

Refereed Journal Publications:

23. Y.-j. Cai, B.-m. Zhang Newby, "Porous Polymer Films Templated by Marangoni flow-Induced Water Droplet Arrays", *Langmuir*, 25 (13), 7338-7645, 2009. (May 21)
22. Y.-j. Cai, B.-m. Zhang Newby, "Marangoni Flow Induced Self-Assembly of Hexagonal and Stripelike Nanoparticle Patterns", *JACS*, 130(19), 6076-6077, 2008. (April 16)
21. Y.-j. Cai, B.-m. Zhang Newby, "Dewetting of Polystyrene Thin Films on Poly(ethylene glycol) Modified Surfaces as a Simple Approach for Patterning Proteins", *Langmuir*, 24 (10), 5202-5208, 2008. (April 11)
20. F. Song, Y.-j. Cai, B.-m. Zhang Newby, "Fabricating Tunable Nanoparticle Density Gradients with the Contact Printing Based Approach", *Appl. Surf. Sci.*, 253(5), 2393-2398, 2006. (December 30)
19. C. Loskofsky, F. Song, B.-m. Zhang Newby, "Under Water Adhesion Measurements Using the JKR Technique", *J. Adhesion*, 82(7), 713-730, 2006. (July)
18. A. A. Al-Juhni, B.-m. Zhang Newby, "Incorporation of Benzoic Acid and Sodium Benzoate into Silicone Coatings and Subsequent Leaching of the Compound from the Incorporated Coatings", *Prog. Org. Coatings*. 56 (2), 135-145, 2006. (July 1)
17. S.-H. Choi, B.-m. Zhang Newby, "Suppress Polystyrene Thin Film Dewetting by Modifying Substrate Surfaces with Aminopropyltriethoxysilane", *Surf. Sci.* 600(6), 1391-1404, 2006. (March 15)
16. S.-H. Choi, B.-m. Zhang Newby, "Dynamic Contact Angle in Rim Instability of Dewetting Holes", *J. Chem. Phys.* 124(5), Art. No. 054702, 2006. (February 7)
15. B.-m. Zhang Newby, T. J. Cutright, C. A. Barrios, Q. W. Xu. "Zosteric Acid – An Effective Antifoulant for Reducing Fresh Water Bacterial Attachment on Coatings", *JCT Research* 3(1), 69-76, 2006. (January)
14. Q. W. Xu, C. A. Barrios, T. J. Cutright, B.-m. Zhang Newby, "Evaluation of Toxicity of Capsaicin and Zosteric Acid and their Potential Applications as Antifoulants", *Environmental Toxicology* 20 (5), 467-474, 2005. (October)
13. Q. W. Xu, C. A. Barrios, T. J. Cutright, B.-m. Zhang Newby, "Assessment of Antifouling Effectiveness of Two NPAs by Attachment Study with Freshwater Bacteria", *ESPR* 12(5), 278-284, 2005. (September)
12. H. Haque[#], T. J. Cutright, B.-m. Zhang Newby, "Effectiveness of sodium benzoate as a freshwater low toxicity antifoulant when dispersed in solution and entrapped in silicone coatings", *Biofouling* 21(2), 109-119, 2005. ([#] Mr. Haque was then an undergraduate student at Ohio State University)
11. L.-f. Wang, G.-y. Zhu, P. Wang, B.-m. Zhang Newby. "Self-assembling of Polymer-enzyme Conjugates at Oil/water Interfaces", *Biotechnology Progress* 21, 1321-1328, 2005. (July-August)
10. C. A. Barrios, Q. W. Xu. T. J. Cutright, B.-m. Zhang Newby, "Incorporating Zosteric Acid into Silicone Coatings to Achieve its Slow Release while Reducing Fresh Water Bacterial Attachment", *Colloid. Surf. B: Biointerfaces*, 41, 83-93, 2005. (March 25)

9. C. Turgut, B.-m. Newby, T. J. Cutright, "Determination of Optimal Water Solubility of Capsaicin for Its Usage as a Non-toxic Antifoulant", *ESPR* 11(1), 7 – 10, 2004.
8. S.-H. Choi, B.-m. Zhang Newby, "Micrometer-Scaled Gradient Surfaces Generated Using Contact Printing of Octadecyltrichlorosilane", *Langmuir* 19(18), 7427 – 7435, 2003. (September 2)
7. S.-H. Choi, B.-m. Zhang Newby, "Alternative Method for Determining Surface Energy by Utilizing Polymer Thin Film Dewetting", *Langmuir* 19(4), 1419 – 1428, 2003. (February 18)
6. B.-m. Zhang Newby, K. Wakabayashi, R. J. Composto, "Confinement induced stabilization in polymer blend thin films", *Polymer* 42(21), 2001. (October)
5. B.-m. Zhang Newby, R. J. Composto, "Phase-morphology map of polymer-blend thin films confined to narrow strips", *Phys. Rev. Lett.* 87(9), 098302-1-098302-4, 2001. (August 27)
4. B.-m. Zhang Newby, R. J. Composto, "Influence of Lateral Confinement on Phase Separation in Thin Film Polymer Blends", *Macromolecules*, 33, 3274-3282, 2000. (May 2)
3. B.-m. Zhang Newby, M. K. Chaudhury, "Friction in Adhesion", *Langmuir*, 14(17), 4865-4872, 1998. (August 18)
2. B.-m. Zhang Newby, M. K. Chaudhury, "Effect of Interfacial Slippage on Viscoelastic Adhesion", *Langmuir*, 13(6), 1805-1809, 1997. (March 19)
1. B.-m. Zhang Newby, M. K. Chaudhury, H. R. Brown, "Macroscopic Evidence of the Effect of Interfacial Slippage on Adhesion", *Science*, 269, 1407,-1409, 1995. (September 8)

Refereed Publication:

1. S.-H. Choi, Y.-j. Cai, B.-m. Zhang Newby, "Adhesion Enhancement of Polystyrene Thin Film on Surfaces Modified with Aminopropyltriethoxysilane Ultrathin Layers", *Silanes and Other Coupling Agents*, Vol 4, (K. L. Mittal Edited), VSP 2007.

Non-refereed Journal Publication:

1. K. Moorthy, B.-m. Newby, G. G. Chase, "Effect of surface energy of fibers on coalescence fuel filtration", *Exploration & Production: The Oil & Gas Review*, issue 2, 2007.

Conference Proceedings:

18. B.-m. Zhang Newby, Y. Cai, F. Song, S.-H. Choi, "Generating Step-wise Gradient Surfaces as Combinatory Tools for Investigating Adhesion Phenomena", the *Proceedings of the 29th Annual Meeting of the Adhesion Society*, 2006.
17. A. Al-Juhni, B.-m. Zhang Newby, "Bulk Entrapment of Less Toxic Antifouling Compounds into Silicone Coatings to Evaluate Their Release: Experimental Studies and Mathematical Modeling", *Smart Coating 2006 Symposium*, 2006.

16. A. Al-Juhni, B.-m. Zhang Newby, "Incorporation of Sodium Benzoate into Silicone Coatings: An Environmental Friendly Way to Resolve Biofouling Problems", the *Proceedings of the 28th Annual Meeting of the Adhesion Society*, 2005.
15. S.-H. Choi, B.-m. Zhang Newby, "Adhesion Enhancement of Amino-functional Organosilane for Polystyrene Thin Films", the *Proceedings of the 28th Annual Meeting of the Adhesion Society*, 2005.
14. B.-m. Zhang Newby, C. Loskofsky, C. A. Barrios, "Under Water Adhesion Measurement with JKR Technique", the *Proceedings of the 28th Annual Meeting of the Adhesion Society*, 2005.
13. B.-m. Zhang Newby, C. A. Barrios, Q. W. Xu, T. J. Cutright, "Zosteric Acid: An Effective Antifoulant For Reducing Bacterial Attachment on Coatings", *Abstracts of Papers of the American Chemical Society*, 228:322-Poly, Part 2, Aug 22, 2004.
12. A. Al-Juhni, B.-m. Zhang Newby, "Techniques for Incorporating of Capsaicin into Silicone for Enhanced Antibacterial Performance", the *Proceedings of the 27th Annual Meeting of the Adhesion Society*, 2004.
11. C. A. Barrios, Q. W. Xu, T. J. Cutright, B.-m. Zhang Newby, "Evaluation of Antifouling Properties of Zosteric Acid", the *Proceedings of the 27th Annual Meeting of the Adhesion Society*, 2004.
10. S.-H. Choi, B.-m. Zhang Newby, "Rim Instabilities Depending on Substrate Surface Energy in Polystyrene Thin Film Dewetting", the *Proceedings of the 27th Annual Meeting of the Adhesion Society*, 2004.
9. K. R. Jaggari, B.-m. Zhang Newby, "Immobilizing Capsaicin on Silicone To Access the Coatings Antifouling Performance", the *Proceedings of the 26th Annual Meeting of the Adhesion Society*, 2003.
8. S.-H. Choi, B.-m. Zhang Newby, "An Alternative Method for Determining Surface Energy by Utilizing Polymer Thin Film Dewetting", the *Proceedings of the 26th Annual Meeting of the Adhesion Society*, 2003.
7. K. R. Jaggari and B.-m. Zhang Newby, "Preparation of Porous PDMS Membranes by Polymer Blend Phase Separation Mechanism", *Abstracts of Papers of the American Chemical Society*, 224:164-Poly, Part 2, Aug 18, 2002.
6. M. K. Chaudhury, B.-m. Zhang Newby, "Adhesion, Friction and Fracture", *Abstracts of Papers of the American Chemical Society*, 216:284-Poly, Part 3, Aug 23, 1998.
5. B.-m. Zhang Newby, M. K. Chaudhury, "Effect of Interfacial Friction on Adhesion", the *Proceedings of the 21st Annual Meeting of the Adhesion Society*, 1998.
4. B.-m. Zhang Newby, M. K. Chaudhury, "Viscoelastic Adhesion Between a Pressure Sensitive Adhesive and Surfaces with Low Surface Free Energy", the *Proceedings of the 20th Annual "Anniversary" Meeting of the Adhesion Society*, 1997.
3. M. K. Chaudhury, H. She, B.-m. Zhang Newby, "Using Rolling Contact Mechanics to Study Adhesion Hysteresis at Polymer Oxide Interfaces", the *Proceedings of the 20th Annual "Anniversary" Meeting of the Adhesion Society*, 1997.

2. H. R. Brown, M. K. Chaudhury, B.-m. Zhang Newby, "Effects of Segment Mobility on Slip and Adhesion", *Polymer Preprints*, 37(2), 1996.
1. M. K. Chaudhury, B.-m. Zhang Newby, "A Direct Observation of Hydrodynamic Slip at an Adhesive-Substrate Interface", *Polymeric Materials: Science and Engineering*, 75, 1996.