CURRICULUM VITAE

Lei Zhai

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PROFESSIONAL EXPERIENCE

Associate Professor	NanoScience Technology Center and the Department of Chemistry University of Central Florida	2010- present
Assistant Professor	NanoScience Technology Center and the Department of Chemistry University of Central Florida	2005-2010
Postdoctoral Fellow	Department of Materials Science & Engineering Massachusetts Institute of Technology Advisor: Michael F. Rubner and Robert E. Cohen	2003-2005

RESEARCH INSTERESTS

- Polymer Composites for Energy Conversion and Storage
- Surface Science and Engineering of Carbon Nanotubes, Graphene and Nanoparticles
- Polymer-Derived Ceramics
- Multilayer Films
- Functional Electrospun Fibers

TEACHING

- CHS 1440: General Chemistry for Engineering Major (Enrollment: 300)
- CHM 2205: Introduction to Organic and Biochemistry for Health Major (Enrollment: 150)
- CHM1320L: Analytical Lab (Enrollment: 20)
- CHM 3212L: Organic Lab (Enrollment:24)
- CHM2046H: General Chemistry II (Enrollment:24)

EDUCATION

Ph.D. (Chemistry) Carnegie Mellon University, Pittsburgh, PA 2002
Dissertation Title: Micro- and Nanostructures from Functionalized Regioregular Polythiophenes
Advisor: Professor Richard D. McCullough

M.S. (Chemistry) East Tennessee State University Johnson City, TN 1998
Thesis Title: Theoretical Study of Pyrolysis Mechanisms of Pyrrole and Furan
Advisor: Professor Ruifeng Liu

B.S. (Chemical Engineering) East China University of Science and Technology 1993
Shanghai, China

AWARDS

NSF CAREER Award

AFFILIATIONS

American Chemical Society
Materials Research Society
Sigma Xi

SERVICES

- Associate editor for Materials Express, an international journal
- Serve on Undergraduate Affair Committee at the Department of Chemistry (2006-), Construction Committee (2007, Chair), Instrument Committee (2008-), Affiliate Committee (2008-, Chair) at NanoScience Technology Center
- Serve on student dissertation committees, as a judge for Undergraduate Research Showcase and Graduate Research Symposium at the University of Central Florida, and National Junior Science and Humanities Symposia.
- Coordinate Outreach Programs for NanoScience Technology Center
- Serve as a reviewer for: Nano Letters, ACS Nano, Langmuir, Accounts of Chemical Research, Biomacromolecules, Advanced Materials, Macromolecular Rapid Communications, Physical Chemistry Chemical Physics, Journal of Applied Polymer Science, Journal of Material Chemistry, Journal of Controlled Release, Journal of Nanoscience and Nanotechnology, Carbon, Colloids and Surfaces A: Physicochemical and Engineering Aspects, Electrochemsitry Communications, etc.
- Serve as a reviewer for National Science Foundation, Department of Energy (DOE), NASA, and ACS-PRF (Petroleum Research Fund)

PUBLICATIONS

1. Li, Q.; Liu, J.; Zou, J.; Chunder, A.; Chen, Y.; **Zhai, L.** "Synthesis and Electrochemical Performance of Multi-walled Carbon Nanotube/Polyaniline/MnO_2 Ternary Coaxial Nanostructures for Supercapacitors" *J. Power Sources* **2011,** *196***,** 565**.**
2. Tafti1, E. Y.; Londe, G.; Chunder, A; **Zhai, L.**; Kumar, R.; Cho, H. J. "Wettability Control and Flow Regulation Using a Nanostructure-Embedded Surface" *J. Nanosci. Nanotechnol.* **2011**, 11, 1.
3. Zou, J.; Liu, J.; Karakoti, A.; Kumar, A.; Joung, D.; Li, Q.; Khondaker, I. S.; Seal, S.; **Zhai, L.** "Ultra-light Multi-walled Carbon Nanotube Aerogel" *ACS Nano* **2010**,*4*, 7293.
4. Hu, Z.; Liu, J.; Gesquiere, A.; **Zhai, L.** "Single Molecule Spectroscopy and Atomic Force Microscopy Morphology Studies on a Diblock Copolymer Consisting of Poly (3-hexylthiophene) and Fullerene" *Macromol. Chem. Phys.* **2010**, *211*, 2416.
5. Joung, D.; Chunder, A.; **Zhai, L.**; Khondaker. S. I. "Space Charge Limited Conduction with Exponential Trap Distribution in Reduced Graphene Oxide Sheet" *Appl. Phys. Lett.* **2010**, *97*, 093105.
6. Chunder, A.; Pal, T.; Khondaker, S. I.; **Zhai, L.** "Reduced Graphene Oxide/Copper Phthalocyanine Composite and Its Optoelectrical Properties" *J. Phys. Chem. C.* **2010**, *114*, 15129.
7. Arif, M.; Liu, J.; **Zhai, L.**; Khondaker, S. I. "Poly(3-hexylthiophene) Crystalline Nanoribbon Network for Organic Field Effect Transistors" *Appl. Phys. Lett.* **2010**. *96*, 243304.
8. Ghosh, S.; Sarker, B. K.; Chunder, A.; **Zhai, L.**; Khondaker, S. I. "Position Dependent Photodetector from Large Area Reduced Graphene Oxide Thin Films" *Appl. Phys. Lett.* **2010**, *96*, 162109.
9. Sarkar, S.; Zou, J.; Liu, J.; Xu, C.; An, L.; **Zhai, L.** "Polymer-Derived Ceramic Composite Fibers with Aligned Pristine Multiwalled Carbon Nanotubes" *ACS Applied Materials & Interface* **2010**, *2*, 1150.
10. Joung, D.; Chunder, A.; **Zhai, L.**; Khondaker. S. I. "High Yield Fabrication of Chemically Reduced Graphene Oxide Field Effect Transistors by Dielectrophoresis" *Nanotechnology*, **2010**, *16*, 165202.
11. Sharma, R.; Karakoti, A.; Seal, S.; **Zhai, L.** "MWCNT-PSS Supported Polypyrrol/Manganese Oxide Nano-Composite for High Performance Electrochemical Electrodes" *J. Power Sources* **2010**, *195*, 1256.
12. Chunder, A.; Liu, J.; **Zhai, L.** "Reduced Graphene Oxide/Poly(3-hexylthiophene) Supramolecular Composites" *Macromol. Rapid Commun.* **2010**, *31*, 380.
13. Liu, J.; Arif, M.; Zou, J.; Khondaker, S. I.; **Zhai, L.** "Controlling Poly(3-hexylthiophene) Crystal Dimension: Nanowhiskers and Nanoribbons" *Macromolecules*, **2009**,*42*, 9390.

14. Zou, J.; Tran, B.; Huo, Q.; **Zhai, L.** "Transparent Carbon Nanotube/Poly (3, 4-ethylenedioxythiophene) Composite Electrical Conductors" *Soft Materials* **2009**, *7*, 355.
15. Sharma, R.; **Zhai, L.** "Multiwall Carbon Nanotube Supported Poly(3,4-ethylenedioxythiophene)/Manganese Oxide Nanocomposite Electrode for Supercapacitors" *Electrochim. Acta* **2009**, *54*, 7148.
16. Dai, Q.; Li, Y.; **Zhai, L.**; Sun, W. "3, 4-Ethylenedioxythiophene (EDOT)-Based π-Conjugated Oligomers: Facile Synthesis and Excited-state Properties" *J. Photochem. Photobio. A: Chem.* **2009**, *206*,164.
17. Liu, J.; Zou, J.; **Zhai, L.** "Bottom-up Assembly of Poly(3-hexylthiophene) on Carbon Nanotubes: 2D Building Blocks for Nanoscale Circuits" (Cover Featured) *Macromol. Rapid Commun.* **2009**, *30*,1387.
18. Dhir, V.; Natarajan, A.; Stanceescu, M.; Chunder, A.; Bhargava, N.; Das, M.; **Zhai, L.**; Molnar, P. "Patterning of Diverse Mammalian Cell Types in Serum Free Medium with Photoablation" *Biotechnol. Prog.* **2009,** *25*, 594.
19. Londe, G.; Chunder, A.; **Zhai, L.**; Cho, H. J. "An Analytical Model for the Wettability Switching Characteristic of a Nanostructured Thermoresponsive Surface" *Appl. Phys. Lett.* **2009**, *94*, 164104.
20. Chunder, A.; Etcheverry, K.; Wadsworth, S.; Boreman, G. D.; **Zhai, L.** "Fabrication of Antireflection Coatings on Plastics Using the Spraying Layer-by-layer Self-assembly Technique" *Journal of the Society for Information Display (invited)*, **2009,** *17*, 389.
21. Scolari, L.; Gauza, S.; Xianyu, H.; **Zhai, L.** ; Eskildsen, L.; Akleskhold, T. T.; Wu, S. –S.; Bjarklev, A. "Frequency Tunability of Solid-Core Photonic Crystal Fibers Filled with Nanoparticle-Doped Liquid Crystals" *Opt. Exp.* **2009**, *17*, 3754.
22. Stokes, P.; Liu, L.; Zou, J.; **Zhai, L.**; Huo, Q.; Khondaker, S. I. "Photoresponse in Large Area Multi-walled Carbon Nanotube/Polymer Nanocomposite Films" *Appl. Phys. Lett.* **2009,** *94*, 042110.
23. Zou, J.; Khondaker, S. I.; Huo, Q.; **Zhai, L.** "A General Strategy to Disperse and Functionalize Carbon Nanotubes Using Conjugated Block Copolymers" *Adv. Funct. Mater.* **2009,** *19*, 479.
24. Chunder, A.; Etcheverry, K.; Londe, G.; Cho, H. J.; **Zhai, L.** "Conformal Switchable Superhydrophobic/Hydrophilic Surfaces for Microscale Flow Control" *Colloids Surf., A* **2009**, *333*, 187.
25. Zou, J.; Chen, H.; Chunder, A.; Yu, Y.; Huo, Q.; **Zhai, L.** "A Simple Preparation of Superhydrophobic and Conductive Nanocomposite Coating from a Carbon Nanotube-Conjugated Block Copolymer Dispersion" *Adv. Mater.* **2008**, *20,* 3337.
26. Sarkar, S.; Chunder, A.; Fei, W.; An, L.; **Zhai, L.** "Superhydrophobic Mats of Polymer Derived Ceramics" *J. Am. Ceram. Soc.* **2008**, *91,* 2751.
27. Zou, J.; Liu, L.; Chen, H.; Khondaker, S. I.; McCullough, R. D.; Huo, Q.; **Zhai, L.** "Dispersion of Pristine Carbon Nanotubes Using Conjugated Block Copolymers" *Adv. Mater.* **2008**, *20*, 2055.
28. Londe, G.; Chunder, A.; Wesser, A.; **Zhai, L.**; Cho, H. J. "Microfluidic Valves Based on Superhydrophobic Nanosctructures and Switchable Thermosensitive Surface for Lab-on-a-chip (LOC) Systems" *Sens. Actuators, B* **2008**, *132*, 431.
29. Chang, N. –B.; Wanielista, M.; Hossain, F.; **Zhai, L.**; Lin, K. –S. "Integrating Nanoscale Zero-valent Iron and Titanium Dioxide for Nutrient Removal in Stormwater Systems" *NANO* **2008**, *3*, 297.
30. Zhang, L.; Wang, Y.; Wei, Y.; Xu, W.; Fang, D.; **Zhai, L.**; Lin, K.-C.; An, L. "A Silicon Carbonitride Ceramic with Anomalously High Piezoresistivity" *J. Am. Ceram. Soc.* **2008**, *91*, 1346.
31. Chen, H.; Muthuraman, H.; Stokes, P.; Zou, J; Liu, X.; Wang, J; Huo, Q.; Khondaker, S. I.; **Zhai, L.** "Dispersion of Carbon Nanotubes and Polymer Nanocomposite Fabrication Using Trifluoroacetic Acid as a Co-solvent" *Nanotechnology* **2007**, *18*, 415606.
32. Chunder, A.; Sarkar, S.; Yu, Y.; **Zhai, L.** "Fabrication of Ultrathin Polyelectrolyte Fibers and Their Controlled Release Properties" *Colloids Surf. , B* **2007**, *58*, 172.
33. Bravo, J.; **Zhai, L.**; Wu, Z.; Cohen, R. E.; Rubner, M. F. "Transparent Superhydrophobic Films Based on Silica Nanoparticles" *Langmuir* **2007**, *23*, 7293.
34. Ma, M.; Gupta, M.; Li, Z.; **Zhai, L.**; Gleason, K. K.; Cohen, R. E.; Rubner, M. F.; Rutledge, G. C. "Decorating Electrospun Fibers for Superhydrophobicity" *Adv. Mater.* **2007**, *19*, 255.

35. Wu, Z.; Walsh, J.; Nolte, A.; **Zhai, L.**; Cohen, R. E.; Rubner, M. F. "Deformable Antireflection Coatings from Polymer and Nanoparticle Multilayers" *Adv. Mater.* **2006**, *18*, 2699.
36. **Zhai, L.**; Berg, M. C.; Cebeci, F. Ç.; Kim, Y.; Milwid, J. M. Cohen, R. E.; Rubner, M. F. "Patterned Superhydrophobic Surface: Toward a Synthetic Mimic of the Namib Desert Beetle" *Nano Lett.* **2006**, *6*, 1213.
37. Cebeci, F. Ç.; Wu, Z.; **Zhai, L.**; Cohen, R. E.; Rubner, M. F. "Nanoporosity-Driven Superhydrophilicity: A Means to Create Multifunctional Antifogging Coatings" *Langmuir* **2006**, *22*, 2856.
38. Berg, M. C.; **Zhai, L.**; Cohen, R. E.; Rubner, M. F. "Controlled Drug Release from Porous Polyelectrolyte Multilayers" *Biomacromolecules* **2006**, *7*, 357.
39. Ewbank, P. C.; Loewe, R. S.; **Zhai, L.**; Reddinger, J.; Sauve, G.; McCullough, R. D. "Regioregular Poly(thiophene-3-alkanoic acid)s: Watersoluble Conducting Polymers Suitable of Chromatic Chemosensing in Solution and Solid State" *Tetrahedron* **2004**, *40*, 11269.
40. **Zhai, L.**; Cebeci, F. Ç.; Cohen, R. E.; Rubner, M. F. "Stable Superhydrophobic Coatings from Polyelectrolyte Multilayers" *Nano Lett.* **2004**, *7*, 1349.
41. **Zhai, L.**; Nolte, A. J.; Rubner, M. F.; Cohen, R. E. "pH-gated Nanoporous Transitions of Polyelectrolyte Multilayers in Confined Geometries and Their Application as Tunable Bragg Reflectors" *Macromolecules* **2004**, 3*7*, 6113.
42. **Zhai, L.**; McCullough, R. D. "Regioregular Polythiophene / Gold Nanoparticle Hybrid Materials" *J. Mater. Chem.* **2004**, *14*, 141.
43. **Zhai, L.**; Laird, D. W.; McCullough, R. D. "Soft-lithography Patterning of Functionalized Regioregular Polythiophenes" *Langmuir* **2003**, *19*, 6492.
44. **Zhai, L.**; Pilston, R. L.; Zaiger, K. L; Stokes. K. K.; McCullough, R. D. "Synthesis of Poly(3-(6-bromohexyl)thiophene) by Grignard Metathesis, and its Post-polymerization Functionalization" *Macromolecules* **2003**, *36*, 61.
45. **Zhai, L.**; McCullough, R. D. "Layer-by-layer Assembly of Polythiophene" *Adv. Mater.* **2002**, *14*, 901.
46. Loewe, R. S.; Eubank, P.; Liu, J.; **Zhai, L.**; McCullough, R. D. "Regioregular, Head-to-tail Poly(3-alkylthiophenes) Made Easily by the GRIM Method: Investigation of the Reaction and the Origin of Regio-selectivity" *Macromolecules* **2001**, *34*, 4324.
47. **Zhai, L.**; Zhou, X.; Liu, R. "A Theoretical Study of Pyrolysis Mechanisms of Pyrrole" *J. Phys. Chem. A* **1999** *103*, 3917.
48. Liu, R.; Zhou, X.; **Zhai, L.** "Theoretical Investigation of Unimolecular Decomposition Channels of Furan" *J. Comput. Chem.* **1998**, *19*, 240.

PATENTS

1. Zou, J.; **Zhai, L.**; Huo, Q. "Dispersions of Carbon Nanotubes in Copolymer Solutions and Functional Composite Materials and Coatings Therefrom" US 20090118420 (2009)
2. Huo, Q.; Khondaker, S.; Zou, J.; **Zhai, L.**; Chen, H.; Muthuraman, H. "Polymer Composites Having Highly Dispersed Carbon Nanotubes and Methods for Forming Same" US 2009001325 (2009)
3. Sheng, X.; **Zhai, L.**; Rubner, M. F.; Cohen, R. E. "Patterned Coatings Having Extreme Wetting Properties and Methods of Making" US 20070166513A1 (2007)
4. **Zhai, L.**; Cebeci, Fevzi C.; Cohen, Robert E.; Rubner, Michael F. "Superhydrophilic Coatings with Antireflective and Antifogging Property" US 2007104922 (2007)
5. Berg, M.; Ahn, H.; **Zhai, L.**; Cohen, R. E.; Rubner, M. F. "Polyelectrolyte Mutilayers Deposited on a Surface and Converted to a Porous Structure" U. S. 2006029634 (2006)
6. **Zhai, L.**; Cebeci, F.; Cohen, R. E.; Rubner, M. F. " Superhydrophobic Coatings that Mimic Lotus Leaf Structure" U.S. 2006029808 (2006)

BOOK CHAPTERS

1. Zou, J.; Liu, J.; Zhai, L. "Dispersing and Functionalizing Carbon Nanotubes Using Conjugated Block Copolymers" in "Functional Polymer Nanocomposites for Energy Storage and Conversion" Ed. Wang, Q.; Zhu, L. ACS Symposium Proceeding 2010.
2. Zhai, L. "Layer-by-Layer Self-Assembled Multilayer Stimuli-Responsive Polymeric Films" in "Handbook of Stimuli Responsive Materials" Ed. Urban, M. Joho-Wiley (in press)

CONFERENCE PROCEEDINGS

1. **Zhai, L.** "Conjugated polymer/Carbon Nanotube Composites for Energy Applications" Polymer Preprints 2010, 51, 692-693.
2. **Zhai, L.** "Conjugated Polymer/Carbon Nanotube Composites" PMSE Preprints, 2010.
3. Sarkar, S. ; Zou, J. ; Xu, C. ; Liu, J.; An, L. ; **Zhai, L.**"Polymer-Derived Ceramic Composite Fibers with Aligned Pristine Multiwalled Carbon Nanotubes" PMSE Preprint, 2010.
4. Liu, J.; Zou, J.; **Zhai, L.** "Poly(3-hexylthiophene)/carbon Nanotube Supramolecular Centipede" PMSE Preprints 2009, 100, 605.
5. Zou, J.; **Zhai, L.** "Platinum Nanoparticles Supported on Pristine Carbon Nanotubes for Anodic Oxidation of Methanol" PMSE Preprints 2009, 100, 547.
6. Chunder, A.; Etcheverry, K.; **Zhai, L.** "Invited Paper: Fabrication of Antireflection Coatings for Displays" Digest of Technical Papers - Society for Information Display International Symposium (2008), 39(BK. 1), 557-559.
7. Scolari, L.; Gauza, S.; Xianyu, Ha.; **Zhai, L.**; Eskildsen, L.; Alkeskjold, T. T. Wu, S.-T.; Bjarklev, A.; Cordeiro, C. M. B.; de Matos, C. J. S. "Nanoparticles Doped Liquid Crystal Filled Photonic Bandgap Fibers" AIP Conference Proceedings 2008, 1055, 29-32.
8. Fei, W.; Yang, Z.; **Zhai, L.**; Sohn, Y.; Cho K.; Klier E. "De-agglomeration Study and Slip Casting of Tungsten Nanopowders via Aqueous Colloidal Processing" The Proceedings of Tungsten, Refractory and Hard materials. 2008
9. Yang, Z.; Fei, W.; **Zhai, L.**; Sohn, Y.; Cho K.; Klier E. "Microscopic and Spectroscopic Characterization of Nano-Tungsten Powders" The Proceedings of Tungsten, Refractory and Hardmaterials. 2008*
10. Sarkar, S.; Tran, B.; Zhang, L.; An, L.; **Zhai, L.** "High Temperature Stable Silicon Borocarbonitride from Polyorganoborosilazane" PMSE Preprints 2008, 99, 551.
11. Zou, J.; Huo, Q.; **Zhai, L.** "Dispersion and Self-assembly of Carbon Nanotubes Using Conjugated Block Copolymers" PMSE Preprints 2008, 99, 204.
12. Sarka, S.; Chunder, A.; Fei, W.; An, L.; **Zhai, L.** "Superhydrophobic Polymer Derived Ceramic Fibers" PMSE Preprints 2007, 97, 871.
13. Chunder, A.; Sarkar, S.; Yu, Y.; **Zhai, L.** "Controlled Release of Low Molecular Weight Cationic Molecules from Electrospun Weak Polyelectrolyte Fibers" PMSE Preprints 2007, 96, 622.
14. Li, Z.; Lee, D.; **Zhai, L.**; Rubner, M.F.; Cohen, R.E. "Tuning the Water Wetting of Fabrics Using Nanoparticle Multilayer Assembly" PMSE Preprints 2006, 95, 800.
15. Ma, M.; Li, Z.; **Zhai, L.**; Rubner, M. F.; Rutledge, G. C. "Superhydrophobic Fabrics by Decorating Electrospun Fibers" Polymer Preprints 2006, 47, 441.
16. Wu, Z.; Nolte, A.; Walish, J.; **Zhai, L.**; Rubner, M. F.; Cohen, R. E. "Layer-by-layer Assembled Nanoparticles on Flexible Substrates: Toward Deformable Antireflection Coatings" PMSE Preprints 2005, 93, 654.
17. **Zhai, L.**; Laird, D.D.; McCullough, R. D. "Regioregular Polythiophene for Integrated Circuits" PMSE Preprints 2002, 87, 288.
18. Liu, J.; Sheina, E.; **Zhai, L.**; Kowalewski, T.; McCullough, R. D. "Nanowires Formed from Block Copolymers of Regioregular Polythiophene" PMSE Preprints 2002, 86, 35.
19. Zaiger, K.; **Zhai, L.**; McCullough, R. D. "Carbohydrate Functionalized Polythiophenes as Biosensors" Polymer Preprints 2001, 42, 332.

20. **Zhai, L.**; McCullough, R. D. "Layer by Layer Self-assembly of Polythiophene" Polymer Preprints 2001, 42, 187.
21. **Zhai, L.**; McCullough, R. D. "Functionalization of Regioregular Head-to-Tail Poly(3-alkylthiophenes) Side Chain" Polymer Preprints 2000, 41, 1582.

PRESENTATIONS

1. "Responsive Conjugated Polymer/Carbon Nanotube Composites" 6th International Symposium on Stimuli-Responsive Materials. Hattiesburg, MS, Oct 26-27, 2010 (invited).
2. "Conjugated Polymer/Carbon Nanotube Composites" WUC International Symposium on Energy Storage and Conversion 240 ACS National Meeting, Boston, MA, August 22-26, 2010 (invited).
3. "Controlling Poly(3-hexylthiophene) Supramolecular Structures: Nanowires and Nanoribbons" 239 ACS National Meeting, San Francisco, CA, March 21-25, 2010 (invited).
4. "Conjugated Polymer/Carbon Nanotube Composites for Engergy Applications" 239 ACS National Meeting, San Francisco, CA, March 21-25, 2010 (invited).
5. "Conjugated Polymer/Carbon Nanotube Composites" University of Florida, Mar. 18th, 2010 (invited).
6. "Conjugated Polymer/Carbon Nanotube Composites" University of New Hampshire, Dec. 2nd, 2009 (invited).
7. "Polymer Derived Ceramics" Northwestern Polytechnical University, China, 2009 (invited).
8. "Conductive Polymer/Carbon Nanotube Composites" 2009 Nanoelectronic Devices for Defense & Security, Fort Lauderdale, Florida. September 28-October 2, 2009.
9. "Polymer Composite for Transportation Parts" 238th ACS National Meeting, Washington D. C. August 17-22, 2009 (invited).
10. "Nanocomposites for Transporation: Workshop for High School Teachers" 238th ACS National Meeting, Washington D. C. August 17-22, 2009 (invited).
11. "Poly(3-hexylthiophene) Supramolecular Structures on Carbon Nanotubes" 237th ACS National Meeting, Salt Lake City, UT Mar. 22-26, 2009.
12. "Dispersion and Self-assembly of Carbon Nanotudes Using Conjugated Block Copolymers" 236th ACS National Meeting, Philadelphia, PA, Aug 17-21, 2008.
13. "Fabrication of Antireflection Coatings for Display" 2008 Society for Informational Display International Symposium, Seminar and Exhibition, Los Angeles, LA, May 13-18 (invited).
14. "Multifunctional Coatings from Nano Particles" Particles 2008, Orlando, FL (invited)
15. "Multifunctional Coatings" PPG Industry, Pittsburgh, PA. 2007 (invited)
16. "Electrospun Polyelectrolyte Fibers" 234th ACS National Meeting, Boston, MA, Aug 19-23, 2007.
17. "Superhydrophobic Polymer Derived Ceramic Mats" 234th ACS National Meeting, Boston, MA, Aug 19-23, 2007.
18. "pH-gated Drug Releasing of Polyelectrolyte Nanofibers" MRS Fall Meeting, Boston, MA, 2006.
19. "Surface Patterns with Extreme Wetting Properties" 230th ACS National Meeting, Washington DC, Aug 27-Sep 1, 2005.
20. "pH-gated Porosity Transitions of Polyelectrolyte Multilayers" University of Connecticut, 2005
21. "pH-gated Porosity Transitions of Polyelectrolyte Multilayers" University of Central Florida, 2005
22. "pH-gated Porosity Transitions of Polyelectrolyte Multilayers" Northeastern University, 2005
23. "Superhydrophobic Surface from Polyelectrolyte Multilayer Films." MRS Fall Meeting, Boston, MA, 2004.
24. "pH-gated Porosity Transitions of Polyelectrolyte Multilayers" Iowa State University, 2004.
25. "pH-Gated Porosity Transitions of Polyelectrolyte Multilayers in Confined Geometries and Their Applications as Bragg Reflectors " 227th ACS National Meeting, Anaheim, CA, Mar 27-Apr 1, 2004.
26. "pH-gated Nanoporous Transitions of Polyelectrolyte Multilayers in Confined Geometries" MRS Fall Meeting, Boston, MA, 2003.
27. "Regioregular polythiophene for integrated circuits. " 224th ACS National Meeting, Boston, MA, August 18-22, 2002.

28. "Layer by layer self-assembly of polythiophene." 222nd ACS National Meeting, Chicago, IL, August 26-30, 2001.
29. "Functionalization of regioregular head-to-tail poly(3-alkylthiophenes) side chain." 220th ACS National Meeting, Washington, DC, August 20-24, 2000.