

A Complete List of Publications (as of November 9, 2008):

Publications at the University of Tennessee, Knoxville

39. Jiang, X. M.; Wang, B. B.; Li, C. Y.; Zhao, B. "Thermosensitive Polymer Brush-Supported 4-*N,N*-Dialkylaminopyridine on Silica Particles for Catalysis of Hydrolysis of an Activated Ester in Aqueous Buffers: Comparison of Activity with Linear Polymer-Supported Version and Effect of LCST Transition", submitted for publication in October, 2008.
38. Jiang, X. G.; Zhao, B. "Tuning Micellization and Dissociation Transitions of Thermo- and pH-Sensitive Poly(ethylene oxide)-*b*-poly(methoxydi(ethylene glycol) methacrylate-*co*-methacrylic acid) in Aqueous Solutions By Combining Temperature and pH Triggers", *Macromolecules* **2008**, *41*, ASAP article (November 6, 2008); DOI: 10.1021/ma8018238.
37. Wang, B. B.; Li, B.; Zhao, B.; Li, C. Y. "Amphiphilic Janus Gold Nanoparticles via Combining "Solid State Grafting to" and "Grafting-from" Methods" *J. Am. Chem. Soc.* **2008**, *130*, 11594-11595.
36. Zhu, L.; Zhao, B. "Transmission Electron Microscopy Study of Solvent-Induced Phase Morphologies of Environmentally Responsive Mixed Homopolymer Brushes on Silica Particles" *J. Phys. Chem. B.* **2008**, *112*, 11529-11536.
35. Li, D. J.; Dunlap, J. R.; Zhao, B. "Thermosensitive Water-Dispersible Hairy Particle-Supported Pd Nanoparticles for Catalysis of Hydrogenation in an Aqueous/Organic Biphasic System" *Langmuir* **2008**, *24*, 5911-5918.
34. Zhao, B.; Jiang, X. M.; Li, D. J.; Jiang, X. G.; O'Lenick, T. G.; Li, B.; Li, C. Y. "Hairy Particle-Supported 4-*N,N*-Dialkylaminopyridine: An Efficient and Recyclable Nucleophilic Organocatalyst" *J. Polym. Sci. Part A: Polym. Chem.* **2008**, *46*, 3438-3446.
33. Jiang, X. G., Lavender, C. A.; Woodcock, J. W.; Zhao, B. "Multiple Micellization and Dissociation Transitions of Thermo- and Light-Sensitive Poly(ethylene oxide)-*b*-poly(ethoxytri(ethylene glycol) acrylate-*co*-*o*-nitrobenzyl acrylate) in Water" *Macromolecules* **2008**, *41*, 2632-2643.
32. Jiang, X. G.; Zhao, B. "End Group Effect on the Thermosensitive Properties of Well-Defined Water-Soluble Polystyrenics with Short Pendant Oligo(ethylene glycol) Groups Synthesized by Nitroxide-Mediated Radical Polymerization" *J. Polym. Sci. Part A: Polym. Chem.* **2007**, *45*, 3707-3721.
31. Li, D. J.; Zhao, B. "Temperature-Induced Transport of Thermosensitive Hairy Hybrid Nanoparticles between Aqueous and Organic Phases" *Langmuir* **2007**, *23*, 2208-2217.
30. Santer, S.; Kopyshv, A.; Donges, J.; Rhe, J.; Jiang, X. G.; Zhao, B.; Mller, M. "Memory of Surface Patterns in Mixed Polymer Brushes: Simulation and Experiment" *Langmuir* **2007**, *23*, 279-285.
29. Hua, F. J.; Jiang, X. G.; Zhao, B. "Temperature-Induced Self-Association of Doubly Thermosensitive Diblock Copolymers with Pendant Methoxytris(oxyethylene) Groups in Dilute Aqueous Solutions" *Macromolecules* **2006**, *39*, 3476-3479.
28. Li, D. J.; Jones, G. J.; Dunlap, J. R.; Hua, F. J.; Zhao, B. "Thermosensitive Hairy Hybrid Nanoparticles Synthesized by Surface-Initiated Atom Transfer Radical Polymerization" *Langmuir* **2006**, *22*, 3344-3351.
27. Ma, H. W.; Li, D. J.; Sheng, X.; Zhao, B.; Chilkoti, A. "Protein Resistant Polymer Coatings on Silicon Oxide by Surface-Initiated Atom Transfer Radical Polymerization" *Langmuir* **2006**, *22*, 3751-3756.

26. Zhao, B.; Zhu, L. "Nanoscale Phase Separation of Mixed Poly(*tert*-butyl acrylate)/Polystyrene Brushes on Silica Nanoparticles under Equilibrium Melt Conditions" *J. Am. Chem. Soc.* **2006**, *128*, 4574-4575.
25. Hua, F. J.; Jiang, X. G.; Li, D. J.; Zhao, B. "Well-Defined Thermosensitive, Water-Soluble Polyacrylates and Polystyrenics with Short Pendant Oligo(ethylene glycol) Groups Synthesized by Nitroxide-Mediated Radical Polymerization" *J. Polym. Sci. Part A: Polym. Chem.* **2006**, *44*, 2454-2467.
24. Zhao, B.; Li, D. J.; Hua, F. J.; Green, D. R. "Synthesis of Thermosensitive Water-Soluble Polystyrenics with Pendant Methoxyoligo(ethylene glycol) Groups by Nitroxide-Mediated Radical Polymerization" *Macromolecules* **2005**, *38*, 9509-9517.
23. Li, D. J.; Sheng, X.; Zhao, B. "Environmentally Responsive "Hairy" Nanoparticles: Mixed Homopolymer Brushes on Silica Nanoparticles Synthesized by Living Radical Polymerization Techniques" *J. Am. Chem. Soc.* **2005**, *127*, 6248-6256.
22. Zhao, B. "A Combinatorial Approach to Study Solvent-Induced Self-Assembly of Mixed Poly(methyl methacrylate)/Polystyrene Brushes on Planar Silica Substrates: Effect of Relative Grafting Density" *Langmuir* **2004**, *20*, 11748-11755.
21. Zhao, B.; Haasch, R. T.; MacLaren, S. "Self-Reorganization of Mixed Poly(methyl methacrylate)/Polystyrene Brushes on Planar Silica Substrates in Response to Combined Selective Solvent Treatments and Thermal Annealing" *Polymer* **2004**, *45*, 7979-7988.
20. Zhao, B.; Haasch, R. T.; MacLaren, S. "Solvent-Induced Self-Assembly of Mixed Poly(methyl methacrylate)/Polystyrene Brushes on Planar Silica Substrates: Molecular Weight Effect" *J. Am. Chem. Soc.* **2004**, *126*, 6124-6134.
19. He, T.; Li, D. J.; Sheng, X.; Zhao, B. "Synthesis of ABC 3-Miktoarm Star Terpolymers from a Trifunctional Initiator by Combining Ring-Opening Polymerization, Atom Transfer Radical Polymerization, and Nitroxide-Mediated Radical Polymerization" *Macromolecules* **2004**, *37*, 3128-3135.
18. Zhao, B.; He, T. "Synthesis of Well-Defined Mixed Poly(methyl methacrylate)/Polystyrene Brushes from an Asymmetric Difunctional Initiator-Terminated Self-Assembled Monolayer" *Macromolecules* **2003**, *36*, 8599-8602.
17. Zhao, B. "Synthesis of Binary Mixed Homopolymer Brushes by Combining Atom Transfer Radical Polymerization and Nitroxide-Mediated Radical Polymerization" *Polymer* **2003**, *44*, 4079-4083.

Publications from postdoctoral and graduate research work

16. Zhao, B.; Moore, J. S.; Beebe, D. J. "Pressure-Sensitive Microfluidic Gates Fabricated by Patterning Surface Free Energies Inside Microchannels" *Langmuir* **2003**, *19*, 1873-1879.
15. Zhao, B.; Moore, J. S.; Beebe, D. J. "Principles of Surface-Directed Liquid Flow in Microfluidic Channels" *Anal. Chem.* **2002**, *74*, 4259-4268.
14. Zhao, B.; Viernes, N. O. L.; Moore, J. S.; Beebe, D. J. "Control and Applications of Immiscible Liquids in Microchannels" *J. Am. Chem. Soc.* **2002**, *124*, 5284-5285.
13. Zhao, B.; Moore, J. S. "Fast pH- and Ionic Strength-Responsive Hydrogels in Microchannels" *Langmuir* **2001**, *17*, 4758-4763.
12. Zhao, B.; Moore, J. S.; Beebe, D. J. "Surface-Directed Liquid Flow inside Microchannels" *Science* **2001**, *291*, 1023-1026.

11. Brittain, W. J.; Boyes, S. G.; Granville, A. M.; Baum, M.; Mirous, B. K.; Akgun, B.; Zhao, B.; Blicke, C.; Foster, M. D. "Surface Rearrangement of Diblock Copolymer Brushes – Stimuli Responsive Films" *Advances in Polymer Science* **2006**, *198*, 125-147.
10. Petrash, S.; Cregger, T.; Zhao, B.; Tremsina, J.; Foster, M. D.; Brittain, W. J.; Sevastianov, V.; Majkrzak, C. F. "Changes in Protein Adsorption on Self-Assembled Monolayers with Monolayer Order: Comparison of Human Serum Albumin and Human Gamma Globulin" *Langmuir* **2001**, *17*, 7645-7651.
9. Zhao, B.; Brittain, W. J. "Synthesis, Characterization, and Properties of Tethered Polystyrene-*b*-Polyacrylate Brushes on Flat Silicate Substrates" *Macromolecules* **2000**, *33*, 8813-8820.
8. Zhao, B.; Brittain, W. J.; Zhou, W. S.; Cheng, S. Z. D. "AFM Study of Tethered Polystyrene-*b*-poly(methyl methacrylate) and Polystyrene-*b*-poly(methyl acrylate) Brushes on Flat Silicate Substrates" *Macromolecules* **2000**, *33*, 8821-8827.
7. Zhao, B.; Brittain, W. J. "Polymer Brushes: Surface-Immobilized Macromolecules" *Prog. Polym. Sci.* **2000**, *25*, 677-710.
6. Zhao, B.; Brittain, W. J.; Zhou, W.; Cheng, S. Z. D. "Nanopattern Formation from Tethered PS-*b*-PMMA Brushes upon Treatment with Selective Solvents" *J. Am. Chem. Soc.* **2000**, *122*, 2407-2408.
5. Zhao, B.; Brittain, W. J. "Synthesis of Polystyrene Brushes on Silicate Substrates via Carbocationic Polymerization from Self-Assembled Monolayers" *Macromolecules* **2000**, *33*, 342-348.
4. Zhao, B.; Mulkey, D.; Brittain, W. J.; Chen, Z.; Foster, M. D. "Synthesis and Characterization of Phenol- and *o*-Chlorophenol-Terminated Monolayers" *Langmuir* **1999**, *15*, 6856-6861.
3. Zhao, B.; Brittain, W. J. "Synthesis of Tethered Polystyrene-*block*-Poly(methyl methacrylate) Monolayer on a Silicate Substrate by Sequential Carbocationic Polymerization and Atom Transfer Radical Polymerization" *J. Am. Chem. Soc.* **1999**, *121*, 3557-3558.
2. Zhao, B.; Brittain, W. J.; Vogler, E. A. "Trichlorosilane Chemisorption on Surface-Modified Poly(tetrafluoroethylene)" *Macromolecules* **1999**, *32*, 796-800.
1. Pan, C. Y.; Zhao, B.; Bai, R.; Zheng, T. "Study on Copolymerization Behavior of 2-Substituted 4-Methylene-1,3-Dioxolane with Maleic Anhydride and Acrylonitrile" *J. Polym. Sci, Part A, Polym. Chem.* **1996**, *34*, 2149-2156.