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Education/Research Positions.

- Present University of Cincinnati, Cincinnati, OH, 45221 **Assistant Professor**, Department of Materials Science and Engineering
- 1994 Sandia National Laboratory, Albuquerque, NM 87185, **Staff Member**, Organic Materials Group 1815. Cooperative research agreements with U.S. industrial partners.
- 1993 Sandia National Laboratory, Albuquerque, NM 87185; **Post Doctoral Fellow**, Organic Materials Group with **Dale W. Schaefer**, Group 1703. Characterization of multi-component materials using scattering. Development of scattering theory in these systems.
- 1991 University of Massachusetts, Amherst, MA 01003 **Ph.D. Polymer Science and Engineering**. Advisor: **Richard S. Stein**. Dissertation: *A Morphological, Mechanical and Thermodynamic Investigation of the Isotactic-PVME/PS Polymer Blend*.
- 1982 University of Rhode Island, Kingston, RI 02881 **B.S. Chemical Engineering**; Rhode Island State Scholarship, Phi Beta Kappa, Phi Kappa Phi, High Distinction.
- 1980 University of Rhode Island, Kingston, RI 02881 **B.S. Zoology**; Rhode Island State Scholarship, Phi Beta Kappa, Phi Kappa Phi, Tau Beta Pi, Highest Distinction

Five Publications Relevant to Proposal. (Total of 43 publications including submitted papers.)

- "Aero-Sol-Gel Synthesis of Nanostructured Silica Powders", J. Hyeon-Lee, G. Beaucage, S. E. Pratsinis, *Chem. of Mater.*, **9**, 2400 (1997).
- "Morphological Development in PDMS/TEOS Hybrid Materials", J. Hyeon-Lee, L. Guo, G. Beaucage, M. A. Macip-Boulis, A. J. M. Yang, *J. Polym. Sci., Polym. Phys. Ed.* **34**, 3073 (1996).
- "Small-Angle Scattering from Polymeric Mass Fractals of Arbitrary Mass-Fractal Dimension." G. Beaucage *J. Appl. Cryst.* **29**, 134 (1996).
- "Multiple Size Scale Structures in Silica-Siloxane Composites Studied by Small-Angle Scattering", G. Beaucage; T. A. Ulibarri; E. P. Black; D. W. Schaefer, *ACS Symp. Ser.*, **585**(*Hybrid Organic--Inorganic Composites*), 97 (1995).
- "General Routes to Porous Metal Oxides via Inorganic and Organic Templates", C. Roger, M. J. Hampden-Smith, D. W. Schaefer, G. Beaucage, *J. Sol-Gel Sci. Technol.*, **B**, 67 (1994).

Five Other Significant First Author Publications.

- "Nano-Structured, Semi-Crystalline Polymer Foams.", G. Beaucage, J. H. Aubert, R. R. Lagasse, D. W. Schaefer, T. P. Rieker; P. Ehrlich, R. S. Stein, S. Kulkarni, P. Whaley, *J. Polym. Sci., Part B: Polym. Phys.* **34**, 3072 (1996).
- "Symmetric, Isotopic Blends of Poly(dimethylsiloxane).", G. Beaucage, S. Sukumaran, S. J. Clarson, M. S. Kent and D. W. Schaefer *Macromolecules*, **29**(26), 8349 (1996).
- "Approximations Leading to a Unified Exponential/Power-Law Approach to Small-Angle Scattering", G. Beaucage, *J. Appl. Cryst.*, **28**, 717 (1995).
- "Structural Studies of Complex Systems using Small-Angle Scattering: A Unified Guinier/Power-Law Approach", G. Beaucage, D. W. Schaefer *J. Non-Cryst. Solids* **172-174**, 797 (1994).
- "Persistence Length of i-Poly(Hydroxy-Butyrate)", G. Beaucage, S. Rane, S. Sukumaran, M. M. Satekowsk, L. A. Schechtman, Y. Doi, *Macromolecules* **30** 4158 (1997).

Collaborators (other than those cited in the publication list) within 48 months.

- Dr. Adel F. Halasa, R&D Fellow, Goodyear Tire & Rubber, Akron, OH.
- Dr. Yi Feng, Goodyear Tire & Rubber, Akron, OH.
- Dr. Richard Pekala, PPG Industries, Warrendale, PA.

Dr. Clifford L. Spiro, Manager Elastomers Division, GE Silicones, Waterford, NY.
 Dr. M. M. Satkowski, Miami Valley Laboratories, Procter and Gamble Corporation, Cincinnati, OH.
 Dr. A. Macip-Boulis, Armstrong World Industries, Lancaster PA.
 Dr. S. E. Pratsinis, Chemical Engineering, University of Cincinnati.
 Dr. D. W. Schaefer, Dept. of Materials Science and Engineering, University of Cincinnati.
 Dr. J. E. Mark, Dept. Chemistry, University of Cincinnati.
 Dr. F. Mirabella, Equistar Chemical, Cincinnati, OH.
 Dr. E. Ford, Equistar Chemical, Cincinnati, OH.
 Dr. M. M. Jevtitch, Section Head, Paper Technology, Procter and Gamble Corporation, Cincinnati, OH.
 Dr. K. Schwartz, Raychem Corporation, Palo Alto, CA.
 Dr. D-W. Hua, SCM Chemicals, Baltimore MD.
 Dr. S. Rojstaczer, Occidental Chemicals, Buffalo, NY.
 Dr. M. T. Berard, Dow Chemical, Elastomers Division, Plaquemine, LA.
 Dr. L. Effler, Dow Chemical, Elastomers Division, Plaquemine, LA.
 Dr. W. Hamilton, Reactor Division, Oak Ridge National Laboratories, Oak Ridge, TN.
 Dr. A. Singhal, Chemistry Division, Oak Ridge National Laboratories, Oak Ridge TN.
 Dr. G. D. Wignall, Reactor Division, Oak Ridge National Laboratories, Oak Ridge, TN.
 Dr. Gabrielle Long, Ceramics Division, NIST, Gaithersburg, MD.
 Dr. H. Boukari, Ceramics Division, NIST, Gaithersburg, MD.
 Dr. D. Fischer, Ceramics Division, NIST, Gaithersburg, MD.
 Dr. M. Kent, Sandia National Laboratories, Albuquerque, NM.
 Dr. W. Ford, Dept. of Chemistry, Oklahoma State University.
 Dr. H. Mark, Dept. Chemistry, University of Cincinnati.
 Dr. S. Clarson, Department of Materials Science and Engineering, University of Cincinnati.
 Dr. M.A.Sharaf, University of Cairo, Cairo, Egypt
 Dr. J. Jethmalani, Department of Chemical Engineering, California Institute of Technology.
 Dr. T. Rieker, Dept. of Chemical Engineering, University of New Mexico, Albuquerque, NM.

Current Graduate Students (5 graduate students and 1 part-time post-doc)

J. Hyeon-Lee, "Nano-structured Materials"

Pursuing PhD, funded by NSF (formerly by P&G MVL and Cabot Corporation).
 Expected Graduation *August 1998*, has a Post Doctoral Position at Seoul National University in the fall funded by the Korean Government.

Doug Kohls, "ASG Process for Nano-Powders and Their Applications"

Pursuing PhD, funded by NSF.

S. Rane, "Processing of Semi-Crystalline Polymers"

Pursuing PhD, funded by Equistar Corporation and P&G MVL.

S. Sukumaran, "Applications of Fractal Concepts to Complex Materials"

Pursuing PhD, funded by PRF-G and P&G Paper Division

Mike Banach, "Ellipsometric Study of Non-Linear Optical Materials"

Summer intern at WPAFB, undergraduate Research Planned Fall 1998

Graduated Students:

Ling Guo, MS 1997, "Polymer Reinforced Ceramic Super-Insulators"

pursuing PhD part time, funded by P&G, MVL and Armstrong Corporation. Currently working at P&G Miami Valley Laboratories (Central Research Division).

Doug Kohls, "Sol-Gel Cell Growth Substrates for Hematopoietic Stem Cells."

Undergraduate Research BS Materials Engineering 1998.

Graduate Advisor (own): Dr. Richard S. Stein, Emeritus Professor of Polymer Science and Engineering, University of Massachusetts, Amherst, MA. Member NAS and NAE!