and Biology, Big Sky, MT, September 5-10, 2004.

"Dendritic Macromolecules as Multi-functional Components of Nanostructured Materials", American Chemical Society National Meeting, Philadelphia, PA, August 22-26, 2004.

"Nanoscopically-resolved Amphiphilic Coatings: Treacherous terrain to inhibit biofouling", American Chemical Society National Meeting, Philadelphia, PA, August 22-26, 2004.

"Beyond Supramolecular Assembly: Shaping of nanostructures", American Chemical Society National Meeting, Philadelphia, PA, August 22-26, 2004.

"Polymer Structures as Delivery Systems: Nanoparticles and nanochannels designed as intricate vessels for guest sequestration, packaging and release", ICI/National Starch, Bridgewater, NJ, August 31, 2004.

"Kinetically-trapped Segregating Mixtures of Fluoropolymers and Linear Poly(ethylene glycol)s: Nanoscopically-resolved amphiphilic surfaces that present treacherous terrain to inhibit biofouling", 12th International Congress on Marine Corrosion and Fouling, Southampton University, Southampton, United Kingdom, July 27-30, 2004.

"Biologically-active Nanostructures Derived from Functionalized Polymerization Initiators", Polymers in Organic Chemistry 2004 Conference, Prague, Czech Republic, July 18-23, 2004.

"Biologically-active Nanostructures Derived from Functionalized Polymerization Initiators", World Polymer Congress, MACRO 2004, 40th International Symposium on Macromolecules, Paris, France, July 4-9, 2004.

"Antifouling Accomplished via Topographically Complex Polymer Surfaces", ONR Coatings/Biofouling/Membranes Program Review, San Francisco, CA, June 21, 2004.

"The Application of Covalent Stabilization for Further Manipulation of Supramolecular Polymer Assemblies", Emerging Materials Knowledge (EMK) Network Research Day, The University of Toronto, Ontario, Canada, June 10, 2004.

"The Design, Preparation and Characterization of Synthetic Nanocages Derived from Amphiphilic Block Copolymers", Applied Biosystems, Foster City, CA, June 8, 2004.

"Polymer Structures as Delivery Systems", Unilever Corporation, Port Sunlight, United Kingdom, April 30, 2004.

"Polymer Structures as Delivery Systems", United Kingdom High Polymer Research Symposium, "Polymer Science Of, In, and On Biological Systems", Pott Shrigley, Cheshire, England, April 28, 2004.

"Nanostructured Materials: From nanoparticles for treating cancer to coatings that inhibit marine fouling", Presentation to the NSF-sponsored Students and Teachers as Researchers (STARS) Participants, Saint Louis, MO, April 19, 2004.

"Physical Manipulation of Nanoscopic Core-shell Materials Originating from Di- or Tri-block Copolymers", Washington University, Department of Physics Colloquium, Saint Louis, MO, April 12, 2004.

"Supramolecular Chemistry Applied to the Assembly of Nanostructures and to their Subsequent Manipulation", ACS Polymer Chemistry Award Symposium in Honor of Virgil Percec, Anaheim, CA, March 29, 2004.
"Nanostructured Materials", Research Triangle Park ACS Polymer Discussion Group, Research Triangle Park, NC, March 11, 2004.
"Supramolecular Chemistry Applied to the Assembly of Nanostructures and to their Subsequent Manipulation", California Institute of Technology, Pasadena, CA, January 14, 2004.
"Supramolecular Chemistry Applied to the Assembly of Nanostructures and to their Subsequent Manipulation", 38th ACS Midwest Regional Meeting, Columbia, MO, November 6, 2003.
"Advances in the development of synthetic nanocages for the detection and treatment of cancer", Yale University, Department of Chemistry, New Haven, CT, October 8, 2003.
"Fluorine in dendrimers and hyperbranched polymers: Labeling for determination of conformation and property modifier to generate treacherous terrain to inhibit biofouling", 3rd International Dendrimer Symposium, Berlin, Germany, September 19, 2003.
"Thermal shaping of shell-crosslinked (SCK) nanoparticles, facilitated by nanoconfinement of fluid-like cores", Materials Discussion 6, "Controlled Polymer Architectures-from micro to meso scale", Univeristy of Durham, United Kingdom, September 13, 2003.
"Complex Nanostructured Materials Designed as Sophisticated, Yet Simple, Vessels for Drug Delivery", 4th Annual BioMEMS and NANOtech World Conference, Washington, DC, August 25, 2003.
"The Dimensional Evolution of Synthetic Organic Chemistry Toward Nanostructured Materials", 26th Australasian Polymer Symposium, Noosa, Queensland, Australia, July 14, 2003.
"Methodologies for Regioselectivity in the Preparation of Complex Nanostructured Materials", Crompton Corporation, Middlebury, CT, June 19, 2003.
"Methodologies for Regioselectivity in the Preparation of Complex Nanostructured Materials", University of California—Los Angeles, Los Angeles, CA, May 27, 2003.
"Nanoscale Bioconjugates as Passive and Active Detection, Diagnosis and Treatment Systems for Cancer", Lawrence Livermore National Laboratory, Lawrence, CA, May 23, 2003.
"The Synthesis and Study of Isomeric Linear and Hyperbranched Polycarbonates", American Chemical Society Meeting, New Orleans, LA, March 27, 2003.
"Kinetically-trapped Segregated Mixtures of Hyperbranched Fluoropolymers and Linear Poly(ethylene glycol)s: Treacherous terrain to inhibit biofouling", American Chemical Society Meeting, New Orleans, LA, March 24, 2003.
"Regiochemical Control Across Nanoscale Frameworks", University of Pittsburgh, Pittsburgh, PA, March 6, 2003.
"Complex Nanostructured Materials as Antifouling Surfaces", Bayer Corporation, Pittsburgh, PA, March 5, 2003.
"Physical and Chemical Manipulation of Shell Crosslinked Nanostructures", American Physical Society Meeting, Austin, TX, March 3, 2003.
"Nanoscale Bioconjugates as Passive and Active Detection, Diagnosis, and Treatment Systems", National Cancer Institute, Unconventional Innovations Program Review Meeting, San Diego, CA, February 17-18, 2003.
"Synthetic Viral Capsids", Students and Teachers as Research Scientists (STARS) Program, University of Missouri, Saint Louis, MO, February 11, 2003.
"The Dimensional Evolution of Synthetic Organic Chemistry Toward the Preparation of Well-defined Nanostructured Materials", University of California, Santa Cruz, CA, February 3, 2003.
"The Dimensional Evolution of Synthetic Organic Chemistry Toward the Preparation of Well-defined Nanostructured Materials", Washington University, Bioorganic Chemistry Journal Club, Saint Louis, MO, January 23, 2003.
"Complex Nanostructured Matrials as Antifouling Surfaces", Polymers (West) Gordon Research Conference, Ventura, CA, January 5-9, 2003.
"Methodologies that Allow for Definition of the Surface Chemistries of Nanostructures for Mediation of Biological Interactions", IBM Almaden Research Center, San Jose, CA, January 3, 2003.

"Nanostructured Materials and their Application as Separations Media", Dionex Corporation, Sunnyvale, CA, January 3, 2003.

"The Synthesis and Study of Complex Nanostructured Surfaces", Japan-US Seminar on Advanced Polymer Chemistry for the 21st Century, Westin Nagoya Castle Hotel, Nagoya, Japan, December 6-10, 2002.

"Regiochemical Control Across Nanoscale Molecular Frameworks", 2002 Biennial Symposium, Polymeric Nanomaterials, Sonoma Doubletree Resort, Rohnert Park, CA, November 18, 2002.

"Methodologies for Regioselectivity in the Preparation of Complex Nanostructured Materials", Michigan State University, East Lansing, MI, October 17, 2002.

"Complex Nanostructured Materials: Fundamental designs and programmed functions", Cornell University, Symposium Celebrating the 100th Anniversary of the Cornell Section of the American Chemical Society, October 12, 2002.

"The Dimensional Evolution of Synthetic Organic Chemistry", GE Global Research Center, Niskayuna, NY, August 22, 2002.

"The Dimensional Evolution of Synthetic Organic Chemistry", Arthur C. Cope Young Scholar Award Symposium, American Chemical Society National Meeting, Boston, MA, August 20, 2002.

"Regiochemical Control Over Nanoscopic Dimensions: Synthetic design criteria for the preparation of nanostructured materials", MACRO Group 2002 Conference, The University of Warwick, Warwick, UK, July 30, 2002.

"Nanoscopically-resolved Amphiphilic Surfaces: Treacherous terrain to prevent protein adhesion", Unilever, Port Sunlight, UK, July 25, 2002.

"Advanced, Non-toxic, Anti-fouling Coatings Based Upon Control Over Surface Topography, Morphology, and Composition", Office of Naval Research Program Review Meeting, San Diego, CA, July 19, 2002.

"Methodologies for Regioselectivity in the Preparation of Complex Nanostructured Materials", Polymers and Organic Chemistry 2002 Conference, San Diego, CA, July 17, 2002.

"Kinetically-trapped Segregating Mixtures of Hyperbranched Fluoropolymers and Linear Poly(ethylene glycol)s: Nanoscopically-resolved amphiphilic surfaces that present treacherous terrain to inhibit biofouling", 3M Corporation, Science Research Center, Minneapolis, MN, June 4, 2002.

"The Transformation of Block Copolymers into Well-defined Nanostructured Materials", 34th Great Lakes Regional Meeting of the American Chemical Society, Symposium on Block Copolymers, Minneapolis, MN, June 3, 2002.

"Synthetic Methodologies for the Surface Derivatization of Shell Crosslinked Nanoparticles", 223rd American Chemical Society National Meeting,, Symposium on Recent Advances in Polymer Synthesis: Review and Progress in Methodology and Self-Assembly, ACS Division of Polymer Chemistry, Orlando, FL, April 7-11, 2002.

"Preparation and Study of Synthetic Viral Capsid Mimics: Colloidal properties, internal chemistries, nad biological compatibilities", 223rd American Chemical Society National Meeting,, Symposium on Carrier Based Drug Delivery, ACS Division of Colloid and Surface Science, Orlando, FL, April 7-11, 2002.

"From Materials to Medicine", NSF Symposium, "Small Wonders: Exploring the Vast Potential of Nanoscience", Washington, DC, March 19, 2002.

"The Design, Synthesis, and Characterization of Complex Nanostructured Materials", Case Western Reserve University, Macromolecular Colloquia Series, Cleveland, OH, March 8, 2002.

"Shell Crosslinked Polymer Micelles: Nanoscale constructs inspired from biological systems", Oregon State University, Department of Chemistry, Corvallis, OR, March 4, 2002.

"Synthetic Methodologies for the Preparation of Hybrid Peptidic-synthetic Nanostructured Materials: Synthetic mimics of viral capsids", NCI Protein Transduction Workshop, Rockville, MD, February 11-12, 2002.

"Complex Nanostructured Materials: The design of sophisticated, yet simple, vessels for sequestration or delivery of biologically-active agents", Sigma-Aldrich Company., Saint Louis, MO, February 5, 2002.

"Complex Nanostructured Materials:", University of Missouri-Columbia, Columbia, MO, January 29, 2002.

"Complex Nanostructured Materials: The design of sophisticated, yet simple, vessels for sequestration or delivery of biologically-active agents", GelTex Pharmaceuticals, Inc., Waltham, MA, December 5, 2001.

"Complex Nanostructured Materials Designed as Sophisticated, Yet Simple, Vessels for Drug Delivery", The Knowledge Foundation's 3rd Annual International Conference on Controlled Polymer Synthesis: New Approaches in Applications and Processes, Cambridge, MA, USA, December 4, 2001.

"Nanoscopically-resolved Amphiphilic Surfaces: Treacherous terrain to prevent protein adhesion", Southwest Regional ACS Meeting, San Antonio, TX, October 19, 2001.

"Synthetic Viral Capsids", Life Sciences and Nanostructured Materials Symposium, University of Pennsylvania, Philadelphia, PA, September 29, 2001.

"Polymeric Nanocontainers", Gordon Research Conference on Polymers (East), Colby-Sawyer College, New London, NH, July 8, 2001.

"New Methods for the Preparation of Nanoscale Colloidal Particles of Controlled Shapes", Gordon Research Conference on Polymer Colloids, Tilton School, Tilton, NH, July 3, 2001.

"Complex Nanostructured Materials Designed as Sophisticated, Yet Simple, Vessels for Drug Delivery", Johnson & Johnson, Corporate Biomaterials Center, Somerville, NJ, June 18, 2001.

"The Preparation and Study of Complex Nanostructured Materials", Rohm and Haas sponsored Macromolecules Symposium, National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) 2001 National Meeting, Baltimore, MD April 12, 2001.

"Complex Nanostructured Materials Made Possible by Living Free-radical Polymerization Methodologies", Carl S. Marvel Award Symposium in honor of Craig J. Hawker, ACS National Meeting, San Diego, CA April 1, 2001.

"Beyond Self-Organization—Supramolecular Assembly as a First Step Toward Complex Nanostructures", 14th Biennial Carl S. Marvel Symposium, Supramolecular Materials, Department of Chemistry, University of Arizona, Tucson, AZ March 11-13, 2001.

"Designing Nanostructured Colloids from the Inside-Out", Department of Chemistry, University of North Carolina, Chapel Hill, NC February 23, 2001.

"Polymeric Nanocontainers", Department of Chemistry, North Carolina State University, Raleigh, NC February 22, 2001.

"Correlation of Molecular Conformation and Solid-state Packing in the Development of Hyperbranched Polycarbonate Engineering Materials", PacifiChem meeting, Invited presentation for the Symposium on Dendrimers and Hyperbranched Polymers—Synthesis, Structure and Properties, Honolulu, HI December 16, 2000.

"Stabilization of Controlled Supramolecular Assemblies: The preparation and study of nanoscale constructs", PacifiChem meeting, Invited presentation for the Symposium on Precision Polymers and Controlled Supramolecular Architectures, Honolulu, HI December 16, 2000.

"Amphiphilic Crosslinked Films from Multi-architectural Components: Preparation, characterization, and protein adsorption behavior", POLY MILLENNIAL meeting, Invited presentation for the Symposium on Polymers in the Marine Environment, Kona, HI December 11, 2000.

"Complex Nanostructured Materials: From patterned surfaces to core-shell particles", University of Akron, Department of Polymer Science, Polymer Science Student Organization invited Eastman Chemical Company Lecture, Akron, OH November 28, 2000.

"Constructing Nanocages", University of Oregon, Department of Chemistry and the Materials Science Institute, Eugene, OR November 10, 2000.

"Nanoscale Constructs: The preparation, characterization and manipulation of shell crosslinked nanoparticles", Massachusetts Institute of Technology, Program for Polymer Science and Technology seminar series, Boston, MA November 8, 2000.

"Supramolecular Assembly—A starting point in the preparation of nanostructured materials", Symposium on Supramolecular Chemistry, 35th Midwest Regional ACS Meeting, St. Louis, MO October 27, 2000.

"Nanoscale Constructs Inspired from Biological Systems", Georgia Institute of Technology, Department of Chemistry and Biochemistry, Atlanta, GA October 5, 2000.

"The Preparation and Study of Complex Nanostructured Materials", Keynote presentation at the Bayer Polymer Science Forum, Bayer Corporation, Pittsburgh, PA September 21, 2000.

"Nanoscale Constructs Inspired from Biological Systems", Symposium on Functional Nanostructures, ACS Advanced Materials and Nanotechnology Subdivision of the ACS Division of Industrial Engineering Chemistry, National ACS Meeting, Washington, D.C., August 22, 2000.

"Preparation of Nanoscopically-resolved Amphiphilic Networks from the Hybridization of Hyperbranched Fluoropolymers and Linear PEGs", Symposium on Macromolecular Synthesis by Selective Chemical Modification, ACS Division of Polymer Chemistry, National ACS Meeting, Washington, D.C., August 21, 2000.

"Nanoscale Constructs Inspired from Biological Systems", Stanford University, NSF Supported Center on Polymer Interfaces and Macromolecular Assemblies, A Stanford University/IBM Almaden Research Center/UC Davis Partnership, Palo Alto, CA, August 3, 2000.

"Nanoscale Constructs Inspired from Biological Systems", Macro IUPAC 2000, Warsaw, Poland, July 13, 2000.

"Solution- and Solid-state Evaluation of Complex Nanostructured Materials", International Symposium on Polymer Analysis and Characterization, Pittsburgh, PA, June 19-21, 2000.

"The Inclusion of Rubbery Polymers within Nanoscale Assemblies: Preparation, characterization, and utilization", Invited presentation as part of the "Frontiers in Rubber Science Colloquium" at the Rubber Division, ACS 157th Spring Technical Meeting, April 4-6, 2000.

"Nanoscale Constructs Inspired from Biological Systems", XenoPort, Inc., Palo Alto, CA March 28, 2000.

"Dendrimers and other Nanostructured Materials: Lessons learned and applied", Invited presentation as part of the symposium celebrating the ACS Award in Polymer Chemistry awarded to Jean M. J. Fréchet, ACS National Meeting in San Francisco, March 27, 2000.

"Complex Nanostructured Materials from Polymer Precursors", US-Japan Conference on Polymer Synthesis, Berkeley, CA December 12-15, 1999.

"Complex Nanostructured Materials", IBM Almaden Research Center, San Jose, CA December 10, 1999.

"Nanoscale Constructs Inspired from Biological Systems", Symyx Technologies, Inc., San Jose, CA December 10, 1999.

"Constructing Nanocages", Iowa State University, Ames, IA November 19, 1999.

"Constructing Nanocages", University of Rochester, Rochester, NY November 12, 1999.

"Complex Nanostructured Materials", Kodak Company, Rochester, NY November 11, 1999.

"Complex Nanostructured Materials", Murray State University, Murray, KY September 27, 1999.

"'Living' Anionic vs. Radical Polymerization in the Preparation of Precursors for the Assembly of Nanostructured Materials", The Knowledge Foundation's Symposium "Commercialization of Controlled Polymer Synthesis", San Francisco, CA September 16, 1999.

Discussion leader for Novel Polymers session of Chinese-American Frontiers of Science Symposium, Beijing, China, August 20, 1999.

"Cross-linking within Nanoassemblies: The creation of nanodomains with properties ranging from elastomeric to hydrogel-like", Elastomers Gordon Research Conference, New London, NH July 22, 1999.

"Constructing Nanocages", Monsanto Company, St. Louis, MO June 30, 1999.

"Constructing Nanocages", University of Chicago, Chicago, IL June 2, 1999.

"NSF Workshop on Physical Organic Chemistry", San Antonio, TX May 23-25, 1999.

"Polymerization of Self-assembled Nanostructures to Yield Fluid-filled Nanoparticles", 217th National ACS Meeting, Anaheim, CA March 21, 1999.

"Polymerization of Self-assembled Nanostructures to Yield Nanoparticles and Polymer Shells", DSRC/DARPA Workshop on Nanomaterials, Washington, D.C., March 16, 1999.

"Nanostructured Materials: Design, synthesis, and characterization", Louisiana State University, Baton Rouge, Louisiana, February 19, 1999.

"Complex Nanostructured Materials", Southern Illinois University, Carbondale, Illinois, February 5, 1999.

"Nanostructured Polymeric Materials", Hendrix College, Conway, Arkansas, January 25, 1999.

"Stabilized Nanoscale Polymer Assemblies: Design, synthesis, characterization and performance as biomimics", ACS POLY Workshop "Contemporary Biomaterials Through Precise Control of Macromolecular Chemistry and Architecture", Williamsburg, VA, November 20, 1998.

"Knedels: Not only polish dumplings", PEW Midstates Science and Mathematics Consortium, Undergraduate Research Symposium in Mathematics and the Physical Sciences, Washington University, St. Louis, MO, November 15, 1998.

"Structural Studies of Dendritic Poly(benzyl ether)s and Relation to their Micromechanical Properties", Southeast Regional ACS Meeting, Research Triangle Park, NC, November 6, 1998.

"Structural, Compositional, and Functional Control in the Development of Nanostructured Materials", University of Chicago, Chicago, IL, October 23, 1998.

"Nanostructured Polymeric Materials", Bayer Corporation, Pittsburgh, PA, October 22, 1998.

"Nanostructured Polymer Assemblies: Synthesis, characterization and potential applications", University of Missouri—St. Louis, St. Louis, MO, October 19, 1998.

"From Dendrimers to Knedel-like Structures. Synthetic Materials Modeling Biology in Construction and Function", Polymers (East) Gordon Research Conference, New England College, Henniker, New Hampshire, June 15, 1998.

"Construction of Polymeric Materials with Nanoscale Control—Why Bother", DuPont Central Research and Development, Wilmington, Delaware, May 19, 1998.

"Nanostructured Polymeric Materials", Washington University, St. Louis, MO, April 28, 1998.

"Nanostructured Materials (Structural, Compositional and Functional Control)", 11th Annual Missouri Organic Chemistry Day, University of Missouri, Columbia, MO, April 25, 1998.

"Nanostructured Materials for Controlled Encapsulation and Release", Hoechst Celanese, Summit, NJ, January 9, 1998.

"Stabilized Micellar Structures in Nanodevices", IBC's 2nd Annual International Conference on 'Biological Approaches and Novel Applications for Molecular Nanotechnology', La Jolla, CA, December 8-9, 1997.

"Nanostructured Materials: Shell cross-linked knedel-like amphiphilic core-shell nanospheres", Purdue University, West Lafayette, Indiana, October 21, 1997.

"Hyperbranched Polyfluorinated Polymers and Hyperbranched Polycarbonates", Texas Christian University, Fort Worth, Texas, October 7, 1997.

"Degradable Poly(silyl ester)s", Southern Methodist University, Dallas, Texas, October 6, 1997.

"Nanostructured Materials: Shell cross-linked knedel-like amphiphilic core-shell nanospheres", University of Texas at Austin, Austin, Texas, October 3, 1997.

"Nanostructured Materials: Shell cross-linked knedel-like amphiphilic core-shell nanospheres", Texas A&M University, October 2, 1997.

"Nanostructured Materials", Raychem Corporation, Menlo Park, California, September 17, 1997.

"Nanostructured Materials: Shell cross-linked knedel-like amphiphilic core-shell nanospheres", University of California, Berkeley, California, September 16, 1997.

"Fluorine-containing Dendrimers: Characterization of solid-state structure and tailoring of properties", 214th ACS National Meeting, Symposium on Dendrimers and Hyperbranched Polymers, Las Vegas, Nevada, September 9, 1997.

"Nanostructured Materials", Monsanto Company, Agricultural Group, August 8, 1997.

"Poly(silyl ester)s: A new family of degradable polymers with attunable stabilities", IUPAC Symposium on Molecular Architecture for Degradable Polymers, Stockholm, Sweden, June 10, 1997.

"The Design, Synthesis, Characterization and Derivatization of Fluorine-containing Dendrimers: Investigation of structure and modification of properties", 2nd International Forum on Hyper-Structured Materials for Organic Quantum Device Applications, Invited Talk, Hokkaido University, Sapporo, Japan, May 31, 1997.

"The Design, Synthesis, Characterization and Potential Applications of Shell-crosslinked Knedels (SCK's): water-soluble, amphiphilic, core-shell nanospheres", Washington University, 1st Interdisciplinary Nanoscience/Nanotechnology Workshop, St. Louis, Missouri, May 22, 1997.

"Shell-crosslinked Knedels (SCK's): Amphiphilic core-shell polymer nanospheres", Colorado State University, Fort Collins, Colorado, May 7, 1997

"Shell-crosslinked Knedels (SCK's): Amphiphilic core-shell polymer nanospheres", The Dow Chemical Company, Midland, Michigan, April 29, 1997.

"Dendritic and Hyperbranched Polymers: Taking advantage of unique properties", The Dow Chemical Company, Midland, Michigan, April 29, 1997.

"Shell-crosslinked Knedels: Amphiphilic core-shell polymer nanospheres", Invited Lecture in Intelligently-Designed Polymers Symposium, American Physical Society Meeting, Kansas City, Missouri, March 21, 1997.

"Shell-crosslinked Knedels: Amphiphilic core-shelled nanospheres", Bioorganic Chemistry Program, Washington University, Second Annual Retreat, St. Louis, Missouri, February 8, 1997.

"Synthetic Approaches Toward the Preparation of Controlled Macromolecular Architectures and New Types of Degradable Polymers", DuPont, Central Research and Development, Wilmington, Delaware, January 21, 1997.

"Poly(silyl ester)s: A new family of degradable polymers with attunable degradation rates", Southwest Missouri State University, Springfield, Missouri, November 4, 1996.

"Fluorine-containing Dendrimers and Hyperbranched Polymers: Synthesis, structure and properties", U.S. Army Second Dendritic Polymer Workshop, Michigan Molecular Institute, Midland, Michigan, October 29-30, 1996.

"Synthetic Globular Macromolecules: Dendrimers, hyperbranched polymers and shell-crosslinked knedels", Saint Louis University, St. Louis, Missouri, October 25, 1996.

"Poly(silyl ester)s: A new family of degradable polymers with attunable degradation rates", Truman State University, Kirksville, Missouri, October 18, 1996.

"The Synthesis and Characterization of Shell-crosslinked Knedels: Amphiphilic polymer nanospheres", Monsanto Company, St. Louis, Missouri, July 10, 1996.

"Synthetic Globular Macromolecules: Dendrimers, hyperbranched polymers and shell-crosslinked knedels", University of Massachusetts, Amherst, Massachusetts, June 1996.

"Synthetic Globular Macromolecules: Dendrimers, hyperbranched polymers and shell-crosslinked knedels", University of Tokyo, Institute of Industrial Science, Tokyo, Japan, May 1996.

"Synthetic Globular Macromolecules: Dendrimers, hyperbranched polymers and shell-crosslinked knedels", Frontier Research Laboratory, Riken Institute, Wako, Japan, May 1996.

"The Synthesis and Characterization of Poly(silyl ester)s as a New Family of Hydrolytically-Degradable Polymers with Attunable Degradation Rates", 211th American Chemical Society National Meeting, New Orleans, LA, March 1996.

"Dendritic and Hyperbranched Macromolecules: Synthesis, characterization and applications", Indiana University-Purdue University at Indianapolis (IUPUI), Indianapolis, IN, January 31, 1996.

"Dendritic and Hyperbranched Macromolecules: Synthesis, Characterization and Applications", Southern Illinois University, Edwardsville, IL, January 25, 1996.

"Conformational Studies of Dendritic Macromolecules by Rotational-echo Double Resonance (REDOR) Solid-state NMR", 210th American Chemical Society National Meeting, Chicago, IL, August 1995.

"Fluorine-containing Dendrimers", Army Research Office Dendrimer Technology Workshop, Research Triangle Park, NC, March 15-16, 1995.

"The Application of Solvatochromic Groups Toward the Characterization of Dendrimers, Linear Polymers, and Polymeric Micelles", Second NSF Materials Workshop, St. Louis, MO, October 13-16, 1994.

"The Design, Synthesis, and Properties of Dendritic Macromolecules", Monsanto Company, The Agricultural Group, St. Louis, MO, July 13, 1994; University of Missouri-St. Louis, St. Louis, MO, March 21, 1994; University of Missouri-Rolla, Rolla, MO, January 24, 1994; University of Maryland, College Park, MD, January 12, 1993; Johns Hopkins University, Baltimore, MD, January 11, 1993; Oregon State University, Corvallis, OR, January 8, 1993; Ohio State University, Columbus, OH, January 6, 1993; University of Oregon, Eugene, OR, January 4, 1993; University of Alabama, Tuscaloosa, AL, December 23, 1992; University of Georgia, Athens, GA, December 21, 1992; Northwestern University, Evanston, IL, December 17, 1992; Washington University, St. Louis, MO, November 23, 1992; State University of New York, Geneseo, NY, November 18, 1992.

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Lu Su	09/14 to 10/17; Ph.D. conferred at Fudan University in China (2014): Advisor: Ming Jiang; Postdoc with E.W. (Bert) Meijer at Eindhoven University of Technology; presently an Assistant Professor at Leiden University, Leiden, The Netherlands.
Yingchao Chen	12/15 to 01/18; Ph.D. conferred at The University of Delaware, Newark, DE, USA (2015): Advisor: Darrin Pochan; presently Data Scientist with Allergan Data Labs, Irvine, CA, USA.
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Fuwu Zhang	08/18 to 08/20; Ph.D. conferred at Texas A&M University, College Station, TX, USA (2015): Advisor: Karen L. Wooley; presently Assistant Professor of Chemistry with University of Miami, Miami, FL, USA.
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Debasis Pati	11/20 to 03/21; Ph.D. conferred at CSIR-National Chemical Laboratory, India (2013); Advisor: Prof. Sayam Sen Gupta.
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Chavis Stackhouse	01/22 to 1/24; Ph.D. conferred at University of South Florida, Tampa, FL, USA (2018): Advisor: Dr. Shengqian Ma; presently Electrochemistry Sales Representative, Metrohm AG, Houston, TX, USA.
Shih-Guo Li	08/25 to 10/25; Ph.D. conferred at Texas A&M University, College Station, TX, USA (2018): Advisor: Karen L. Wooley; presently Process Engineer at Applied Materials, Inc., Sunnyvale, CA, USA.

Graduate Students:

Washington University—

Daniel H. Bolton	1993 to 1998; B.S. Chemistry, University of Central Oklahoma, Edmond, OK, USA (1993); Ph.D. dissertation "Synthesis, Characterization, and Comparison of Linear and Hyperbranched Polycarbonates", 03/98; presently Director Polymers Technology and Applications with Eastman Chemical Company, Kingsport, TN, USA.
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Jennifer M. Weinberg Tsao	1993 to 1998; B.A. Chemistry, University of Virginia, USA (1993); Ph.D. dissertation "The Design, Synthesis, and Characterization of Degradable Poly(silyl ester)s", 06/98; MBA from Wharton School of Business (2005); presently Executive Director of Corporate Strategy with Quest Diagnostics, New York, NY, USA.
Anja Mueller	1995 to 1998, Diplom in Biologie Universität von Regensburg, Germany (1993); Ph.D. Dissertation "The Design, Synthesis, and Characterization of Hyperbranched Fluoropolymers", 08/98; presently Professor of Chemistry & Biochemistry with Central Michigan University, Mount Pleasant, MI, USA.
Harvey R. Fields, Jr.	1994 to 2004; B.S. Chemistry, Morehouse College (1983); B.Ch.E. Georgia Inst. Tech. (1983), Atlanta, GA, USA; Chemical Engineer with Procter & Gamble (1983-1994); Ph.D. Dissertation "Investigation of the Role of Macromolecular Architecture on the Tribological Behavior of a Family of Chemically Homologous, yet Architecturally Distinct Poly(benzyl ether)s"; joint with Professor Jacob Schaefer (Department of Chemistry, Washington University), 12/04; presently Founding Dean and Assistant Professor of Chemistry, College of STEM, Harris Stowe State University, St. Louis, MO, USA.
Christopher G. Clark, Jr.	1995 to 2002; B.A. Chemistry, Cornell University, Ithaca, NY, USA (1995); Ph.D. Dissertation "The Design, Synthesis, Characterization, and Graphitic Surface-mediated Assembly of Dendrimers with a Planar Core and Variably Flexible Branching Units", 08/2002; VP, Emerging Technologies at Locii Innovations, Singapore.
Min Wang	1996 to 2001; B.E. China Textile University (1993); M.S. Fudan University, China (1996); Ph.D. Dissertation "Hydrolytically-labile Poly(silyl ester)s Designed for Tailored Degradation Rates and Profiles", 05/2001; presently Software Design Engineer with Microsoft Corporation, Redmond, WA, USA.
Qi Zhang	1997 to 2001; B.S. Peking University, China (1997); Ph.D. Dissertation "Design, Synthesis, and Characterization of Shell Crosslinked Nanoparticles (SCKs) Containing Degradable, Crystalline, or Glassy Core Domains", 06/2001; M.S. Washington University, Department of Computer

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Qinggao (Philip) Ma	1997 to 2002; B.S. Tongji University, Shanghai, China (1992); M.S. Chinese Academy of Science, Shanghai Institute of Materia Medica, China (1995); Ph.D. Dissertation "Fundamental and Applied Studies of SCK Nanoparticle Surface Interactions", 05/2002; presently Global Technical Marketing Manager with BASF, Tarrytown, NY, USA.
Juli S. Allen	1998 to 2000; B.A. Chemistry, Newberry College, Newberry, SC, (1998); M. A. Chemistry, Washington University, St. Louis, MO, USA.
Cathleen Kolthoff	1998 to 2000; B.S. Chemistry, Rockhurst College, Kansas City, MO, (1992); M. A. Chemistry, Washington University, St. Louis, MO, USA.
Matthew L. Becker	1998 to 2003; B.S. Chemistry, Northwest Missouri State University, Maryville, MO, USA (1998); Ph.D. Dissertation "Regioselective Labeling of Block Copolymers, Incorporation into Nanostructures, and Evaluation of Biological Activity", 06/2003; presently Distinguished Professor of Chemistry with Duke University, Durham, NC, USA.
Chakravarthy Gudipati	1999 to 2004; B. S. Mathematics, Physics and Chemistry, Osmania University, Hyderabad, India (1996); M. S. Organic Chemistry, Indian Institute of Technology, Bombay, India (1998); Ph.D. Dissertation, "Hyperbranched Fluoropolymer (HBFP)-Poly(ethylene glycol) (PEG) Amphiphilic Nanostructures in Solution and as Components of Crosslinked Networks", 08/2004; presently Executive Director of Water Technologies, Technology Innovation Institute, Abu Dhabi, United Arab Emirates.
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