

Curriculum Vitae- Brian Scott Mitchell

Department of Chemical & Biomolecular Engineering
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POSITIONS HELD

Associate Provost	2006 - present	Tulane University
Professor	2002 - present	Tulane University, Chemical and Biomolecular Engineering
Associate Director	2001- 2006	Tulane Institute for Macromolecular Engineering and Science
Associate Professor (with tenure)	1999 - 2002	Tulane University, Chemical Engineering
Associate Professor (untenured)	1997-1999	Tulane University, Chemical Engineering
Assistant Professor	1994-1997	Tulane University, Chemical Engineering
Lecturer/Instructor	1993 - 1994	University of Wisconsin-Madison, Chemical Engineering

EDUCATION

- Ph.D., Chemical Engineering (1991), University of Wisconsin-Madison
- M.S., Chemical Engineering (1987), University of Wisconsin-Madison
- B.S., Chemical Engineering with High Distinction (1986), University of Illinois Urbana-Champaign

RESEARCH EXPERIENCE

- Visiting Scientist - 3/03 to 8/03, German Aerospace Agency (DLR), Köln, Germany
- Visiting Scholar - 6/98, Institut f. Keramische Werkstoffe, Universität Freiberg, Germany
- Visiting Scientist - 7/98, Bundesanstalt f. Materialforschung u. -prüfung, Berlin, Germany
- Postdoctoral Fellow - 2/92 to 2/93, University of Karlsruhe, Germany
- Research Assistant - 1/86 to 12/91, University of Wisconsin-Madison

INDUSTRIAL EXPERIENCE

- Consultant, 2000, LLB, Inc., Metairie, LA
- Consultant, 1999, Exxon Research and Development Laboratories, Baton Rouge, LA
- Consultant, 1997-98, The Laitrum Corporation, New Orleans, LA
- Research Associate - 6/86 to 9/86, USG Corporate Research Center, Libertyville, IL

HONORS & ACTIVITIES

- Alexander von Humboldt Research Fellow (2002-03)
- AIChE Student Chapter Honor Roll Advisor (2002)
- Finalist, Sir Harold Thompson Memorial Award for best paper, *Spectrochimica Acta A* (2001)
- German Academic Exchange Program Fellow (1998)
- Member, LA Board of Regents "Speaking of Science" Speaker's Bureau (1997-present)
- Lilly Teaching Endowment Fellow (1995)
- NSF-NATO Postdoctoral Fellow (1992-93)
- Amoco Foundation Fellow, University of Wisconsin (1989-90)
- Member: AIChE, ASEE, AIChE Mat. Sci. Div., ACS, MRS, ACerS, Tau Beta Pi

RESEARCH INTERESTS

- Nanostructured Hybrid Materials; Materials Processing & Characterization

PROFESSIONAL SERVICE

- AIChE Materials Eng. & Science Div., Chair (current)
- AIChE New Orleans Section, Chair (2002), Vice-Chair (2001), Secretary (2000), Treasurer (1999)
- Chair, AIChE 2004 Spring National Meeting General Arrangements Committee (GAC)
- Proposal/Panel Reviewer, NSF: (9); CRDF(1); ACS/PRF (2); ARO (1)
- Paper Reviewer, *Acta Biomat.* (2), *J. Am. Cer. Soc.* (15), *J. Am. Chem. Soc.* (1), *J. Non-crys. Sol.*(8), *Langmuir* (4), *J. Phys. Chem.* (2), *J. Mat. Sci.* (1), *Comp. Eng.* (1), *J. Eng. Ed.* (1), *Powder Tech.* (1), *Met. Mat. Trans.*(1), *Topics in Catalysis* (1), *Science* (1), *J. Mat. Syn. Proc.* (1), *Mat. Chem. Phys.* (4), *Emirates J. Eng. Research* (1), *Solid State Science* (1), *IEEE Trans. Nanotech.* (1), Technical Books (2).
- Session chair, AIChE (F2003, F2001, F2000, S2000, F1999), ICCE/2 (1995), SES (1995), TEF(2001, 2007)
- Mentor, Louise Stokes Louisiana Alliance for Minority Participation (LSAMP), 1998, 1999, 2002, 2004, 2007.
- University Senator (2001-06); member: Budget, Development, Benefits, Conflict of Interest, Review of Faculty Status Decision Impasses; and President's Faculty Action committees.

PUBLICATIONS

43. Schexnaydre, R. and B.S. Mitchell, "Solid State Blending of Poly(ethylene terephthalate) with Polystyrene: Extent of PET Amorphization and Compositional Effects on Crystallization," *J. Pol. Sci. B Pol. Phys.*, submitted.
42. Schexnaydre, R. and B.S. Mitchell, "Solid State Blending of Poly(ethylene terephthalate) with Polystyrene: Extent of Compatibilization and its Dependence on Blend Composition," *Pol. Sci. Eng.*, submitted.
41. Moster, A.L. and B.S. Mitchell, "Mechanical and Hydration Properties of Nafion®/Ceramic Nanocomposite Membranes Produced by Mechanical Attrition," *J. App. Pol. Sci.*, submitted.
40. Heintz, A., M. Fink and B.S. Mitchell, "Mechanochemical Synthesis of Blue Luminescent Alkyl/Alkenyl-Passivated Silicon Nanoparticles" *Adv. Mat.*, **19**[22], 3984-3988 (2007).
39. Schexnaydre, R. and B.S. Mitchell, "Synchrotron Infrared Microspectroscopy Characterization of Heterogeneities in Solid-State Blended Polymers," *Mat. Let.*, **61**, 2151-2155 (2007) .
38. Mitchell, B.S., H. Ashbaugh, J. Prindle, and V.T. John, "From Survival to Renewal - Katrina and its Aftermath at Tulane's Chemical and Biomolecular Engineering Department," *Chem. Eng. Ed.*, Spring, 80-87 (2006).
37. Mitchell, B.S., "Formation and Characterization of Highly Interfacial Hybrid Nanocomposites," *Rev. Adv. Mat. Sci.*, Advanced Center Study, St. Petersburg, Russia, **10**[3], 239-242 (2005).
36. De Castro, C.L., and B.S. Mitchell, "Crystal growth kinetics of nanocrystalline aluminum prepared by mechanical attrition in nylon media," *Mat. Sci. Eng. A*, **396**[1-2], 124-128 (2005).
35. Mitchell, B.S. and V. J. Law, "Community-Based Presentations in the Unit Operations Laboratory," *Chem. Eng. Ed.*, **39**[2], 160-163(2005).
34. Roy, S., I.S. Dubenko, M. Khan, E.M. Condon, J. Craig, M. Ali, W. Liu and B.S. Mitchell, "Magnetic Properties of Perovskite-derived Air-Synthesized $R\text{BaCo}_2\text{O}_{5+\delta}$ ($R=\text{La-Ho}$) Compounds," *Phys. Rev. B*, **71**, 024419-1 (2005).
33. Haynes, S.D. and B.S. Mitchell, "Preparation and Characterization of Ball-Milled Nafion Powders for Membrane Applications," *J. App. Pol. Sci.*, **93**[5], 2275-2281 (2004).
32. Hampsey, J.E., C. De Castro, B. McCaughey, D. Wang, B.S. Mitchell and Y. Lu, "Preparation of Micron and Sub-Micron Sized Nanostructured Silica Particles Using High Energy Ball Milling," *J. Am. Ceram. Soc.*, **87**[7], 1280-1286 (2004).
31. Mitchell, B.S., "The Use of Cooperative Learning Exercises in Materials Science and Engineering Instruction," *J. Mat. Ed.*, **25**[4-6], 165-178 (2003).
30. De Castro, C. and B.S. Mitchell, "The Use of Polymeric Milling Media in the Reduction of Contamination During Mechanical Attrition," *J. Mat. Res.*, **17**[12], 2997-2999 (2002).
29. De Castro, C. and B.S. Mitchell, "Nanoparticles from Mechanical Attrition," in *Synthesis, Functionalization and Surface Treatment of Nanoparticles*, M.I. Baraton, editor, American Scientific Publishers, 2003, p.1.
28. Müller E, D. Kurtenbach, G. Roewer, E. Brendler, and B.S. Mitchell, "Crystallization Kinetics of Polysilane Derived SiC," *Key Eng. Mat.*, **206**[2], 55-58, (2002)
27. Zhang, H.Y., N. Maljkovic, and B.S. Mitchell, "Structure and Interfacial Properties of Nanocrystalline Aluminum/Mullite Composites," *Mat. Sci. Eng. A*, **326**[2], 315-321 (2002).
26. Mitchell, B.S., "Nanocrystallinity in Heat Treated Calcium Aluminate Fibers," *Mat. Let.*, **48**[5], 316-318 (2001).
25. Mitchell, B.S., "MicroRaman Analysis of Calcium Aluminate Fibers Formed by Inviscid Melt Spinning (IMS)," *Mat. Let.*, **45**[2], 138-142 (2000).
24. Xiao, Z. and B.S. Mitchell, "Mullite Decomposition Kinetics and Melt Stabilization in the Temperature Range 1900-2000 °C," *J. Am. Cer. Soc.*, **83**[4], 761-767 (2000).
23. Zhang, H.Y. and B.S. Mitchell, "A Method for Determining Crystallization Kinetic Parameters from One Non-isothermal Calorimetric Experiment," *J. Mat. Res.*, **15**[4], 1000-1007 (2000).
22. Fondeur, F. and B.S. Mitchell, "A Modified Diffuse Reflectance Infrared Fourier Transform Spectroscopy Cell for Depth Profiling of Ceramic Fibers" *Spectrochim. Acta A* **56**[3], 467-473 (2000).
21. Kurtenbach, D., M. Ade, E. Müller, and B.S. Mitchell, "Kinetics of nucleation and crystallization of amorphous SiC structures," *Freiberg. Forschungsh. B*, **B295**, 293-300 (1999).
20. Kurtenbach, D., B.S. Mitchell, H. Zhang, M. Ade and E. Müller, "Crystallization Kinetics of Amorphous Silicon Carbide Derived from Polymeric Precursors," *Thermochim. Acta.*, **337**[1-2], 155-161 (1999).
19. Mitchell, B.S. "A Chemical Engineering Graduate Course in Materials Design," *Chem. Eng. Ed.*, **33**[4], 262-265 (1999).
18. Zhang, H.Y. and B.S. Mitchell, "Thermal Expansion Behavior and Microstructure in Bulk Amorphous and Nanocrystalline Selenium by Thermomechanical Analysis," *Mat. Sci. Eng. A*, **270**[2], 237-243 (1999).
17. Li, W. and B.S. Mitchell, "Nucleation and Crystallization in Calcium Aluminate Glasses," *J. Non-crys. Sol.*, **255**[2-3], 199-207, (1999).
16. Xiao, Z. and B.S. Mitchell, "Optimization of Process Parameters in the Production of Mullite Fibers by Inviscid Melt Spinning," *Chem. Eng. Comm.*, **173**, 123-133 (1999).
15. Mitchell, B.S., H.Y. Zhang, N. Maljkovic, M. Ade, D. Kurtenbach and E. Müller, "Formation of Nanocrystalline SiC Powder from Chlorine-Containing Polystyrene/Polycarbosilane Precursors," *J. Am. Cer. Soc.*, **82**[8], 2249-2251 (1999).
14. Xiao, Z. and B.S. Mitchell, "The Production of Mullite Fibers by Inviscid Melt Spinning," *Mat. Lett.*, **37**[6], 359-365 (1998).
13. Mitchell, B.S., F. Fondeur, Z. Xiao, W. Li and S. Bennett, "The Effect of Lubricant on the Surface Structure of Aluminosilicate Fibers," *J. Am. Cer. Soc.*, **81**[12], 3333-3336 (1998).
12. Fondeur, F. and B.S. Mitchell, "FT-Infrared Studies of Propane Pyrolysis over Calcium Aluminate Melts," *J. Am. Ceram. Soc.*, **81**[4], 1045-1049 (1998).
11. Fondeur, F. and B.S. Mitchell, "Infrared Studies of Processing Effects in Calcium Aluminate Glasses," *J. Non-crys. Sol.*, **224**[2], 184-190 (1998).

10. Mitchell, B.S., "Crystallization and Solidification Studies in Calcia-Alumina Fibers Formed via Inviscid Melt-Spinning (IMS)," *Ceramics International*, **24**[1], 67-71 (1998).
9. Mitchell, B.S., "Use of Spreadsheets in Introductory Statistics and Probability," *Chem. Eng. Ed.*, **31**[3], 194-200 (1997).
8. Fondeur, F. and B.S. Mitchell, "IR Studies of IMS Calcia-Alumina Fibers," *J. Am. Cer. Soc.*, **79**[9], 2469-2473 (1996).
7. Yon, K.Y., B.S. Mitchell, J.A. Koutsky and S.A. Dunn, "Introduction of New Reinforcements for Cementitious Materials - Calcia-Alumina (CA) Fibers Formed by the Inviscid Melt-Spinning (IMS) Process" *Cement and Concrete Composites*, **15**[3], 165 (1993).
6. Yon, K.Y., B.S. Mitchell, J.A. Koutsky and S.A. Dunn, "Chemical Stability of Inviscid Melt-Spun Fibers of Calcia-Alumina in Aqueous Media," *Mat. Chem. Phys.*, **34**[3-4], 219 (1993).
5. Mitchell, B.S., J.A. Koutsky, S.A. Dunn and K.Y. Yon, "Viscosity of Eutectic Calcia-Alumina Melts," *Mat. Chem. and Phys.*, **34**[1], 81 (1993).
4. Mitchell, B.S., J.A. Koutsky, S.A. Dunn and K.Y. Yon, "Phase Identification in Calcia-Alumina Fibers Crystallized from Amorphous Precursors," *J. Non-crystalline Solids*, **152**[2-3], 143 (1993).
3. Mitchell, B.S., J.A. Koutsky, S.A. Dunn and K.Y. Yon, "The Production of BaO-TiO₂ Fibers via Inviscid Melt-Spinning," *Chem. Eng. Comm.*, **106**, 87 (1991).
2. Mitchell, B.S., and J.A. Koutsky, "Binder Droplet-Fiber Interactions in the Production of Thermal Insulations," *J. Thermal Insulation*, **15**, 30 (1991).
1. Mitchell, B.S., J.A. Koutsky, S.A. Dunn and K.Y. Yon, "Attenuation Effects in Aluminum and Lead Fibers Formed by Inviscid Melt-Spinning (IMS)," *Mat. Let.*, **10**[1-2], 71 (1990).

PATENTS

2. Mitchell, B.S., M. Fink and A. Heintz, "Method of Forming Stable Functionalized Nanoparticles," patent pending, 2007.
1. Mitchell, B.S., H.Y. Zhang and Z. Xiao, "Inviscid Melt Spinning of Mullite Fibers," USP 6,312,626, Nov. 6, 2001.

BOOKS

1. Mitchell, B.S., *An Introduction to Materials Engineering and Science for Chemical and Materials Engineers*, John Wiley & Sons, Inc., 2004, ISBN 0-471-43623-2.

REFEREED PUBLISHED PROCEEDINGS

7. Schexnaydre, Ryan, and B.S. Mitchell, "Nanoscale polymer blends via mechanical milling," AICHE Annual Meeting, Conference Proceedings, Cincinnati, OH, United States, Oct. 30-Nov. 4, 2005 (2005).
6. Mitchell, B.S., C.L. De Castro, A. Moster and R. Schexnaydre, "Highly Interfacial Hybrid Nanocomposites," 7th International Conference on Nanostructured Materials, Wiesbaden, Germany, June 23, 2004.
5. Hampsey, J.E.; De Castro, C.L.; McCaughey, B.F.; Wang, D.; Mitchell, B.S.; Lu, Y., "Micron to sub-micron sized highly ordered mesoporous silica particles prepared using a high energy ball milling process" *Materials Research Society Symposium Proceedings*, (2003), **775**, p. 83-88.
4. Hampsey, J.E.; DeCastro, C.; McCaughey, B.F.; Wang, D.; Mitchell, B.S.; Lu, Y., "Preparation of micron to submicron-sized mesoporous silica particles using high-energy ball milling," *Abstracts of Papers, 225th ACS National Meeting*, New Orleans, LA, March 23-27, 2003 (2003).
3. Mitchell, B.S.; Zhang, H.Y.; Ade, M.; Kurtenbach, D.; Müller, E. "Formation of Nanocrystalline SiC Powder From Chlorine-containing Polycarbosilane Precursors;" *Materials Research Society Symposium - Proceedings The 1999 MRS Fall Meeting - Symposium F 'Nanophase and Nanocomposite Materials III'* Nov 29-Dec 2 1999 v581 2000 Boston, MA, Materials Research Society Warrendale PA USA p 205-209.
2. Mitchell, B.S., "Inviscid Melt Spinning of Mullite Fibers," *Ceramic Engineering and Science Proceedings*, American Ceramic Society, **20**[4], 267-273 (1999).
1. Mitchell, B.S., Y.M. Sung, and K.Y. Yon, "Microstructure and Interphase Characterization of Inviscid Melt-Spun CaO-Al₂O₃ Fibers for Composite Applications," *Proceedings of the Second International Conference on Composites Engineering*, ICCE, 513-514 (1995).

TECHNICAL PRESENTATIONS (Personally Presented)

42. "Nanopartikeln: Anwendungen und Entwicklungen," DAAD International Symposium, Sao Paulo, Brazil, June 10, 2007.
41. "Incorporation of Biological Materials into an Introductory Materials Engineering Course," ASEE Annual Meeting, Chicago, IL, June 21, 2006.
40. "Synchrotron IR for Characterization of Polymer Blends," CAMD Summer Workshop, Baton Rouge, LA, May 24, 2006.
39. "Interface-Property Relationships in Hybrid Nanocomposites from Near Net-Shape Manufacturing," Nanotech 2006, Boston, MA, May 10, 2006.
38. "Polymer Research at Tulane University," Bridgestone Americans Center for Research and Technology, Akron, OH, January 9, 2006.
37. "Near Net-Shape Manufacturing of Nafion® Membranes for Fuel Cell Applications" with Amanda Moster, AICHE Annual Meeting, Cincinnati, OH, November 1, 2005.
36. "Formation and Characterization of Highly Interfacial Hybrid Nanocomposites," 2nd International Conference on Nanomaterials and Nanotechnologies, Iraklion, Crete, June 19, 2005.
35. "Nanoparticles from Mechanical Attrition," University of Arkansas, Dept. of Mechanical Engineering, June 7, 2005 (Invited).

34. "Nanoparticles and Nanocomposites from Mechanical Attrition," Materials Modification, Inc., Fairfax, VA, June 2, 2005.
33. "Highly Interfacial Hybrid Nanocomposites," 5th Louisiana Conference on Advanced Materials and Emerging Technologies, Tulane University, January 21, 2005.
32. "Near Net-Shape Manufacturing of Aluminum/Mullite Nanocomposites," DMII Grantees Conference, Phoenix, AZ, January 4, 2005.
31. "Near Net-Shape Manufacturing of Hybrid Polymeric Nanocomposites," AIChE Annual Meeting, Austin, TX, November 9, 2004.
30. "Incorporation of Biological Materials into an Introductory Materials Engineering Course," AIChE Annual Meeting, Austin, TX, November 9, 2004.
29. "Highly Interfacial Hybrid Nanocomposites," Dept. Of Chemical Engineering, University of Louisiana-Lafayette, Lafayette, LA, November 2, 2004 (Invited).
28. "Highly Interfacial Hybrid Nanocomposites," 7th International Conference on Nanostructured Materials, Wiesbaden, Germany, June 23, 2004.
27. "The Chemist's Role in the Changing Landscapes of Chemical Engineering and Materials Science," ACS Northwest Louisiana Local Section, Shreveport, LA, March 15, 2004 (Invited).
26. "Highly Interfacial Hybrid Nanocomposites," Department of Chemical Engineering, Kansas State University, Manhattan, KS, February 26, 2004 (Invited).
25. "Investigations into the interfacial and mechanical properties of aluminum/mullite nanocomposites," NSF/DMII Grantees Conference, Dallas, TX, January 4-9, 2004.
24. "Materials Research at Tulane University," 2003 Louisiana Materials Research and Development Conference, Lafayette, LA, November 4, 2003.
23. "Factorial Analysis of Processing Effects on the Mechanical Properties of WHIPOX Composites," German Aerospace Agency, Cologne, Germany, July 24, 2003.
22. "The Formation of Mullite Fibers from the Melt," German Aerospace Agency, Cologne, Germany, March 27, 2003.
21. "Investigations into the interfacial and mechanical properties of aluminum/mullite nanocomposites," NSF/DMII Grantees Conference, Birmingham, AL, January 5-9, 2003.
20. "Investigations into the interfacial, mechanical, and corrosion properties of nanocrystalline mullite-reinforced nanocrystalline aluminum composites," NANO2002, Orlando, FL, June 19, 2002.
19. "Aluminum/Mullite Nanocomposites from Mechanical Attrition," Dept. Of Chemical Engineering, Tennessee Technological University, Cookeville, TN, May 20, 2002 (Invited).
18. "Metal-Ceramic Nanocomposites from Mechanical Attrition," Technanogy, Inc., Irvine, CA, April 12, 2002.
17. "Polymer-Ceramic Nanocomposites from Mechanical Attrition," Ceramatec., Salt Lake City, UT, April 11, 2002.
16. "Near Net-Shape Manufacturing of Nanocrystalline Aluminium/Mullite Composites," NSF Design, Service and Manufacturing Grantees and Research Conference, San Juan, PR, January 10, 2002.
15. "Nanostructured Composites: To Build Up or To Break Down?" Center on Nanotechnology, University of Washington, Seattle, WA, October 23, 2001 (Invited).
14. "Nanostructured Ceramics," Kyocera, Inc., Vancouver, WA, February 9, 2001.
13. "Materials Research at Tulane University," Louisiana Materials Science Conference, University of New Orleans, New Orleans, LA August 17, 2000
12. "Engineering Ethics: A Modular Lecture for Chemical Engineering Students," AIChE Spring Mtg, Atlanta, GA, Mar 9, 2000
11. "Formation of Nanocrystalline SiC Powder from Chlorine-Containing Polystyrene/Polycarbosilane Precursors," Materials Research Society Fall Meeting, Boston, MA, November 30, 1999.
10. "Formation of Nanocrystalline SiC Powder from Chlorine-Containing Polystyrene/Polycarbosilane Precursors," Partners in Scientific Collaboration, Oak Ridge National Laboratories, Oak Ridge, TN, August 18, 1999.
9. "Contact Angle Measurements of Droplets on Fibers," Exxon R & D Labs, Baton Rouge, LA, April 1, 1999 (Invited).
8. "Melt Spinning of Mullite Fibers," AcerS 23rd Annual Cocoa Beach International Conference on Engineering Ceramics and Structures, Cocoa Beach, FL, January 26, 1999.
7. "Hydrolytic Stability of Calcium Aluminate Fibers for Cement Composites," AIChE Annual Meeting, Miami Beach, FL, November 19, 1998.
6. "Präparation, Analyse und Struktur von CA-Aluminat-Fasern," Bundesanstalt für Materialforschung und -prüfung, Berlin, Germany, August 6, 1998.
5. "Evaluation of Ceramic Fibers Produced by Inviscid Melt Spinning," Institut für Keramische Werkstoffe, Technische Universität Freiberg, Freiberg, Germany, July 7, 1998.
4. "The Early Introduction of Design Fundamentals Into the Chemical Engineering Curriculum," ASEE Annual Meeting, Milwaukee, WI, June 18, 1997.
3. "The Production of Mixed-Metal Oxide Fibers by Inviscid Melt Spinning," ACerS Annual Meeting, Cincinnati, OH, May 14, 1997.
2. "Carbon Deposition and Stream Stabilization in CaO-Al₂O₃ Fibers Formed via IMS," Ohio University Seminar Series, Athens, OH, January 23, 1996 (Invited).
1. "Microstructure and Interphase Characterization of Inviscid Melt-Spun CaO-Al₂O₃ Fibers for Composite Applications," ICCE/2, New Orleans, LA, August 21, 1995.

OUTREACH PRESENTATIONS

The presentation "From Silly Putty to Superconductors: Career Opportunities in Engineering and Science," has been presented through the Louisiana Board of Regents "Speaking of Science" Program to school children at the following locations:

18. Springfield Elementary School, Springfield, LA, May 1, 2007.
17. Monterey High School, Monterey, LA, October 27, 2006.
16. Springfield Elementary School, Springfield, LA, April 13, 2006.
15. Enon Elementary School, Franklinton, LA, November 11, 2005.
14. Springfield Elementary School, Springfield, LA, May 4, 2005.
13. Evangeline Elementary School, Evangeline, LA, January 14, 2005.
12. Airline High School, Bossier City, LA, October 8, 2004.
11. Springfield Elementary School, Springfield, LA, April 29, 2004.
10. Monterey High School, Monterey, LA, April 2, 2004.
9. St. Angela Merici School, Metairie, LA, February 13, 2004.
8. Northwestern Middle School, Zachary, LA, February 12, 2004.
7. Lukeville Elementary School, Lukeville, LA, February 21, 2003.
6. Dwight D. Eisenhower Elementary School, New Orleans, LA, February 3, 2003.
5. Louisiana Art and Science Museum, Baton Rouge, LA, December 14, 2002.
4. Breaux Bridge Elementary School, Breaux Bridge, LA, May 6, 2002.
3. Springfield Elementary School, Springfield, LA, May 1, 2002.
2. St. Pius Elementary School, Lafayette, LA, April 16, 2002.
1. Natchitoches Central H. S., Natchitoches, LA, April 10, 2000.

GRANTS (active in bold)

1. **NSF/CMMI, "New Surface Chemistries and Process Innovations in the Production of Surface Functionalized Semiconductor Nanoparticles," with M. Fink and H. Ashbaugh, \$350,000, 7/2007 - 6/2010.**
2. **NASA "APTEC," with D. De Kee et al., \$0.9M, 12/2005 - 11/2007.**
3. NSF/MRI: "Acquisition of a Field Emission Environmental Scanning Electron Microscope for Research and Education in Nanomaterials and Biological Structures at Tulane University," Co-PI with Vijay John et al., \$515,892.
4. Louisiana Board of Regents (BOR), "Preliminary Planning Grant for a Nanoscale Engineering and Science Center in Polymer-Based Nanostructures," \$15,000, 4/2004-3/2005.
5. NASA "Tulane Institute for Macromolecular Engineering and Science," with D. De Kee, \$1.8M, 7/2003 - 12/2004.
6. NSF/DMII/MPE "Collaborative Research: "Innovations in Net-Shape Composite Fabrication through Microscale Modeling of Infiltration," with Karsten Thompson (LSU), \$102,900 (including supplements), 7/2002 - 6/2007.
7. NSF/DMII/Nano "Interfacial Investigations and Process Innovations in the Near Net-Shape Manufacturing of Aluminum/Ceramic Nanocomposites," \$227,463 (including REU supplements) 04/2001 - 03/2005.
8. NASA "Tulane Institute for Macromolecular Engineering and Science," with D. De Kee, \$2.5M, 4/2002 - 6/2003.
9. BOR/ENH "Sample Preparation Equipment for Advanced Materials Imaging and Analysis," with Robert Dotson, \$15,925, 6/1/01 - 5/31/02.
10. LTTR, "SBIR Phase Zero: Commercialization of a Novel Fiber Spinning Process for Cement Composites," \$3,000, 5/15/2000 - 5/31/2001.
11. DoE/EPSCoR, "Novel Nanostructured Materials: From Microstructure to Macroscopic Performance," \$42,000, 1/1/2000 - 12/31/2000 (participant).
12. NSF/MRI, "Acquisition of a Scanning Transmission Electron Microscope for Advanced Materials Development," \$602,293, 07/01/99 - 6/30/01.
13. DoD/EPSCOR "Development of Mullite Fibers for High Temperature Structural Applications," \$575,168, 6/1/96-5/30/2000.
14. Engineering Foundation, "Formation of Superconducting Fibers by a Novel Melt Spinning Technique," \$25,000, 9/1/98 - 8/31/99.
15. UES, Inc., "Formation of Al₂O₃-YAG Particulates by Unstabilized Inviscid Melt Spinning," \$1,505, 4/15/98 - 5/31/98.
16. German Academic Exchange Service, "Study Visit to the Technische Universität Freiberg and BAM," \$5,000 (approximate), 6/15/98 - 8/15/98.
17. Thermal Ceramics, "Evaluation of Surface Properties of Fibers-Phase II", \$14,622, 10/15/97 to 1/15/98
18. BOR/SoS "Career Opportunities in Materials Science," 1/1/97-12/31/97.
19. Thermal Ceramics, "Evaluation of Mechanical and Surface Properties of Fibers," \$18,685, 3/1/97 to 6/30/97.
20. LEQSF/TGEF "Funding Possibilities at NSF for Ceramic Fibers," \$500, 3/1/96 through 4/1/96
21. ACS/PRF "Study of Hydrocarbon Pyrolysis and Carbon Deposition Rates in the Formation of Ceramic Fibers via Inviscid Melt-Spinning," \$20,000, 9/1/95 through 8/31/97.
22. NSF/ARI "Acquisition of Thermal Analysis Equipment for Advanced Materials Design," \$250,000, 10/15/95 - 6/30/97.
23. Dreyfus Foundation "Molecular Simulation and Visualization in the Undergraduate Chemical Engineering Curriculum," \$36,540, 3/1/96 - 3/1/97.
24. Lilly Teaching Foundation "Development of Materials Science and Engineering Course" \$3,000, 7/1/95 - 6/30/96
25. LEQSF/Enhancement "Instrumentation for Interface and Bulk Characterizations of Novel Materials," \$146,250, 6/1/95 - 5/31/96
26. LaSPACE/REA "The Production of Ceramic Fibers via Inviscid Melt-Spinning in a Zero-Gravity Environment," \$10,000, 2/15/95 - 2/14/96.

POSTDOCTORAL ASSOCIATES

Dr. Haoyue Zhang, 2 papers published

GRADUATE STUDENTS

Fernando Fondeur, Ph.D., 1998. 5 papers published
Zhijun Xiao, Ph.D., 1998. 3 papers published
Wenyan Li, M.S., 1998. 1 paper published
Nicika Maljkovic, M.S., 2000. 1 paper published
Shawn D. Haynes, M.S., 2003. 1 paper published
Claudio L. De Castro, Ph.D., 2005, 1 book chapter, 3 papers published.
Daniel U, M.S. 2006, (co-advised with Y. Lu)
Ryan J. Schexnaydre, Ph.D. candidate, matriculated 2002, 1 paper published, 2 submitted.
Amanda L. Moster, Ph.D. candidate, matriculated 2002, 1 paper submitted, 1 in preparation.
Cindy Hetzer, Ph.D. candidate, matriculated 2003
Andrew Heintz, Ph.D. candidate, matriculated 2004, 1 paper in press.

UNDERGRADUATE STUDENTS

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