Mark P. Stoykovich

Department of Chemical and Biological Engineering
University of Colorado – Boulder
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PROFESSIONAL PREPARATION

Massachusetts Institute of Technology	Chemical Engineering	B.S., 2000
Massachusetts Institute of Technology	Chemistry	B.S., 2000
University of Wisconsin – Madison	Chemical Engineering	Ph.D., 2007
University of Illinois at Urbana-Champaign	Materials Science	2007-2008

APPOINTMENTS

2008–present: Assistant Professor of Chemical and Biological Engineering, University of Colorado - Boulder.

2007–2008: Postdoctoral Research Associate, Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign.

GRADUATE ADVISORS AND POSTDOCTORAL SPONSORS

Graduate Advisor: Professor Paul F. Nealey, University of Wisconsin - Madison
Postdoctoral Advisor: Professor John A. Rogers, University of Illinois at Urbana - Champaign

AWARDS AND HONORS

- College of Engineering Dean's Faculty Fellowship (2011-2012).
- 1st Place, "Science as Art" Competition, MRS Fall Meeting and Exhibit (2011).
- ISI Essential Science Indicator *Hot Papers* for ACS Nano, 1(3), 168, 2007 article (2008).
- Semiconductor Research Corporation (SRC) inventor recognition award (2004, 2005, 2008).
- SRC Graduate Fellowship (2003-2006).
- Finalist for the American Physical Society's Frank J. Padden, Jr. award for graduate student research in Polymer Physics (2006).
- Best paper in session at TECHCON (2005).
- Best poster/presentation at the SRC Graduate Fellowship Conference (2004).
- Best presentation award at the SRC Review, University of Wisconsin (2002, 2005).
- Merck Index Award for outstanding scholarship, Department of Chemistry, MIT (2000).

PROFESSIONAL ACTIVITIES

- Session organizer for DPOLY focus session on "Thin Films of Block Copolymers and Hybrid Materials" at the American Physical Society (APS) March meeting (2013, 2014).
- Session organizer for "Top-down meets bottom-up" at the Foundations of Nanoscience (FNANO) conference, Snowbird, UT (2009-2012).
- Session chair for "Friction and brushes" at the American Physical Society (APS) March meeting, Boston, MA (2012).
- Symposium organizer for "Dynamics of nanostructured polymers" at the ACS Fall National meeting, Denver, CO (2011).
- Session chair for "Block copolymer thin films III" at the American Physical Society (APS) March meeting, Dallas, TX (2011).
- Nano Picks reviewer for ACS Nanotation (2008-2009).

- Referee for Nano Letters, Physical Review Letters, ACS Nano, Advanced Materials, Advanced Functional Materials, Macromolecules, ACS Macro Letters, Langmuir, Materials Today, ACS Applied Materials & Interfaces, Applied Physics Letters, Soft Materials, Optics Express, Journal of Materials Chemistry, Polymer, Thin Solid Films, European Polymer Journal, Journal of Vacuum Science and Technology B, Nano-Micro Letters.
- Reviewer of funding proposals for DOE, University of Colorado Innovative Seed Grant, Dutch Technology Foundation STW.
- Outreach:
  - Volunteer for University of Colorado NanoDays (2010, 2012,2013).
  - Panelist at the Graduate School Advising Workshop, Univ. of Colorado (2012).
  - Judge for middle school science fair in Aurora, IL (2007).
  - Volunteer for Univ. of Wisconsin Engineering Expo (2005).
  - Designed and performed demonstrations for local underrepresented high school students through the Univ. of Wisconsin Pre-college Enrichment Opportunity Program for Learning Excellence (PEOPLE) program (2003, 2004).
- Departmental Service:
  - Chemical Engineering Senior Thesis Instructor (CHEN 4010, 4020) (2008-).
  - Departmental ABET committee (2012-).
  - Departmental advisor for the Engineering Honors Program (2009-2011).
  - Organized department seminars (2011-2012).
  - Member of departmental strategic planning committee (2011-2012).
  - Stars Symposium judge (2010-2011).
  - Member of the departmental Department Chair Search Committee (2010-2011).
  - Undergraduate recruiting - Engineering Sampler (2010).
  - Member of the College of Engineering Honors Program curriculum task force (2009-2010).
  - Member of the departmental Faculty Search Committee (2009-2010).
  - Member of the departmental Research Faculty Committee (2009).
  - Advisor for 31 Chemical Engineering undergraduates (2008-2010).
  - Member of thesis committees: Steven Koenig (PhD ME, 2013), Mohammad Reza Kabiri (CVEN), Zhen Wang (PhD ME, 2013), Arezou Seifpour (PhD, 2013), Megan Cole (PhD, 2012), Kenneth C. Koehler (PhD, 2012), Richard Sheridan (PhD, 2012), Benjamin T. Smith (PhD, 2012), Qi Ge (PhD ME, 2012), Jonathan Figueroa (MS CVEN, 2012), Stephanie Malone (PhD, 2011), Stephen T. Marshall (PhD, 2010), Eric Greenwald (MS, 2010), Anna Pickerell (MS, 2009).

COURSES TAUGHT

University of Colorado (2008 -)

- CHEN 4130 – Chemical Engineering Laboratory 2 (undergraduate core course)

Fall 2008	24 students	Instructor Rating: 4.6 / 6.0
Fall 2009	18 students	Instructor Rating: 5.1 / 6.0**
Fall 2010	22 students	Instructor Rating: 5.3 / 6.0**
Fall 2012	17 students	Instructor Rating: 5.4 / 6.0**
Fall 2013	17 students	Instructor Rating: 5.8 / 6.0**

- CHEN 4460/5460 – Polymer Engineering (undergraduate core course, graduate elective course)

Spring 2009	61 students	Instructor Rating: 4.0 / 6.0
Spring 2011	64 students	Instructor Rating: 4.5 / 6.0
Spring 2013	60 students	Instructor Rating: 4.1 / 6.0

- CHEN 4836/4836 – Nanomaterials (undergraduate and graduate elective course)
  Fall 2011 37 students Instructor Rating: 5.1 / 6.0**
  Spring 2014

** Above department average.

PERSONNEL DIRECTED

Graduate students	*Dates, Degree Granted*
Kathryn Morrissey	2011 –
Kelsey Childress	2011 –
Chunlin He	2010 –
Ian P. Campbell	2010 – 2013, PhD in Chemical and Biological Eng.
Ryan Mowbray	2011 – 2013, MS in Chemical and Biological Eng.
Marc Vera Canudas	2011 – 2013, MS in Chemical and Biological Eng.
Katherine P. Rice	2011 – 2012, PhD in Chemical and Biological Eng.
Julie L. Stiver	2010 – 2011, MS in Chemical and Biological Eng.
Barbara J. Ward	2009 – 2010, none
Jonathan L. Feaver	2008 – 2010, MS in Chemical and Biological Eng.

Undergraduate students	*Dates*	*Current Position*
Kyle Diederichsen	8/2013 – (Senior Thesis)	
Rebeccah Chapman	8/2013 – (Senior Thesis)	
Taylor Kennedy	8/2013 – (Senior Thesis)	
Chris Geary	6/2013 –	
Lucjan Zolnierowski	6/2013 – 8/2013 (REU)	Yale Univ.
Connor McMahan	6/2013 – 8/2013 (REU)	MIT
Xueying Zhao	6/2012 – 8/2012 (REU)	Georgia Tech.
Soichi Hirokawa	6/2012 - 8/2012 (REU)	Bowdoin Univ.
Will Brewer	8/2011 – 5/2012 (Senior Thesis)	Micron Technologies
Gawain Lau	6/2011 – 8/2011 (REU)	Univ. of Pennsylvania
Min Hao Wong	6/2011 – 8/2011 (REU)	Univ. of Illinois
Graham Parkinson	1/2011 – 5/2012 (Senior Thesis)	Georgia Tech.
Kyle Kuchta	1/2011 – 5/2012 (Senior Thesis)	Tesoro
James Prager	1/2011 – 5/2011	Goldman-Sachs
Andrew Paterson	10/2010 – 7/2011	University of Houston
Junsu Han	9/2010 – (UROP 2011-2012)	
Gracson Andrews	8/2010 – 12/2010	Shell
David Garfield	6/2010 – 12/2010	UC-Berkeley
Robert Morrow	6/2010 - 8/2010 (REU)	University of Buffalo
Brian Perea	6/2010 - 8/2010 (REU)	UC-Berkeley
Katrina Jewell	5/2010 – 12/2010	MCDB undergrad.
Aaron Olson	5/2010 – 6/2011 (UROP 2010-2011)	Halliburton
Katherine Potter	8/2009 - 6/2010 (Senior Thesis)	Bend Research
Matthew Gaudyn	5/2009 - 8/2009	AAA Molybdenum
David Tzou	1/2009 - 1/2010 (UROP 2009)	Halliburton
Daryl Krug	1/2009 - 5/2009	Schlumberger

PATENTS

Patents granted:

5. US Patent 8,287,957. "Methods and compositions for forming aperiodic patterned polymer films," Paul F. Nealey, Sang Ouk Kim, Erik W. Edwards, **Mark P. Stoykovich**, Juan J. de Pablo (**October 16, 2012**).

4. US Patent 8,217,381. "Controlled buckling structures in semiconductor interconnects and nanomembranes for stretchable electronics," John A. Rogers, Matthew Meitl, Yugang Sun, Heung Cho Ko, Andrew Carlson, Won

Mook Choi, **Mark P. Stoykovich**, Hanqing Jiang, Yonggang Huang, Ralph G. Nuzzo, Keon Jae Lee, Zhengtao Zhu, Etienne Menard, Dahl-Young Khang, Seong Jun Kang, Jong Hyun Ahn, Hoon-sik Kim (**July 10, 2012**).

3. US Patent 8,168,284. "Fabrication of complex three-dimensional structures based on directed assembly of self-assembling materials on activated two-dimensional templates," Paul F. Nealey, **Mark P. Stoykovich**, Kostas Ch. Daoulas, Marcus Müller, Juan J. de Pablo, Sang-Min Park (**May 1, 2012**).

2. US Patent 8,133,534. "Methods and compositions for forming patterns with isolated or discrete features using block copolymer materials," **Mark P. Stoykovich**, Huiman Kang, Kostas Ch. Daoulas, Juan J. de Pablo, Marcus Müller, Paul F. Nealey. (**March 13, 2012**).

1. US Patent 7,972,875. "Optical systems fabricated by printing-based assembly," John A. Rogers, Ralph G. Nuzzo, Matthew Meitl, Etienne Menard, Alfred J. Baca, Michael Motala, Jong-Hyun Ahn, Sang-Il Park, Chang-Jae Yu, Heung Cho Ko, **Mark P. Stoykovich**, Jongseung Yoon. (**July 5, 2011**).

Patents pending:

1. "Stretchable and foldable electronic devices," John A. Rogers, Yonggang Huang, Heung Cho Ko, **Mark P. Stoykovich**, Won Mook Choi, Jizhou Song, Jong Hyun Ahn, Dae Hyeong Kim (pending 12/398,811 - filed March 2009).

PUBLICATIONS

Total citations: 2664; Average citations per item: 74.00; h-index: 23.
Source: Web of Science, February 2, 2014.

University of Colorado (2008 -) (* indicates corresponding authors)

44. K. P. Rice, A. S. Paterson, **M. P. Stoykovich***, "Oxidation kinetics and stability in hollow copper oxide nanocrystals characterized by real-time optical spectroscopy," in preparation (2014).

43. K. I. MacConaghy, C. I. Geary, J. L. Kaar*, **M. P. Stoykovich***, "Photonic crystal kinase biosensor," submitted to *J. American Chemical Society* (2014).

42. Y. Watanabe, R. W. Mowbray, K. P. Rice, **M. P. Stoykovich***, "Kinetic description of metal nanocrystal oxidation: A combined theoretical and experimental approach for determining morphology and diffusion parameters in hollow nanoparticles by the nanoscale Kirkendall effect," submitted to *Phil. Mag.* (2013).

41. K. P. Rice, J. Han, I. P. Campbell, **M. P. Stoykovich***, "Absorbance spectroscopy for characterizing the low temperature oxidation of copper thin films and nanoparticles," submitted to *Particle* (2013).

40. K. L. Morrissey, C. He, M. H. Wong, X. Zhao, S. L. Bender, W. D. Prevatt, **M. P. Stoykovich***, "Reversible and recyclable polymer flocculants for the dewatering of microalgae," submitted to *Environ. Sci. Technol.* (2013).
Journal Impact Factor: 5.257, *Times Cited:* 0.

39. K. P. Rice*, R. R. Keller, **M. P. Stoykovich**, "Specimen-thickness effects on transmission Kikuchi patterns in the scanning electron microscope," submitted to *J. Microscopy* (2013).
Journal Impact Factor: 1.633, *Times Cited:* 0.

38. I. P. Campbell, S. Hirokawa, **M. P. Stoykovich***, "Processing approaches for the defect engineering of lamellar-forming block copolymers in thin films," *Macromolecules*, 46(24), 9599-9608 (2013).
Journal Impact Factor: 5.521, *Times Cited:* 0.

37. I. P. Campbell, C. He, **M. P. Stoykovich***, "Topologically distinct lamellar block copolymer morphologies formed by solvent and thermal annealing," *ACS Macro Letters*, 2, 918–923 (2013) **(highlighted with cover illustration)**.

Journal Impact Factor: NA, *Times Cited:* 0.

36. K. P. Rice, A. E. Saunders, **M. P. Stoykovich***, "Seed-mediated growth of shape-controlled wurtzite CdSe nanocrystals: Platelets, cubes, and rods," *J. American Chemical Society*, 135, 6669-6676 (2013).
Journal Impact Factor: 10.677, *Times Cited:* 2.

35. D. U. Ahn, Z. Wang, I. P. Campbell, **M. P. Stoykovich**, Y. Ding*, "Morphological evolution of thin PS/PMMA films: Effects of surface energy and blend composition," *Polymer*, 53(19), 4187-4194 (2012).
Journal Impact Factor: 3.379, *Times Cited:* 0.

34. I. P. Campbell, G. J. Lau, J. L. Feaver, **M. P. Stoykovich***, "Network connectivity and long-range continuity of lamellar morphologies in block copolymer thin films," *Macromolecules*, 45(3), 1587-1594 (2012).
Journal Impact Factor: 5.521, *Times Cited:* 4.

33. K. P. Rice, A. E. Saunders, **M. P. Stoykovich***, "Classifying the shape of colloidal nanocrystals by complex Fourier descriptor analysis," *Crystal Growth & Design*, 12(2), 825-831 (2012).
Journal Impact Factor: 4.689, *Times Cited:* 1.

32. K. P. Rice, E. J. Walker, Jr., **M. P. Stoykovich**, A. E. Saunders*, "Solvent-dependent surface plasmon response and oxidation of copper nanocrystals," *J. Physical Chemistry C*, 115(5), 1793-1799 (2011).
Journal Impact Factor: 4.814, *Times Cited:* 27.

31. **M. P. Stoykovich***, K. Ch. Daoulas, M. Müller, H. Kang, J. J. de Pablo, P. F. Nealey, "Remediation of line edge roughness in chemical nano-patterns by the directed assembly of overlying block copolymer films," *Macromolecules*, 43, 2334-2342 (2010).
Journal Impact Factor: 5.521, *Times Cited:* 33.

pre-University of Colorado (2002 - 2008)

30. H. C. Ko, G. Shin, S. Wang, **M. P. Stoykovich**, J. W. Lee, D.-H. Kim, J. S. Ha, Y. Huang, K.-C. Hwang, J. A. Rogers, "Curvilinear electronics formed using silicon membrane circuits and elastomeric transfer elements," *Small*, 5(23), 2703-2709 (2009) **(highlighted with cover illustration)**.

29. S. Wang, J. Xiao, I. Jung, J. Song, H. C. Ko, **M. P. Stoykovich**, Y. Huang, K.-C. Hwang, J. A. Rogers, "Mechanics of hemispherical electronics," *Applied Physics Letters*, 95, 181912 (2009).

28. J. Song, Y. Huang, J. Xiao, S. Wang, K. C. Hwang, H. C. Ko, D.-H. Kim, **M. P. Stoykovich**, J. A. Rogers, "Mechanics of noncoplanar mesh design for stretchable electronic circuits," *J. Applied Physics*, 105, 123516 (2009).

27. G. L. Liu, **M. P. Stoykovich**, S. Ji, K. O. Stuen, G. S. W. Craig, P. F. Nealey, "Phase behavior and dimensional scaling of symmetric block copolymer-homopolymer ternary blends in thin films," *Macromolecules*, 43, 3063-3072 (2009).

26. H. C. Ko[†], **M. P. Stoykovich**[†], J. Song, V. Malyarchuk, W. M. Choi, C. J. Yu, J. B. Geddes III, J. Xiao, S. Wang, Y. Huang, J. A. Rogers, "A hemispherical electronic eye camera based on compressible silicon optoelectronics," *Nature*, 454, 748-753 (2008) ([†]authors contributed equally) **(highlighted by cover illustration, *Nature* News and Views, and mass media outlets including Technology Review, Scientific American, Photonics Spectra, US News and World Reports, The Discovery Channel, ABC News, BBC, MSNBC, Reuters, Chicago Tribune)**.

25. H. Kang, F. A. Detcheverry, A. N. Mangham, **M. P. Stoykovich**, K. Ch. Daoulas, R. J. Hamers, M. Müller, J. J. de Pablo, P. F. Nealey, "Hierarchical assembly of nanoparticle superstructures from block copolymer-nanoparticle composites," *Physical Review Letters*, 100, 148303 (2008).

24. K. Ch. Daoulas, M. Müller, **M. P. Stoykovich**, H. Kang, J. J. de Pablo, P. F. Nealey, "Directed copolymer assembly on chemical substrate patterns: A phenomenological and Single-Chain-in-Mean-Field simulations study of the influence of roughness in the substrate pattern," *Langmuir*, 24, 1284 (2008).

23. **M. P. Stoykovich**, K. Yoshimoto, P. F. Nealey, "Mechanical properties of polymer nanostructures: Measurements based on deformation in response to capillary forces," *Applied Physics A*, 90, 277 (2008).

22. **M. P. Stoykovich,** H. Kang, K. Ch. Daoulas, G. Liu, C.-C. Liu, J. J. de Pablo, M. Müller, P. F. Nealey, "Directed self-assembly of block copolymers for nanolithography: Fabrication of isolated features and essential integrated circuit geometries," *ACS Nano*, 1(3), 168 (2007) **(highlighted by cover illustration, perspectives article, and ISI Essential Science Indicator *Hot Papers* May 2008)**.

21. Y.-H. La, **M. P. Stoykovich**, S.-M. Park, P. F. Nealey, "Directed assembly of cylinder-forming block copolymers into patterned structures to fabricate arrays of spherical domains and nanoparticles," *Chemistry of Materials*, 19, 4538 (2007).

20. H. R. Keymeulen, A. Diaz, H. H. Solak, C. David, F. Pfeiffer, B. D. Patterson, J. F. van der Veen, **M. P. Stoykovich**, P. F. Nealey, "Measurement of the x-ray dose-dependent glass transition temperature of structured polymer films by x-ray diffraction," *J. Applied Physics*, 102, 013528 (2007).

19. Y. Ekinci, H. H. Solak, C. Padeste, J. Gobrecht, **M. P. Stoykovich**, P. F. Nealey, "20 nm Line/space patterns in HSQ fabricated by EUV interference lithography," *Microelectronic Eng.*, 84(5-8), 700 (2007).

18. S.-M. Park, **M. P. Stoykovich**, R. Ruiz, Y. Zhang, C. T. Black, P. F. Nealey, "Directed assembly of lamellae-forming block copolymers using chemically and topographically patterned substrates," *Advanced Materials*, 19, 607 (2007).

17. E. W. Edwards, M. Müller, **M. P. Stoykovich**, H. H. Solak, J. J. de Pablo, P. F. Nealey, "Dimensions and shapes of block copolymer domains assembled on lithographically defined chemically patterned substrates," *Macromolecules*, 40(1), 90, (2007).

16. **M. P. Stoykovich**, E. W. Edwards, H. H. Solak, P. F. Nealey, "Phase behavior of symmetric ternary block copolymer – homopolymer blends in thin films and on chemically patterned surfaces," *Physical Review Letters*, 97, 147802 (2006).

15. K. Ch. Daoulas, M. Müller, **M. P. Stoykovich**, Y. J. Papakonstantopoulos, S.-M. Park, J. J. de Pablo, P. F. Nealey, H. H. Solak, "Directed assembly of copolymer materials on patterned substrates: Balance of simple symmetries in complex structures," *J. Poly. Sci. B: Poly. Phys.*, 44(18), 2589 (2006).

14. **M. P. Stoykovich**, P. F. Nealey, "Block copolymers and conventional lithography," *Materials Today*, 9(9), 20-29 (2006) **(invited review article)**.

13. S. O. Kim, B. H. Kim, K. Kim, C. M. Koo, **M. P. Stoykovich**, P. F. Nealey, H. H. Solak, "Defect structure in thin films of a lamellar block copolymer self-assembled on neutral homogeneous and chemically nanopatterned surfaces," *Macromolecules*, 39(16), 5466 (2006).

12. E. W. Edwards, **M. P. Stoykovich**, H. H. Solak, P. F. Nealey, "Long-range order and orientation of cylinder-forming block copolymers on chemically nanopatterned striped surfaces," *Macromolecules*, 39(10), 3598 (2006).

11. K. Ch. Daoulas, M. Müller, **M. P. Stoykovich**, S.-M. Park, Y. J. Papakonstantopoulos, J. J. de Pablo, P. F. Nealey, H. H. Solak, "Fabrication of complex three-dimensional nanostructures from self-assembling block copolymer materials on two-dimensional chemically patterned templates with mismatched symmetry," *Physical Review Letters*, 96, 036104 (2006).

10. E. W. Edwards, **M. P. Stoykovich**, H. H. Solak, P. F. Nealey, "Binary blends of diblock copolymers as an efficient route to multiple length scales in perfect directed self-assembly of diblock copolymer thin films," *J. Vac. Sci. Technol. B*, 24(1), 340 (2006).

9. P. F. Nealey, E. W. Edwards, M. Müller, **M. P. Stoykovich**, H. H. Solak, J. J. de Pablo, "Self-assembling resists for nanolithography," *Proceedings of the 2005 IEEE International Electron Devices Meeting*, 356 (2006).

8. E. W. Edwards, **M. P. Stoykovich**, M. Müller, H. H. Solak, J. J. de Pablo, P. F. Nealey, "Mechanism and kinetics of ordering in diblock copolymer thin films on chemically nanopatterned substrates," *J. Poly. Sci. B: Poly. Phys.*, 43(23), 3444 (2005).

7. **M. P. Stoykovich**, M. Müller, S. O. Kim, H. H. Solak, E. W. Edwards, J. J. de Pablo, P. F. Nealey, "Directed assembly of block copolymer blends into nonregular device-oriented structures," *Science*, 308, 1442 (2005).

6. I. Junarsa, **M. P. Stoykovich**, P. F. Nealey, Y. Ma, F. Cerrina, H. H. Solak, "Hydrogen silsesquioxane as a high resolution negative-tone resist for extreme ultraviolet lithography," *J. Vac. Sci. Technol. B.*, 23(1), 138 (2005).

5. K. Yoshimoto, **M. P. Stoykovich**, H. B. Cao, W. J. Drugan, J. J. de Pablo, P. F. Nealey, "A two-dimensional model of the deformation of photoresist structures using elastoplastic polymer properties," *J. Applied Physics*, 96, 1857 (2004).

4. S. O. Kim, H. H. Solak, **M. P. Stoykovich**, N. J. Ferrier, J. J. de Pablo, P. F. Nealey, "Epitaxial self-assembly of block copolymers on lithographically defined nanopatterned substrates," *Nature*, 424, 411 (2003) **(highlighted with News and Views article)**.

3. **M. P. Stoykovich**, H. B. Cao, K. Yoshimoto, L. E. Ocola, P. F. Nealey, "Deformation of nanoscopic polymer structures in response to well-defined capillary forces," *Advanced Materials*, 15(14), 1180 (2003).

2. P. F. Nealey, **M. P. Stoykovich**, K. Yoshimoto, H. B. Cao, "Nanolithographic Polymer Structures: Mechanical Properties," *The Encyclopedia of Materials: Science and Technology*, Elsevier Science Ltd., (2003).

1. T. A. Bullions, **M. P. Stoykovich**, J. E. McGrath, A. C. Loos, "Monitoring the reaction progress of a high-performance phenylethynyl-terminated poly(etherimide). Part II: Advancement of glass transition temperature," *Polymer Composites*, 23(4), 479 (2002).

PRESENTATIONS

Invited Presentations (21 total) including:

- Arizona State University, Chemical Engineering and the Barrett Honors College, Tempe, AZ (2011).
- Bio-directed Assembly Workshop, Army Research Office, Keystone, CO (2010).
- Colorado State University, Department of Chemical and Biomolecular Engineering (2009).
- Seventeenth Symposium on Thermophysical Properties, Boulder, CO (2009).
- University of Colorado, NSF MRSEC Liquid Crystal Center, Boulder, CO (2009).
- Foundations of Nanoscience (Self-Assembled Architectures and Devices), Snowbird, UT (2006).
- North Carolina State University, Department of Chemical and Biomolecular Engineering (2006).
- MIT, Department of Chemical Engineering (2006).
- Sandia National Laboratories, Albuquerque, NM (2006).
- Rice University, Chemical and Biomolecular Engineering Department (2006).
- University of Michigan, Department of Chemical Engineering (2006).
- University of Colorado, Department of Chemical and Biological Engineering (2006).
- Yale University, Department of Chemical Engineering (2006).
- University of Connecticut, Polymer Program (2006).
- The Pennsylvania State University, Department of Chemical Engineering (2006).
- Northwestern University, Department of Chemical and Biological Engineering (2006).

- Los Alamos National Laboratory (2005).
- Center for Nanoscale Materials Users' Meeting at Argonne National Laboratory (2005).

Contributed Presentations including:

- American Physical Society (APS) March meeting (2002, 2004-2008, 2011-2013,2014).
- Materials Research Society (MRS) Fall Meeting (2005, 2010-2013).
- American Institute of Chemical Engineers (AIChE) Annual Meeting (2005, 2010, 2011).
- Foundations of Nanoscience (FNANO) meeting (2010, 2011).
- MRS Workshop Series, Denver, CO (2010).
- American Chemical Society (ACS) spring national meeting (2007).
- TECHCON (2003, 2005).
- SPIE Microlithography 2004 – Advances in Resist Technology and Processing XXI (2004).
- Society for Experimental Mechanics Annual Conference on Applied Mechanics (2002).