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### **Education**

**Ph.D.** Polymer Science & Engineering, University of Massachusetts,  
Amherst, MA February 1984

**M.S.** Polymer Science & Engineering, University of Massachusetts,  
Amherst, MA September 1981

**B.S.** Materials Science & Engineering, Cornell University, Ithaca, NY, May  
1979

### **Employment Experience**

7/2003 to Present **Professor and Chair**, Department of Materials Science and Eng.  
University of Maryland, College Park, MD

7/1997 to 7/2003 **Associate Professor**, Department of Materials and Nuclear Eng.,  
University of Maryland, College Park, MD

1/1992 to 6/1997 **Assistant Professor**, Department of Materials and Nuclear Eng.,  
University of Maryland, College Park, MD

10/1985 to 1/1992 **Research Scientist** in the Institute for Materials Science &  
Engineering, Polymers Division, National Institute of Standards and  
Technology, Gaithersburg, MD

1/1984 to 10/1985 **National Research Council Postdoctoral Fellow** tenured at the  
National Bureau of Standards, Gaithersburg, MD

9/1979 to 1/1984 **Graduate Research Assistant**, Department of Polymer Science &  
Engineering, University of Massachusetts, Amherst, MA

Summer 1979 **Summer Research Associate**, B.F. Goodrich Co., Brecksville, OH.

Summer 1978 **Materials Research Laboratory Summer Fellowship**, University of  
Massachusetts, Amherst, MA.

## Books Edited

1. "Morphological Control of Multiphase Polymer Mixtures", edited by R.M. Briber, C.C. Han and D.G. Peiffer, MRS Symposium Proceedings Series, volume 461, Fall 1996 meeting, Boston, MA ISBN: 1-55899-365-7

## Book Chapters

superscript key: 1: students under my direction; 2: students not under my direction but with whom I worked closely; 3: post-docs under my direction or with whom I worked closely; all other authors: collaborators.

5. R.M. Briber, "Linear Chains in Networks", article for the *Encyclopedia of Materials: Science and Technology*, Edited by K.H. Jergen, R.W. Cahn, M.C. Flemings, B. Ilschner, E.J. Kramer and S. Mahajan, 2001, p. 7227-7231 published by Elsevier Science Ltd., ISBN: 0-08-0431526

4. D. L. Ho<sup>3</sup>, R. M. Briber, and C. J. Glinka; "Studies of Organically Modified Clays by Scattering Techniques", "ACS Symposium Series 804: Polymer Nanocomposites: Synthesis, Characterization and Modeling" edited by R. Krishnamoorti and R. Vaia, 2001, p 127-140, published by the American Chemical Society, ISBN 0-8412-3768-9

3. "Introduction to Engineering Design" Text for ENES 100, T.M. Regan, R. M. Briber, J.W. Dally, W.W. Destler, J.M. Fines, W.L Fourney, L.L. Gasner, W.G. Lawson, P.A. Minderman, Jr., F.W. Mowrer, C.C. Stevens, C.D. Striffler, R. Windblade, McGraw-Hill, NY, 1996, 1995, 1994, ISBN: 0-07-052198-0

2. B.J. Bauer, R.M. Briber, B. Dickens, "Studies of Grafted Interpenetrating Polymer Networks", Interpenetrating Polymer Networks, Advances in Chemistry Series 239, D. Klemperer, L.H. Sperling, L.A. Utracki, editors, American Chemical Society, 179-204, 1995

1. B.J. Bauer, R.M. Briber, "The Effect of Crosslink Density on Phase Separation in Interpenetrating Polymer Networks", Advances in Interpenetrating Polymer Networks, volume 4, edited by H. Frisch and D. Klemperer, Technomic Publishing, Lancaster, PA, 1994

## Articles in Refereed Journals

superscript key: 1: students under my direction; 2: students not under my direction but with whom I worked closely; 3: post-docs under my direction or with whom I worked closely; all other authors: collaborators.

66. Sangcheol Kim<sup>3</sup>, R.M. Briber, Alamgir Karim, Ronald L. Jones, and Ho-Cheol Kim; "Environment-Controlled Spin Coating to Orient Microdomains in Thin Block Copolymer Films", accepted in *Macromolecules*, 4/2007

65. P. Akcora<sup>2</sup>, R.M. Briber, P. Kofinas; "TEM characterization of diblock copolymer templated iron oxide nanoparticles: Bulk solution and thin film surface doping approach"; *Polymer*, 47(6), 2018-2022 (2006)

64. S.I. Yun<sup>3</sup>, R.M. Briber, R.A. Kee, M. Gauthier; "Dilute-solution structure of charged arborescent graft polymer", *Polymer*, 47(8), 2750-2759 (2006)

63. T. Magbitang, V.Y. Lee, R.D. Miller, M.F. Toney, Z.L. Lin<sup>1</sup>, R.M. Briber, H.C. Kim, J.L. Hedrick; “Templating organosilicate vitrification using unimolecular self-organizing polymers: Evolution of morphology and nanoporosity development with network formation”, *Advanced Materials*, 17(8), 1031-1035, (2005)
62. P. Akcora<sup>2</sup>, X. Zhang<sup>1</sup>, B. Varughese, R.M. Briber, P. Kofinas; “Structural and Magnetic Characterization of Norbornene-Deuterated Norbornene Dicarboxylic Acid Diblock Copolymers Doped with Iron Oxide Nanoparticles”, *Polymer*, 46(14), 5194-5201 (2005)
61. G. Caliskan<sup>3</sup>, C. Hyeon, U. Perez-Salas<sup>3</sup>, R.M. Briber, S.A. Woodson and D. Thirumalai; “Persistence Length Changes Dramatically as RNA Folds”, *Phys. Rev. Lett.* 95, 268303 (2005)
60. S. Chauhan, G. Caliskan<sup>3</sup>, Robert M. Briber, U. Perez-Salas<sup>3</sup>, P. Rangan, D. Thirumalai and S.A. Woodson; “RNA Tertiary Interactions Mediate Native Collapse of a Bacterial Group I Ribozyme”, *J. of Molecular Biology*, 353(5), 1199-1209 (2005)
59. G. Caliskan<sup>3</sup>, R.M. Briber, D. Thirumalai, V. Garcia-Sakai, S.A. Woodson, A.P. Sokolov, “Dynamic Transition in tRNA is Solvent Induced”, *JACS Communications*, 128, 32-33, (2006)
58. P. Lazzeri, L. Vanzetti, M. Anderle, M. Bersani, J.J. Park, Z. Lin, R.M. Briber, G.W. Rubloff, H.C. Kim, R.D. Miller, “Thin-Film Transformations and Volatile Products in the Formation of Nanoporous Low-k Polymethylsilsesquioxane-Based Dielectric”, *J. of Vac. Sci. and Tech. B*, 23(3), 908-917(2005)
57. T. Kashiwagi, R.H. Harris Jr., X. Zhang<sup>1</sup>, R.M. Briber, B.H. Cipriano, S.R. Raghavan, W.H. Awada, J.R. Shields, “Flame retardant mechanism of polyamide 6–clay nanocomposites”, *Polymer* 45, 881–891 (2004)
56. P. Lazzeri, G.W. Rubloff, L. Vanzetti, R.M. Briber, M. Anderle, M. Bersani, J.J. Park, H.-C. Kim, W. Volksen, R.D. Miller, Z. Lin<sup>1</sup>, “ToF-SIMS Studies of Nanoporous PMSSQ Materials: Kinetics and Reactions in the Processing of Low-K Dielectrics for ULSI Applications”, *Surface and Interface Analysis*, 36(4), 304-310 (2004)
55. M. K. McDermott<sup>1</sup>, LeRoy W. Schroeder, Shay L. Balsis, N. A. Paradiso, M. L. Byrne, R. M. Briber; “Mechanical Properties of Polyurethane Film Exposed to Solutions of Nonoxynol-9 Surfactant and Poly(ethylene glycol)”, *J. of Applied Polymer Science* , 91(2), 1086-1096 (2004)
54. U.A. Perez-Salas<sup>3</sup>, P. Rangan, S. Krueger, R. M. Briber, D. Thirumalai, S.A. Woodson, “Compaction of a Bacterial Group I Ribozyme Coincides with the Assembly of Core Helices”, *Biochemistry*, 43, 1746–1753 (2004)
53. G. Vogge, K. Fossier, and D. Waldow, R.M. Briber, A. Halasa, “Effect of Random and Block Copolymer Additives on a Homopolymer Blend Studied by Small Angle Neutron Scattering”, *J. of Polymer Science –Polymer Physics Edition*, 42(17), 3191-3203, (2004)
52. H.-C. Kim, W. Volksen, R. D. Miller, E. Huang, G. Yang, R. M. Briber, K. Shin, S. K.

Satija, "Neutron Reflectivity on Nanoporous Poly(methylsilsesquioxane) Thin Films" *Chemistry of Materials* 15(3), 609(2003)

51. M.P. Nieh, S. Kumar, D. L. Ho, R.M. Briber, "Neutron Scattering Study of Chain Conformations in the Energetically Neutral Pores of Vycor Glass", *Macromolecules*, 35, 6384-6391(2002)

50. U. Perez-Salas<sup>1</sup>, R.M. Briber, M.H. Rafailovich, J.Sokolov, "Interfacial Fracture Toughness Between Glassy Polymer Networks", *J. Polymer Sci –Polymer Physics Ed.*, 41(16), 1902-1908(2003)

49. U. Perez-Salas, L. Nasser, R.M. Briber, W.A. Hamilton, M.H. Rafailovich, J.Sokolov, "Polystyrene Network-Network Interdiffusion", *Macromolecules* 35, 6638-6644(2002)

48. N. Gilra<sup>2</sup>, C. Cohen, R.M. Briber, B.J. Bauer, R. Hedden, A.Z. Panagiotopoulos; "A SANS Study in Strained and Unstrained End-linked Elastomers"; *Macromolecules*, 34(22); 7773-7782(2001)

47. D.L. Ho<sup>3</sup>, R.M. Briber, C.J. Glinka; "Characterization of Modified Clays using Scattering and Microscopy Techniques", *Chemistry of Materials*; 13(5); 1923-1931(2001)

46. R.L. Jones<sup>2</sup>, S.K. Kumar, D.L. Ho<sup>1</sup>, R.M. Briber, T.P. Russell; "Chain Conformation in Ultrathin Films using Small Angle Neutron Scattering", *Macromolecules*, 34(3), 559-567(2001)

45. S. Choi<sup>1</sup>, R.M. Briber, B.J. Bauer, D.-W. Liu, M. Gauthier; "Small Angle Neutron Scattering of Blends of Arborescent Polystyrenes", *Macromolecules*, 33(17), 6495-6501(2000)

44. J. Gao<sup>1</sup>, G.C. Walsh, D.I. Bigio, R.M. Briber, M.D. Wetzl, "Mean Residence Time Analysis for Twin Screw Extruders", *Polymer Engineering and Science*, 40, 227(2000)

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42. S. Choi<sup>1</sup>, R.M. Briber, A. Topp, B.J. Bauer, M. Gauthier, L. Tichagwa, "Small Angle Neutron Scattering of Solutions of Arborescent Graft Polystyrenes", *Macromolecules*, 32(23), 7879-7886(1999)

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40. D. L. Ho<sup>1</sup>, R. M. Briber, R. L. Jones<sup>2</sup>, S. K. Kumar, T.P. Russell, "Small Angle Neutron Scattering Studies on Thin Films of Isotopic Polystyrene Blends", *Macromolecules*, 31(26), 9247-9252(1998)

39. J.S. Fodor<sup>3</sup>, R.M. Briber, T.P. Russell, K.R. Carter, J.L. Hedrick, R.D. Miller, "Non-Uniform Composition Profiles in Thin Film Polymeric Nanofoams", *Polymer*, 40:10, (2547)1999

38. J.L. Hedrick, K.R. Carter, J.W. Labadie, R.D. Miller, W. Volksen, C.J. Hawker, D.Y. Yoon, T.P. Russell, J.E. McGrath, R.M. Briber, "Nanoporous Polyimides", *Progress in Polyimide Chemistry II*, 141, (1)1999
37. S. Choi<sup>1</sup>, X. Liu, R.M. Briber; "Small Angle Scattering of Polymer Blends of Polyvinylmethylether at Dilute Concentration in Deuterated Polystyrene", *J. of Polymer Science, Polymer Physics Edition*, 36, 1(1998)
36. J.Y. Cheng<sup>3</sup>, Y. Xie, D.I. Bigio, R.M. Briber; "Slip Flow in a Partially Filled Screw Channel" *Journal of Reinforced Plastics and Composites*, 17(8), 712(1998)
35. J.Y. Cheng<sup>3</sup>, D.I. Bigio, R.M. Briber; "Shear Effect on the Devolatilization of Filled Polymers", *J. of Vinyl & Additive Technology*, 4(1), 45(1998)
34. J.S. Fodor<sup>1</sup>, R.M. Briber, T.P. Russell, K.R. Carter, J.L. Hedrick, R.D. Miller, "Transmission Electron Microscopy of 3F/PMDA Polyimide-Polypropylene Oxide Triblock Copolymer Based Nanofoams", *J. of Polymer Science: Polymer Physics Edition*, 35, 1067(1997)
33. X. Liu<sup>1</sup>, B.J. Bauer, R.M. Briber; "The Conformation of Free Linear Polymer Chains in a Polymer Network", *Macromolecules*, 30(16), 4704(1997)
32. M. Benmouna, R.M. Briber, B. Hammouda; "Polymer Blends, Copolymers and Networks. Scattering Properties and Phase Behavior", *Macromolecular Theory and Simulations*, 6, 197(1997)
31. N.C. Beck-Tan<sup>1</sup>, S.K. Tai, R.M. Briber; "Morphology Control and Interfacial Reinforcement in Reactive Polystyrene/Amorphous Polyamide Blends", *Polymer*, 37(16), 3509(1996)
30. N.C. Beck-Tan<sup>1</sup>, D.G. Peiffer, R.M. Briber; "Reactive Reinforcement of Polystyrene/Poly(2-vinyl pyridine) Interfaces", *Macromolecules*, 29(14), 4969-4975(1996)
29. R.M. Briber, X. Liu<sup>1</sup>, B.J. Bauer; "The Collapse of Free Polymer Chains in a Network", *Science*, 268, 395-399(1995)
28. E.A. Di Marzio, R.M. Briber; "Collapse of a Polymer in a Polymeric Solvent", *Macromolecules* 28, 4020-4023(1995)
27. N.C. Beck Tan<sup>1</sup>, X. Liu, D.G. Peiffer, R.M. Briber; "A Study of Compatibility In the System Polystyrene/Sulfonated Polystyrene", *Polymer*, 36(10), 1969(1995)
26. R.M. Briber, B.J. Bauer, B. Hammouda, "Small Angle Neutron Scattering from Dilute Blends of Deuterated Polystyrene in Polyvinylmethylether and Protonated Polystyrene", *J. Chem. Phys.*, 101(3), 2592(1994)

25. X. Liu<sup>1</sup>, R.M. Briber, B.J. Bauer, "Electron Beam Crosslinking of Polyvinylmethylether, *J. Polymer Science: Polymer Physics Edition*, 32, 811(1994)
24. N.C. Beck Tan<sup>1</sup>, R.M. Aiken, R.M. Briber; "Fracture Toughness of Discontinuously Reinforced Al-4Cu-1.5Mg/TiB<sub>2</sub> Composites", *Metall. and Materials Trans. A*, 25A, 2461(1994)
23. X. Zheng, Z. Zhao, M.H. Rafailovich, J. Sokolov, R.M. Briber, S.A. Schwarz, "Diffusion of Linear Deuterated Polystyrene Chains In Crosslinked Polystyrene Networks", *Macromolecules*, 26, 6431(1993)
22. H. Jinnai<sup>2</sup>, H. Hasegawa, T. Hashimoto, R.M. Briber, C.C. Han, "Effect of Crosslinks on the Miscibility of a Deuterated Polybutadiene and Protonated Polybutadiene Blend", *Macromolecules*, 26, 182(1993)
21. R.M. Briber, F. Khoury, "The Morphology of PVF<sub>2</sub> Crystallized from Blends of PVF<sub>2</sub> and PEA", *Journal of Polymer Science, Physics Edition.*, 31, 1253(1993)
20. B. Hammouda, R.M. Briber, B.J. Bauer, "Small Angle Neutron Scattering from Deuterated Polystyrene / Protonated Polystyrene / Poly(vinyl methyl ether) Blends", *Polymer Communications*, 33, 1785(1992)
19. D.L. Vanderhart, G.C. Campbell, R.M. Briber, "Phase Separation Behavior Blends of Polybenzimidazole and Polyetherimide", *Macromolecules*, 25, 4734(1992)
18. R.M. Briber, B.J. Bauer, "Small Angle Neutron Scattering of Blends of Crosslinked and Linear Polystyrene", *Macromolecules*, 24, 1899(1991)
17. R.M. Briber, "Small Angle Neutron Scattering Studies of Blends of Protonated Linear Polystyrene with Crosslinked Deuterated Polystyrene", in Molecular Based Polymer Composites, edited by D.W. Schaefer and J.E. Mark, *Materials Research Society Symposium Proceedings, Volume 171*, Materials Research Society, Pittsburgh, PA, 1990
16. R.M. Briber, B.J. Bauer, "The Effect of Crosslinks on the Phase Separation Behavior of a Compatible Polymer Blend", *Macromolecules*, 21, 3296(1988)
15. B.J. Bauer, R.M. Briber, C.C. Han, "SANS Studies of Compatible Blends of Poly(vinylmethylether) and Crosslinked Deuterated Polystyrene", *Macromolecules*, 22, 940(1989)
14. J.R. Quay, Z. Sun, J. Blackwell, R.M. Briber, E.L. Thomas, "The Hard Segment Unit Cell for MDI-BDO Based Polyurethane Elastomers", *Polymer*, 31, 1003(1990)
13. R.M. Briber, P. Sung, J.D. Barnes, "Small Angle X-Ray Study of the Deformation of MDI/BDO Based Polyurethanes", *National Institute of Standards and Technology Internal Report (NISTIR 88-3873)*, October 1988

12. N. Ding, E.J. Amis, R. Salovey, R.M. Briber, "Preparation of Homogeneous Polymer Nuclei", *J. Polym. Sci., Lett. Ed.*, 27, 489(1989)
11. R.M. Briber, F. Khoury, "The Phase Diagram and Morphology of PVF<sub>2</sub>/PEA Blends", *Polymer*, 28, 38(1987)
10. R.M. Briber, F. Khoury, "Applications of Electron Energy Loss Spectroscopy to Polymers", *J. Polym. Sci., Polym. Phys. Ed.*, 26, 621(1986)
9. R.M. Briber, P. Sung, "WAXS Study of the Deformation MDI/BDO Based Polyurethanes", *Polymer Communications*, 28(6), 161(1987)
8. C.K. Chiang, B.J. Bauer, R.M. Briber, G.T. Davis, "Synthesis of Ionic Conducting Interpenetrating Polymer Networks", *Polymer Communications*, 28, 34(1987)
7. R.M. Briber, E.L. Thomas, "The Crystal Habit and Morphology of Polybutylene Terephthalate and Related Copolymers", *Polymer*, 27, 66(1986)
6. R.M. Briber, E.L. Thomas, "The Structure of MDI/BDO Based Polyurethanes: Diffraction Studies on Model Compounds and Oriented Thin Films", *J. Polym. Sci., Polym. Phys. Ed.* 23, 1915(1985)
5. R.M. Briber, E.L. Thomas, "The Crystallization Behavior of Random Block Copolymers of Polybutylene Terephthalate and Polytetramethylene Ether Glycol", *Polymer*, 26, 8(1985)
4. W.W. Adams, R.M. Briber, E.S. Sherman, R.S. Porter, E.L. Thomas, J.S. Lin, "Microstructure of High Modulus Solid State Extruded Polyethylene II: X-ray Scattering Studies", *Polymer*, 26, 17(1985)
3. R.M. Briber, E.L. Thomas, "The Investigation of Two Crystal Forms in MDI/BDO Based Polyurethanes", *J. Macromol. Sci.-Physics*, 22(4), 509(1983)
2. C.H.Y. Chen, R.M. Briber, E.L. Thomas, M. Xu, W.J. MacKnight, "Structure and Morphology of Segmented Polyurethanes II: Influence of Reactant Incompatibility", *Polymer*, 24, 1333(1983)
1. A.L. Chang, R.M. Briber, E.L. Thomas, R.J. Zdrahala, F.E. Critchfield, "A Morphological Study of the Structure Developed During the Polymerization of a Series of Segmented Polyurethanes", *Polymer*, 23, 1060(1982)

### **Conference Proceedings and Talks**

superscript key: 1: students under my direction; 2: students not under my direction but with whom I worked closely; 3: post-docs under my direction or with whom I worked closely; all other authors: collaborators.

### **Refereed Conference Proceedings**

10. Sangcheol Kim<sup>3</sup>, R.M. Briber, Alamgir Karim, Ronald L. Jones, and Ho-Cheol Kim; "Fabrication of Thin Block Copolymer Films under Controlled Atmosphere", MRS Symposium Proceedings Series, volume XXX, Fall 2006 Meeting, Boston, MA
9. R.M. Briber, J.S. Fodor<sup>3</sup>, T.P. Russell, R.D. Miller, K.R. Carter and J.L. Hedrick; "Characterization of Thin Polymeric Nanofoam Films by Transmission Electron Microscopy and Small Angle Neutron Scattering" in "Morphological Control of Multiphase Polymer Mixtures", edited by R.M. Briber, C.C. Han and D.G. Peiffer, MRS Symposium Proceedings Series, volume 461, Fall 1996 Meeting, Boston, MA
8. R.M. Briber, D.I. Bigio, J. Lochary; "Integration of Manufacturing into the Undergraduate Polymer Engineering Curriculum", *Proceedings of the 1996 ABET Annual Conference on Innovation in Engineering Education*
7. J. Cheng<sup>3</sup>, D.I. Bigio, R.M. Briber; "Devolatilization of Filled Polymeric Materials: I- Batch Study" *Proceedings of SPE ANTEC 1996*, page 365-369.
6. R.M. Briber, D.I. Bigio, J. Lochary; "Integration of a Manufacturing Experience into the Undergraduate Curriculum in Polymer Engineering", *Proceedings of 1996 American Society of Engineering Education*
5. J.G. Barker, A.M. Mayes, R.M. Briber, B. Orts<sup>3</sup>; "Scaling of The Radius of Gyration with Concentration", *Proceedings of the Materials Research Society*, Vol. 376, Neutron Scattering in Materials Science, 1994
4. X. Liu<sup>1</sup>, B.J. Bauer, R.M. Briber, "Collapse of Isolated Chains in a Network", *Proceedings of the Materials Research Society*, 1994
3. P. Sung, R.M. Briber, Characterization of the Morphology of MDI/BDO Based Polyurethanes, *Proceedings of the Fourth World Biomaterials Congress*, Berlin, Germany, 4/92
2. B.J. Bauer, R.M. Briber, S. Malone, C. Cohen, "Small Angle Neutron Scattering Studies of Single Phase IPNS", *Proceedings of the Materials Research Society, Symposium on Submicron Multiphase Materials*, 1992
1. X. Zhao, W. Zhao, J. Sokolov, M.H. Rafailovich, H.D. Gafney, R.M. Briber, B.J. Wilkins, "Diffusion of Polymers in Crosslinked Networks", *Proceeding of the Materials Research Society, Symposium on the Dynamics of Small Confining Systems*, 1990

#### Unrefereed Conference Proceedings

32. Jones R., Kim S., Karim A., Briber R.M., Kim H.C., "Orientation of block copolymer phases within confined environments", *Abstracts of Papers of the American Chemical Society*, 231: 112, *PMSE*, Mar 26, 2006
31. Zhang X., Briber R.M., Kashiwagi T., "Molecular weight and filler dispersion on the flammability of PMMA/layered silicate nanocomposites", *Abstracts of Papers of the American*

*Chemical Society*, 230: U3666 - U3667 341, *PMSE*, Aug. 28, 2005

30. Akcora P., Briber R.M., Kofinas P., "Incorporation of iron oxide nanoparticles into microphase separated poly(norbornene)-block-poly(deuterated norbornene dicarboxylic acid) diblock copolymers", *Abstracts of Papers of the American Chemical Society*, 230, U3725 - U3726, 466-*PMSE* Aug. 28, 2005

29. Zhang X., Briber R.M., Kashiwagi T., "Microstructure and flammability of PMMA/layered silicate nanocomposite", *Abstracts of Papers of the American Chemical Society*, 228, U423-U423, 51, *PMSE Part 2*, Aug. 22, 2004

28. Kim H.C., Volksen W., Magbitang T., Lee V.Y., Brock P.J., Dubois G., Hedrick H.L., Hawker C., Miller R.D., Huang E., Toney M.F., Lin Z.L., Briber R.M. "Effect of molecular architecture of sacrificial porogens on the pore structures of nanoporous organosilicates: A small angle scattering study", *Abstracts of Papers of the American Chemical Society*, 227: U554 - U554, 422, *PMSE Part 2*, Mar. 28, 2004

27. Xin Zhang, R. M. Briber, Richard H. Harris Jr. and Takashi Kashiwagi, "Characterization of Changes in the Clay Platelet Distribution in Polyamide 6/Clay Nanocomposites During Combustion by TEM and X-Ray Diffraction", *Proceedings of the American Chemical Society, Polymeric Materials: Science and Engineering*, (2003), New York Meeting

26. Hongxia Feng, R. M. Briber, Victor Y. Lee, Robert D. Miller, Ho-Cheol Kim, "Suppression of Dewetting in Polystyrene Thin Films by Using Nanoparticles" *Proceedings of the American Chemical Society, Polymeric Materials: Science and Engineering*, (2003), New York Meeting

25. P. Lazzeri, L. Vanzetti, E. Iacob, M. Bersani, M. Anderle, J.J. Park, Z. Lin, R.M. Briber, G.W. Rubloff, R.D. Miller, "Material Characterization and the Formation of Nanoporous PMSSQ Low-K Dielectric", 2003 International Conference on Characterization and Metrology for ULSI Technology, March 24-28, 2003, Austin, TX, USA

24. G.Y. Yang<sup>3</sup>, R.M. Briber, E.Huang, P.M. Rice, W. Volksen, R.D. Miller, "Formation and Characterization of Ultra-low Dielectric Materials Using TEM and SANS", *Proceedings of the American Chemical Society, Polymeric Materials: Science and Engineering*, 85, 18-19 (2001)

23. S.I.Yun<sup>1</sup>, R.M. Briber, R.A. Kee, M. Gauthier, "Small Angle Neutron Scattering of Arborescent Graft Poly(styrene)-Poly(2-vinylpyridine) Polymers", *Proceedings of the American Chemical Society, Polymeric Materials: Science and Engineering*, 85, 224-225 (2001)

22. D.L. Ho<sup>3</sup>, R.M. Briber, C.J. Glinka, "Studies on Organically Modified Clays using Scattering Techniques", *Proceedings of the American Chemical Society, Polymeric Materials: Science and Engineering*, Spring 2000, San Francisco, 82, 268-9 (2000)

21. Kumar S.K., Jones R.L.<sup>2</sup>, Ho D.L.<sup>1</sup>, Briber R.M., Russell T.P., "Phase Behavior of Thin Film Polymer Blends", *Abstracts of Papers of the American Chemical Society*, 216, 213 (1998)

20. J. Cheng<sup>3</sup>, D.I. Bigio and R.M. Briber, " Devolatilization of Solid Filled Polymeric Materials: Batch Experiments with Newtonian and Viscoelastic Matrices," *24th Soc. of ABM Conference*, Philadelphia, PA, Oct, 1-2 (1995)
- 19 J. Cheng<sup>3</sup>, D.I. Bigio and R.M. Briber, "Devolatilization of Filled Polymeric Materials," *Polymer Processing Society Conference*, Akron, Ohio, Nov. 14-16 (1995)
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11. R.M. Briber, B.J. Bauer, "Thermodynamics of Complex Polymer Systems", *Physics News* 1991, published by the American Institute of Physics
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7. M.A. Schen, R.M. Briber, J. Cline, "X-ray Analysis of a Liquid Crystal Phase Diacetylene Polymerization", *Proceedings of the American Chemical Society, Polymer Preprints*, 32, 290(1990)
6. R.M. Briber, "Microanalysis and Electron Energy Loss Spectroscopy of Polymers", *Proceedings of the Annual Meeting of the Electron Microscope Society of America*, 1987
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4. B.J. Bauer, R.M. Briber, C.C. Han, "Small Angle Neutron Scattering Studies of Single Phase Interpenetrating Polymer Networks", *Proceedings of the American Chemical Society, Polymer Preprints*, 28(2), 169(1987)
3. R.M. Briber, F. Khoury, "The Phase Diagram and Morphology of Blends of PVF<sub>2</sub> and PEA", *Proceedings of the American Chemical Society, Polymer Preprints*, 26(2), 310(1985)
2. R.M. Briber, "The Identification and Characterization of Two Crystal Forms in MDI/BDO Based Polyurethanes by STEM, TEM and Microdiffraction", *Proceedings of the Electron Microscope Society of America*, 1982, p. 674, Presidential Scholarship Award Winning Paper
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### Invited Talks

- National Institutes of Health, NICHD/NIH, Bethesda, MD, October 2006
- International Conference on Small Angle Scattering, Kyoto, Japan, July 2006
- International Conference on Neutron Scattering, Sydney, Australia, November 2005
- Advanced Photon Source Colloquium, Argonne National Lab, October 2005
- Small Angle Scattering Workshop, Army Research Lab, Aberdeen, MD, July 2005
- The Alan Lawley Seminar, Department of Materials Science and Engineering, Drexel University, January 2005
- NIST-University of Maryland Joint Symposium on Biotechnology, College Park, MD October 2004
- American Conference on Neutron Scattering, College Park, MD June 2004
- Princeton University, Department of Chemical Engineering, Princeton, NJ November 2003
- Naval Research Laboratory, Workshop on National User Facilities, Washington, DC October 2003
- NC State University, Department of Chemical Engineering, Raleigh, NC, January 2002
- American Chemical Society Local Chapter, North Carolina Polymer Group Raleigh, NC, January 2002
- Materials Research Society, Boston, Massachusetts, November 2001

- American Chemical Society, Chicago, IL, August 2002
- Advanced Metallization Conference Workshop, Montreal, Canada, September 2001
- IUPAC Macro2000, Warsaw, Poland, July 2000
- Virginia Tech, Dept. of Materials Science and Eng., Blacksburg, VA, March 2000
- Army Research Lab, Aberdeen, MD April 1999
- Institute for Physical Sciences, University of Maryland, December 1998
- National Academy of Sciences/National Research Council Committee on Developing a Federal Materials Facilities Strategy, Irvine CA, November 1998
- Howard University, Department of Chemistry, Washington, DC October 1998
- American Chemical Society Meeting in Nashville, TN September 1998
- NIST Center for Neutron Research Gaithersburg, MD, Short Course on Applications of Cold Neutrons, June 1998
- Materials Research Society Meeting, San Francisco, CA, March 1997
- Department of Chemical Engineering, Columbia University, New York, NY, September 1996
- Cold Neutron Research Facility, NIST, Gaithersburg, MD, Short Course on Applications of Cold Neutrons, June 1996
- University of Delaware, Department of Chemical Engineering, Newark, DE April 1996
- IBM Almaden Research Center, San Jose, CA February 1996
- Cold Neutron Research Facility, NIST, Gaithersburg, MD, Short Course on Applications of Cold Neutrons, August 1995
- American Physical Society, San Jose, CA March 1995
- Army Office of Research, Dendrimer Technology Workshop Research Triangle, North Carolina March 1995
- Materials Research Society, Boston, MA, November 1994
- Intense Pulsed Neutron Source, Argonne National Lab, Argonne, IL September 1994
- Exxon Research and Engineering, Annadale, NJ May 1994
- Reactor Radiation Division, National Institute of Standards and Technology, Gaithersburg, MD April 1994
- Chemical Physics Program, University of Maryland, College Park, MD January 1994
- Chemical Engineering Department, University of Maryland, College Park, MD February 1994
- Sandia National Laboratory, Albuquerque, NM September 1993
- Du Pont, Central Research, Wilmington, DE, October 1992
- American Chemical Society, Washington, D.C., August 1992
- NSF-CNRS U.S. France Workshop on High Performance Polymers, Annecy, France, June 1992
- American Chemical Society, San Francisco, CA, April 1992
- Queens College, Department of Physics, Flushing, NY, February, 1992
- North Carolina State University, Department of Materials Science and Engineering, Raleigh, NC, April 1991
- American Physical Society, Cincinnati, OH, March 1991
- Polymer Science Society of Japan, Nagoya, Japan, October 1990
- Cornell University, Department of Materials Science and Engineering, October 1990.
- Materials Research Society Meeting, Boston, MA, December 1989
- University of Chicago, James Franck Institute Colloquium, Chicago, IL, October 1989
- The Goodyear Tire and Rubber Company, Akron, OH, May 1989
- Polymers-West Gordon Research Conference, Ventura, CA, January 1989

- University of Illinois, Department of Materials Science and Engineering, Urbana-Champaign, IL, September 1988
- Northwestern University, Department of Materials Science and Engineering, Evanston, IL, May 1988
- Electron Microscope Society of America, Annual Meeting, Baltimore, MD, August 1987
- Polymers-West Gordon Research Conference, Santa Barbara, CA, January 1986
- American Chemical Society, Chicago, IL, September 1985
- Eastman Kodak Company, Rochester, NY, May 1985
- Electron Microscopy Workshop on Polymers, Sponsored by the Univ. of Mass. and JEOL USA, Boston, MA, June 1985
- Case Western Reserve University, Department of Macromolecular Science, Cleveland OH, May 1985
- Brown University, Department of Engineering, Providence RI, April 1985
- University of Minnesota, Department of Chemical Engineering and Materials Science, Minneapolis, MN, February 1985
- The Johns Hopkins University, Department of Materials Science, Baltimore, MD, February 1985
- Du Pont, Central Research, Wilmington, DE, November 1984
- Princeton University, Department of Chemical Engineering, Princeton, NJ, November 1984
- Rutgers University, Department of Mechanics and Materials Engineering, New Brunswick, NJ, October 1984

### Contributed Talks

Approximately 2-3 contributed talks per year at national and international meetings.

### **Fellowships, Prizes and Awards**

American Physical Society, Fellow (elected 1995)

Department of Commerce Bronze Medal, December 1990

Electron Microscope Society of America Presidential Student Scholarship, 1982

### **Editorships, Editorial Boards, and Reviewing Activities for Journals**

Editor, *Journal of Polymer Science – Polymer Physics Edition* (1/99-01/07)

The *Journal of Polymer Science – Polymer Physics Edition* is one of the top 3 archival polymer journals for publication of high quality research results. The editorial office at The University of Maryland run by R.M. Briber processes about 150 manuscripts per year. There are 3 other editorial offices for the journal. This involves receiving the initial manuscripts, sending the manuscripts out for review (generally 2 independent reviews), evaluating the reviews, requesting and evaluating author responses to the review, re-review if necessary, acceptance of the articles and forwarding on to the publisher (Wiley Interscience).

Reviewer for the archival journals: *Macromolecules*, *Physical Review Letters*, *Science*, *Journal of Chemical Physics*, *Polymer*, *Polymer Engineering and Science*. Typically I review 10-12 papers per year for these journals.

## **Conferences Organized**

*American Conference on Neutron Scattering*, College Park, MD June 2004. . This is an international conference with about 500 participants.

*First American Conference on Neutron Scattering*, Knoxville, TN, June 2002. This is an international conference which had about 400 participants. It was the first time the conference was run and it is planned to be organized every two years.

*Soft Materials and Structural Biology Breakout Session at the SNS Users Meeting*, May 2000, Washington, DC

*SNS LWTS Polymers, Colloids & Biology Workshop*, April 2000 at University of Maryland, College Park, MD

*Morphological Control of Multiphase Polymer Mixtures*, MRS Fall 1996 meeting, Boston, MA

Session Chair at 2-3 conferences per year, typically APS, ACS, MRS and Gordon Conferences

## **Professional Elected Offices**

Neutron Scattering Society of America, President 2002-2005

Neutron Scattering Society of America, vice president 1999-2002

Member-at-Large to the Executive Committee of the Division of Polymer Physics, American Physical Society, 1999-2002

## **Professional Memberships**

American Physical Society (fellow)

Neutron Scattering Society of America

Materials Research Society

American Chemical Society

Biophysical Society

## **Professional Committee Memberships**

- NIST Center for Neutron Research Program Advisory Committee, member 1999 to 2004

- University of Chicago Review Committee for the Intense Pulsed Neutron Source at Argonne National Laboratory 1997, 1999, 2001

- Large Length Scales Working Group, Spallation Neutron Source, Oak Ridge National Lab, Dept. of Energy, November 1998

- Basic Energy Science Advisory Committee Review of the High Flux Isotope Reactor at Oak Ridge National Lab, October 1998

- Scheduling Committee, American Physical Society, Division of High Polymer Physics March Meeting, 1994-1998

- Los Alamos -Argonne National Laboratory Pulsed Neutron Source Program Advisory Committee  
1993-1997 (Chair 1996-97)
- Society of Plastics Engineers (SPE) Research Award Committee, 1994-1997
- American Physical Society Division of High Polymer Physics Nominations Committee
- NASA Microgravity Research Review Panel for Polymers, 1995, 1997