

VITA

January 2012

1. PERSONAL DATA

Name: Joshua U. Otaigbe, *PhD, CEng, CSci, FIMMM*

Address: 208 PSRC, The University of Southern Mississippi, Hattiesburg, MS 39406

Graduate Faculty Status: Member

2. EDUCATION

Ph.D., Polymer Science and Engineering, Univ. of Manchester (UMIST), England, 1984

B.S., (with Honors) Industrial Chemistry, Univ. of Benin, Nigeria, 1979

Professional Engineering Registration

Chartered Engineer UK (member #554964)

3. ACADEMIC EXPERIENCE

2004 – present	Full Professor, School of Polymers and High Performance Materials, The University of Southern Mississippi, Hattiesburg, MS
2009-2010	Visiting Professor, INSA de Lyon, Ingénierie des Matériaux Polymères Laboratoire des Matériaux Macromoléculaires, 69621 Villeurbanne Cedex France (Sabbatical Leave)
5/2003-8/2003	Visiting Professor, Polymer Physics, Institute for Polymers, Swiss Federal Institute of Technology (ETH-Zurich), Zurich, Switzerland.
2002 – 2003	Associate Professor, School of Polymers and High Performance Materials, The University of Southern Mississippi, Hattiesburg, MS
2000 – 2002	Associate Professor (with Tenure), Materials Science & Engineering Dept. and Chemical Engineering Dept., Iowa State University, Ames, IA Associate Scientist, USDOE Ames Laboratory and Center for Crops Utilization Research, Iowa State University, Ames, IA
1998 – 1999	Assistant Professor, Chemical Engineering Dept., Iowa State University, Ames, IA
1994 – 1999	Assistant Professor, Materials Sci. and Engineering Dept., Iowa State University, Ames, IA; Associate Polymer Scientist, U.S. Dept of Energy Ames Laboratory, Iowa State University, Ames, IA; Associate Scientist, Center for Crops Utilization Research, Iowa State University, Ames, IA
1991-1992	Faculty Member, Grande Prairie Regional College, Grande Prairie, Alberta, Canada

1989–1992	Research Fellow and Instructor, Department of Chemical Engineering, and Department of Mining, Metallurgy and Petroleum Engineering, Univ. of Alberta, Edmonton, Canada
1984–1989	Assistant Professor, University of Benin, Benin, Nigeria,
1980–1984	Research Assistant, University of Manchester (UMIST), England,
1979–1980	Lecturer, Federal Polytechnic, Bida, Nigeria

4. INDUSTRIAL AND OTHER NON-ACADEMIC EXPERIENCE

1992–1994	Project Leader, Corning Incorporated, Corning, New York
1994–2002	Initiated and sustained long-term industrial research partnership between ISU and companies such as Huntsman Corporation in Virginia and Arnold Engineering Company in Illinois

5. INTERNATIONAL EXPERIENCE

Before joining Iowa State, Dr. Otaigbe held academic and research positions at the University of Manchester in United Kingdom, University of Alberta in Canada, Grande Prairie Regional College in Canada, and at the University of Benin in Nigeria. He has initiated international research collaboration with scientists at the Russian Academy of Sciences in St. Petersburg and more recently with scientists at Sheffield & Brunel Universities in U.K. He has held a visiting professorship at the Institute of Polymers (polymer physics) in ETH, Zurich, Switzerland in the summer of 2003.

6. CONSULTING

Peter G. Angelos Law Firm, 2006–; Whatley Drake LLC (Law Firm), 2006–; Bayer MaterialScience LLC, 2004–2006; Anton Paar Physica Company, 2004–2006; Nova Corp., 2004; Nyemaster, Goode, Voigts, West, Hansell, & O'Brien, P.C. Law Firm, 2001; Dancor, Inc., CA, 1998; Arnold Engineering Company, Marengo, IL, 1996–2003
 Advanced Technologies Group, LC, Iowa City, IA, 1998;
 Fuerste, Carew, Coyle, Juergens & Sudmeier Law Offices, Dubuque, IA, 1998.
 DupontDow Elastomers, Switzerland, 1997
 Huntsman Chemical Corporation, Chesapeake, VA 1998–2002
 Huntsman Chemical Company Ltd, Manchester, UK, 1997
 RYKO Manufacturing Company, Grimes, IA, 1997
 Frigidaire Company, Webster City, IA, 1996; Square D Company, Cedar Rapids, IA, 1996
 Maytag Corporation, Newton, IA, 1996–97; Intraco, Inc., Oskaloosa, IA, 1995
 Iowa Plastics Technology Center, Waverly, IA, 1994–1996
 Corning, Inc., Corning, NY, 1994–; General Electric Silicones, Waterford, NY, 1994–1995
 Dow Chemical USA, Midland, MI, 1994–2000
 Department of Energy (formerly AOSTRA Ltd), Edmonton, Canada, 1989–1992

7. HONORS AND AWARDS

National Science Foundation CAREER Award, 1997
 Best Paper Award, 12th Annual Rio Grande Regional Symposium on Advanced Materials, 2000.
 Best Paper-Polyolefins Award, Society of Plastics Engineers-ANTEC'97
 Selected as an Honored Member in Who's Who of American Inventors, 1998-1999.
 Elected to the Board of Directors, Society of Plastics Engineers-EPSTECH, 2001.
 Iowa State University, College of Engineering Patent Recognition Award for United States Patent # 6,171,4333, 2001.
 Inventor Incentive Award, 2001.
 Invited Speaker, PAC RIM 4 Conference and Symposium, Maui, Hawaii, 2001.
 Fellow, Institute of Materials, United Kingdom, 2002.
 Visiting Professor, Polymer Physics, Institute for Polymers, Swiss Federal Institute of Technology (ETH-Zurich), Zürich, Switzerland, 2003.
 Chartered Scientist (UK), 2004
 Registered Chartered (Professional) Engineer, 2005
 Fellow, Society of Plastics Engineers, 2005

8. ACADEMIC AREAS OF SPECIALIZATION

Teaching in University of Southern Mississippi:

PSC820	Spring '12	Advanced Polymer Composites (13), Cr. 3
PSC 730	Fall '02-'10	Polymer Rheology (18), Cr. 3
PSC 460	Fall '11	Structure and properties of polymers & Composites, Cr. 3
PSC 360	Fall '05-'11	Polymer Rheology (15), Cr. 3
PSC 361	Spring '03-'11	Polymer Processing (19), Cr. 3
PSC 361L	Spring '03-'05	Polymer Processing Laboratory (19)
PSC 491	'03-'08	Independent study/undergrad research (variable)
PSC 691	Spring '03-'06	Research (3)

Teaching in Iowa State University:

HON 290H	Fall '97/Spr '98/'02	Freshman Honors Mentor Program
MSE 271	Spring '99-'02	Introduction to Materials Science & Engng (60) Cr. 3
MatE 351	Fall '99-'01	Introduction to Polymeric Materials (20) Cr. 3
MSE 371	Fall '96, '97	Materials for Aerospace Applications (18) Cr. 3
MSE 383 [@]	Fall 1994-1998	Polymers and Composites (25) Cr. 3
MSE 421	Spring '95, '96	Metallurgical Engineering Design (4) Cr. 3
MSE 422	Spring '95, '96	Ceramic Engineering Design (4) Cr. 3
MatE 454	Spring 01/02	Introduction to Polymer Processing (4) Cr. 3
MatE 454L	Spring 01/02	Polymer Processing Laboratory (4) Cr. 3
MSE 466X	Spring '95	Multidisciplinary Engineering Design (?) Cr. 3

[@] Taught over the Iowa Cable Network to Iowa industry

MSE 490	Summer '95, '99, '01	Independent Study (3), Variable credits
MSE 566	Spring '97, '99	Deformation Processing (16) Cr. 3
MSE 521 +	Spring '95	Polymers and Composites (18) Cr. 3
MSE 699	Fall 1995-02	Research (4) Cr. variable

Teaching Prior to Iowa State University:

University of Alberta, CANADA

MET E 567	Fall '90	Polymers and Fiber-Reinforced Polymers (26) Cr. 3
MET E 567L	Fall 1990	Laboratory component of MET E 567

Grande Prairie Regional College, CANADA

CH 200	Fall '91	Introductory University Chemistry (25) Cr. 6
CH 200/202	Fall '91	General Chemistry Laboratory
PC 203/205	Fall '91	Introductory General Physics I (Mechanics) (25) Cr. 4
PC 206	Spring '91	Introductory General Physics I (25) Cr. 3 (Fluids, Heat, Thermodynamics, Electricity) Laboratory Component of PC 203/206

University of Benin, NIGERIA 1984–1989

CHM 599	1984–89	Graduate Research (3) Cr. ?
CHM 499	1984–89	Undergraduate Research Projects (?) Cr. ?
CHM 485	1984–89	Topics in Industrial Chemistry (Composites) (?) Cr. 3
CHM 461	1984–89	Polymer Physics (?) Cr. 3
CHM 460	1984–89	Rheology and Processing of Plastics (?) Cr. 3
CHM 232	1984–89	Physical Chemistry (?) Cr. 3
CHM 102	1984–89	General Chemistry II (500) Cr. 3
CHM 101	1984–89	General Chemistry I (500) Cr. 3
Advising	1984–89	Laboratory Components of CHM 101/102/232/460/461 Several students (200-level Faculty Coordinator)

University of Manchester (UMIST), ENGLAND 1980–84

Taught undergraduate tutorials, seminars, and laboratory classes in polymer science & engineering

Federal Polytechnic, NIGERIA 1979–80

Taught mathematics, chemical thermodynamics, and chemical reaction engineering to chemical engineers

9. RESEARCH ACTIVITIES

Polymer engineering and materials science; Viscoelastic properties of polymeric solids and liquids; Structure and properties of polymer blends and hybrids, and polyphosphate glasses; Nanoscience and nanotechnology; Composites; University/Industry partnerships

+ Co-listed with mechanical engineering course guest-lectured

Dr. Otaigbe's research is in the areas of polymer engineering and materials science. His research blends chemical engineering sciences with materials structure and property principles to understand and improve processes for advanced materials. He is also actively involved in university-industry partnerships to solve industrially relevant problems. These problems are often at the boundaries between established disciplines or in areas combining many disciplines that may ultimately lead to discovery.

Three national and one international research programs into the effects of processing and structure on the physical, mechanical, and rheological properties of polymers and composites have been initiated involving other universities, government, and industrial research laboratories. This work has resulted in collaborations involving a number of principal investigators at Iowa State University; Northwestern University in Illinois; Oak Ridge National Laboratory; Argonne National Laboratory; the Russian Academy of Sciences of Saint Petersburg, Russia; Arnold Engineering Company in Illinois; Dow Chemical in Michigan; Dancor Inc. in California; Ford Motor Company in Michigan; PPG Industries in Pennsylvania; and most recently Huntsman Chemical Corporation in Virginia.

Before joining the USM faculty, Dr. Otaigbe's polymers and composites research group at ISU comprised eight persons, including two postdocs, four graduate students, one research assistant, and four undergraduates, working on seven projects with external sponsors including federal agencies, such as NSF, US-DoE, American Soybean Board; industry, such as Huntsman Corporation, Corning Inc., and Arnold Engineering Company. This research program currently includes one international research project, with Russia. At USM, Dr. Otaigbe has rapidly established a polymer engineering and composites research group that currently comprises 2 postdocs, 3 PhD students, 3 undergraduate students, and one visiting scientist from the Institute of Macromolecular Science in St. Petersburg in Russia. More extensive discussion of research projects is available.

10. RECENT RESEARCH PROJECTS, CONTRACTS AND GRANTS

Proposals Funded:

Total amount of funded proposals approx. \$9.4 Million (since 1995).

Agency/Industry	Year	Amount (\$)	Approx. % Effort
NSF, Div. Materials Research	2010	23,925	PI
NSF, Div. Materials Research	2008	300,000	PI
NSF, CBET-Process/Reaction Engineering	2008	367,662	PI
NSF, CBET/Supplement	2007	26,631	PI
NSF, OISE/Supplement	2006	13,750	PI
NSF, Chemical Transport Syst/Supplement	2006	6,000	PI
NSF, Office of International Sci. & Eng.	2005–2008	83,940	PI
Office of Naval Research	2004	307,333	Co-PI
Bayer MaterialScience LLC	2004	30,000	PI
NSF, Div. Materials Research	2004	20,100	PI
NSF MRSEC	2004–	70,000	PI
NSF, Div. Materials Research	2003	12,000	PI

Proposals Funded Continued:

NSF, Div. Materials Research	2003	6,000	PI
NSF, Div. Chemical & Transport Systems	2003–2006	397,685	PI
NSF, Div. Materials Research	2003–2008	3,609,280	Co-PI
NSF, Div. Materials Research	2003–2005	23,845	PI
USM NSF MRSEC	2003	35000	PI
USM NSF, EPSCoR Nanotech. Cluster	2003–2005	97,802	PI
NSF, Div. Materials Research/Supplement	2003	9,020	PI
NSF, Div. Materials Research	2002	116,172	PI
R.M Hearin Foundation/Start-up Funds	2002	450,000	PI
NSF, Div. Materials Research/MRI	2001	519,568	Co-PI
NSF, Div. Chemical & Transport Systems	2001	69,635	PI
NSF, Div. Materials Research	2001	259,784	Co-PI
NSF, Div. Materials Research/REU	2001	18,478	PI
NSF, Div. Materials Research	2000–2001	12,718	PI
NSF, Div. Materials Research	1999–2002	257,000 ^a	PI
Huntsman Chemical Corporation	1999–2001	118,000 ^b	PI
NSF, Div. Materials Research	1999–2000	25,000	PI
Huntsman Chemical Corporation	1998	32,000	PI
Dow Chemical Company	1998	2,000	PI
NSF, REU, Div. Materials Research	1998–2001	14,000	PI
NSF, Div. Materials Research	1998–2001	350,000 ^c	PI
ISURF [#]	1998	10,000	60, PI
NSF, REU, Div. Materials Research	1998	12,000	PI
NSF, Div. Materials Research	1997–2000	351,000 ^d	PI
NSF, Div. Materials Research-Equip grant	1996–1997	110,000 ^e	50, Co-PI
ISPB	1997–2000	115,988	50, Co-PI
Perkin-Elmer Corporation	1997	100,000 ^f	50, Co-PI
CATD [#]	1996–1997	32,000	PI
RRTC	1995–1997	60,000	50, Co-PI
USB	1994–1996	400,000	33, Co-PI
ISURF [#]	1996	7,500	90, Co-PI
ISURF [#]	1995–1996	19,000	PI
CATD [#]	1995–1996	20,000	90, Co-PI
ISURF [#]	1995–1996	12,000	PI
CATD [#]	1995	50,000	50, Co-PI
ISU/MSE (Equipment start-up) [#]	1994–1996	20,000	PI
Sherritt Incorporated of Canada	1992	20,000	PI
NSERC of Canada	1991–1994	262,000 ^g	90, Co-PI
AOSTRA Limited of Canada	1990–1991	85,000	50, Co-PI

^a Plus \$20,000 Iowa State University matching funds; ^b Plus \$40,000 for equipment purchase

^c Plus \$17,500 Iowa State University matching funds; ^d Plus \$25,000 Iowa State University matching funds

^e Plus \$110,000 Iowa State University matching funds; ^f New thermal analysis teaching laboratory

^g University overheads not included; [#] ISU funding sources

Otaigbe, J.U. W. Jarrett and J. D. Lichtenhan, National Science Foundation-CBET 0752150, "GOALI: New Nanostructured Polyurethane/POSS Hybrid Films With Enhanced Benefits: From Reactive Aqueous Dispersions to Prescribed Film Morphologies and Properties," 2008-2011, \$367,662, PI.

Otaigbe, J.U. National Science Foundation-DMR 1047045, "Collaborative Research: Molecular Structure and Phase Separation Behavior of Novel Phosphate-glass / Polymer Hybrids Studied by Advanced Solid-state NMR and Rheometry Methods," 2010, \$23,925, PI.

Otaigbe, J.U., National Science Foundation-DMR 0652350, "Collaborative Research: Molecular Structure and Phase Behavior of Novel Phosphate-glass / Polymer Hybrids Studied by Advanced Solid-state NMR and Rheometry Methods," 2008-2010, \$300,000, PI.

Otaigbe, J. U., National Science Foundation-CBET 0715095, "International Supplement to NSF-CBET 0317646," 2007, \$26,631, PI.

Otaigbe, J. U., National Science Foundation-INT 0630577, "Supplement to OISE 0436384," 2006, \$13,750, PI.

Otaigbe, J. U., National Science Foundation-CBET 0630481, "Supplement to CBET 0317646," 2006, \$6000, PI.

Otaigbe, J. U., National Science Foundation-OISE 0405001, "U.S.–Switzerland Cooperative Research and Education: Rheology, Morphology and Modeling of New Inorganic-Organic Hybrid Materials," 2005–2008, \$83,940, PI.

Otaigbe, J.U., Office of Naval Research, "Coatings, and Biodegradable and Bioabsorbable Films and Composites," 2004–2006, \$307,333.

Otaigbe, J.U. and D.A. Wicks, Bayer MaterialScience LLC, "Rheology and Morphology of Polyurethane Dispersions," 2004, \$30,000.

Otaigbe, J. U., National Science Foundation-DMR 0412001, "International Supplement to NSF-DMR 0317646," 2004,–2005 \$20,100, PI. (This grant proposal is to support new partnership and new collaborative project with Institute of Macromolecular Compounds, Russian Academy of Sciences).

Otaigbe, J.U., National Science Foundation-MRSEC (DMR-0213883) "Responsive Films from Polymer Nanocomposite Dispersions and Emulsions: Experiment and Theory," 2004, \$70,000, PI. (Support for 1 student and partial support for 1 postdoc).

Otaigbe, J.U. Anton Paar Physica Company, "MCR 501-Equipment Grant," 2004. (Donation of brand-new state-of-the-art rheometer complete with accessories donation, in-kind support).

Otaigbe, J. U., National Science Foundation-DMR 0405690, "REU Supplement to DMR 0317646," 2003–2005, \$12000, PI.

Otaigbe, J. U., National Science Foundation-DMR 0405689 "Supplement to DMR 0242754" 2003-2005, \$6000, PI.

Mathias, L, J.U. Otaigbe, and D. Wicks, National Science Foundation-DMR-0300768 “IGERT-Entrepreneurship at the Interface of Polymer Science and Medicinal Chemistry” 2003–2008, \$3,916,556, Co-PI.

Otaigbe, J.U., National Science Foundation-CTS 0317646, “Novel Approaches to Nanostructured Polymer Blends With Enhanced Benefits,” 2003–2006, \$367,685 (plus \$30,000 University matching funds), PI.

Otaigbe, J.U., National Science Foundation-EPSCoR, “Nanostructured Organic/Inorganic Polymer Hybrid Materials With Enhanced Benefits,” 2003–2005, \$97,802, PI.

Otaigbe, J.U., National Science Foundation-MRSEC (DMR-0213883) “Responsive Films from Polymer Nanocomposite Dispersions and Emulsions: Experiment and Theory,” 2003, \$35,000, PI.

Otaigbe, J. U., National Science Foundation-DMR 0310470 “Supplement to DMR 0242754” 2003, \$3,020, PI.

Otaigbe, J.U. National Science Foundation-DMR 0309115, “Medium-Range Order in Polymeric Phosphate Glasses: Effects of Atomic-Scale Structures on Macroscopic Properties,” 2003, \$23,845.

Otaigbe, J. U., National Science Foundation, “REU Supplement to DMR 0242754,” 2003, \$6000, PI.

Otaigbe, J. U., National Science Foundation, “Supplemental Funding to DMR 0242754,” 2003, \$3020, PI.

Otaigbe, J. U., National Science Foundation-DMR 0242754 “Generation, Characterization, and Modeling of Structure and Properties of Polymer Blend Nano- and Microparticles,” 2002, \$116,172, PI.

Schmidt-Rohr, K. J.U. Otaigbe, *et al.* “Acquisition of a Solid-State NMR 400 MHz Spectrometer for Studies of the Structure and Dynamics of Polymers and Insoluble Natural Compounds,” National Science Foundation Major Research Instrumentation Program, 10/2001, \$259,784 (plus \$259,784 ISU matching funds) Co-PI.

Otaigbe, J. U., National Science Foundation, “Feasibility of Reactive Extrusion of Nanostructured Polymer Blends,” 2001, \$69,635, PI.

Otaigbe, J. U., National Science Foundation, “REU Supplement to CTS 0122925,” 2001, \$12000, PI.

Otaigbe, J. U., National Science Foundation, “REU Supplement to DMR 9733350,” 5/2001, \$12,000, PI.

Otaigbe, J. U., National Science Foundation, “REU Supplement to DMR 9982077,” 1/2001, \$5760, PI.

Otaigbe, J. U., National Science Foundation, “REU Supplement to DMR971268,” 7/2000, \$12,718, PI.

Otaigbe, J. U., National Science Foundation, "International Supplement to NSF-DMR 9712688," 2000–2001, \$12,718, PI. (This grant proposal is to support new partnership and new collaborative project with Institute of Macromolecular Compounds, Russian Academy of Sciences).

Otaigbe, J. U., National Science Foundation, "Generation, Characterization, and Modeling of Structure and Properties of Polymer Blend Nano- and Microparticles," 1999-2002, \$257,000 plus \$20,000 ISU matching funds, PI.

Otaigbe, J. U., PPG Industries, Inc., "PPG's Low Molecular Weight Atomization–Stage 1" 12/1999 \$10,500, PI.

Otaigbe, J. U., Huntsman Chemical Corporation, "Polystyrene and polypropylene Atomization–Stage 2" 12/1998 \$118,000 plus \$40,000 for equipment, PI.

Otaigbe, J. U., National Science Foundation, "Industry Matching Funds," 3/1999–2/2000, \$25,000, PI.

Otaigbe, J. U., Dow Chemical Company, "Support for Polymer Materials Science Education," 11/1998, \$2,000, PI.

Otaigbe, J. U., National Science Foundation, "REU Supplement," 11/1998, \$14,000, PI.

R.C. Larock and Otaigbe, J.U., Iowa Soybean Promotion Board, "Preparation of biodegradable polymers by admet and cationic polymerization of soybean oil," 4/1998, \$115,988, Co-PI.

Otaigbe, J. U., Huntsman Chemical Corporation, "Polystyrene Atomization," 4/1998–12/1998 \$32,000, PI.

Otaigbe, J. U., National Science Foundation, "Medium range order in polymeric phosphate glasses," 2/1998–8/2001, \$350,000 plus \$17,500 ISU matching funds, PI. Note that this is a highly competitive CAREER award (only $\leq 10\%$ or 325 grant proposals nationwide are funded).

Otaigbe, J.U. and Sheares, V.V., Iowa State University Research Foundation, "Quasicrystals as additives in polymeric materials," 1/98–12/98, \$10,000, PI.

Otaigbe, J. U., National Science Foundation, "REU Supplement," 1/1998, \$12,000, PI.

Otaigbe, J. U., National Science Foundation, "Development of polymer bonded magnets," 8/1997–8/2000, \$351,000 plus \$25,000 ISU matching funds PI. Note that this is a highly competitive "Grant Opportunities for Academic Liaison With Industry" award with peer reviewers from both industry and academia.

Martin, S. W. and Otaigbe, J. U., Perkin-Elmer Corporation, "New thermal analysis equipment for teaching laboratory," 1997, \$100,000 value, Co-PI.

Martin, S. W. and Otaigbe, J. U., National Science Foundation, "Acquisition of comprehensive dynamic mechanical thermal analysis system," 7/96–6/97, \$110,000 (plus \$110,000 ISU Matching Funds), Co-PI.

Otaigbe, J. U. and Adams, D., Iowa State University, special Fall 1995 Research Initiation Grants, "Affordable biodegradable soy protein plastic composites," 1/97–12/97, \$7,500, PI.

Otaigbe, J. U., Center for Advanced Technology Development, "Development of a method for making high-quality polymer powders," 8/96-6/97, \$32,000, PI.

Otaigbe, J. U., Iowa State University Research Grant, "Optical shearing system," 10/95 – 6/96, \$19,000, PI, concluded.

Otaigbe, J. U. and Anderson, I., Center for Advanced Technology Development (CATD), "Gas atomization of polymers," 8/95 – 6/96, \$20,000, PI.

Otaigbe, J. U., Iowa State University Research Grant, "Gas atomization of polyethylene," 7/95 - 6/96, \$12,000, PI.

Otaigbe, J. U., Griffiee, B., Bartak, D., and Garvin, M., Recycling and Reuse Technology Center of Iowa State, "Recycling of poly (vinyl alcohol) disposable medical and surgical products," 7/95 - 6/97, \$60,000, Co-PI.

Otaigbe, J. U., Hoechst-Celanese Corporation, "Atomization of Hoechst waxes (PE 130/520)," 1995/96 product development contract, PI. (No grant money, only in-kind support).

Otaigbe, J. U. and Jane, J.-L., Center for Advanced Technology Development (CATD), "Dynamic mechanical properties of starch and soy plastics: Effect of preparation, processing and humidity conditions", 1/95 – 6/95, \$50,000, PI.

Jane, J. L., Huang, S. J., and Otaigbe, J. U., United Soybean Board, "An integrated soy plastics research development and commercialization program," 1/94 – 12/96, \$400,000, Co-PI.

Otaigbe, J.U., Iowa State University (MSE Dept.), "Set-up funds for polymers and composites research laboratory," 10/94 – 9/96, \$20,000, PI.

Otaigbe, J. U., Sherritt Incorporated of Canada, "Differential scanning calorimetry, dynamic mechanical, and microstructural analysis of oriented and amorphous poly (ethylene terephthalate)," 4/92–9/92, \$20,000, PI.

Otaigbe, J. U. and Williams, M. C., Natural Sciences and Engineering Research Council (NSERC) of Canada Strategic Grant Program, "Engineered thermoplastic structural materials," 10/91–10/94, \$262,000 (no overheads), Co-PI, 95% effort. NSERC is equivalent to NSF in the U.S.

Otaigbe, J. U. and Egiebor, N. O., Alberta Oil Sands Technology and Research Authority (now Department of Energy) of Canada, "Athabasca petroleum coke utilization: coagglomeration with sulfur sorbents for the production of smokeless solid fuels," 10/90–10/91, \$85,000, Co-PI.

Proposals Submitted (pending or not funded):

Otaigbe, J.U. National Science Foundation-OISE 1204495, "PIRE: International collaboration in self-assembly of molecular polymer composites reinforced with *in situ* low-Tg phosphate glass fibers." 2011, \$2,400,000, PI, Pending.

Otaigbe, J.U and J. Nairn, National Science Foundation-CMMI 1161292, “Collaborative Research: Wood Fiber Reinforced Polymers using Ring-Opening Polymers for Structural Applications,”2011, \$180,000, PI, Pending.

Otaigbe, J.U., National Science Foundation-DMR 1157732, “GOALI - Development of Inorganic Phosphate Glass Matrix Nanocomposites Incorporating POSS for Optically-Transparent Security Applications,” 2011, \$546,785, PI, Pending.

Otaigbe, J.U. National Science Foundation-DMR 1138108, “Collaborative Research: Molecular Structure and Phase Separation Behavior of Novel Phosphate-glass / Polymer Hybrids Studied by Advanced Solid-state NMR and Rheometry Methods,” 2011, \$23,587, PI, not funded.

Otaigbe, J.U. National Science Foundation-DMR 1104378, “Collaborative Research in Biocompatible POSS/Polymer Hybrid Materials that can Monitor Biodegradation in Biomedical Applications,” 2010, \$596,253, PI, not funded.

Otaigbe, J.U. National Science Foundation-CBET 1064583, “PEU/POSS polymers as synthetic matrices for embryonic stem cell based vascular tissue engineering,” 2010, \$575,319.00, PI, not funded.

Otaigbe, J.U. National Science Foundation-CBET 1027152, “Collaborative Research: The Chemistry of Nanostructuring of Polyurethanes and Polysaccharides from in Situ Synthesis of Nanoobjects,” 2010, \$424,350, PI, not funded.

Otaigbe, J. U., A.B. Lowe, K. Wallace, R. Pandey and Y. Guo, National Science Foundation-DMR 0843966, “IMI – New Polymers and Nanocomposites,” 2008, \$5,234,185, PI, not funded.

Otaigbe, J. U., National Science Foundation-OISE 0721232, “IRES: U.S.-Russia Research & Education Experiences For Global Scientists & Engineers in Innovative Polyimide Nanocomposites With Improved Properties,” 2007, \$150,000, PI, not funded.

Otaigbe, J. U. and J.A. Nairn, National Science Foundation-DMR 0513501, “Collaborative Research: Toward Novel Approaches to Recyclable All-Polymer Composites With Enhanced Benefits,” 2004, \$343,149, PI. (To be revised and re-submitted)

Otaigbe, J.U., National Science Foundation-DMR 0503719, “Towards Rational Design and Processing of New Inorganic-Organic Hybrid Materials With Enhanced benefits: Processing-Structure-Property Correlations,” 2004, \$515,330, PI. (Revised and re-submitted 2005)

Otaigbe, J.U., Dept of Energy-Materials Chemistry Program “Towards Novel Approaches to Nanostructured Polymer Blends With Enhanced Benefits,” 2003, \$295,820, PI. Resubmitted in 2005.

Otaigbe, J.U., Dept of Energy-Basic Energy Sciences, “Towards Rational Design and Processing of New Inorganic-Organic Hybrid Materials With Enhanced benefits,” 2003, \$450,000, PI. Revised and Resubmitted in 2004

Wicks, D.A., J.U. Otaigbe, K. Mauritz, J. Lichtenhan, and S. Nazarenko, National Science Foundation-DMR, “NIRT Rational Design and Processing of Novel Nanoscale Polymeric Materials With Enhanced Benefits,” 2003, \$1,998,657, Co-PI, not funded.

Morgan S, R, J.U. Otaigbe, Dept. of Education-GAANN Program, "GAANN for the Department of Polymer Science," 2003, \$509,580, Co-PI, not funded.

Lochhead, R.Y., C.E. Hoyle, K.A. Mauritz and J.U. Otaigbe, National Science Foundation-DMR-Office of Special Programs, "The Development and Investigation of Responsive Films Having Precise Nanostructured Percolation Pathways," 2003, \$1,731,398, Co-PI, not funded.

Wicks, D.A., J.U. Otaigbe, and W.L. Jarrett, National Science Foundation-GOALI, "Joint University and Industrial Investigations of Systematic Structural Variation in Aqueous Polymeric Dispersions on Performance and the Development of Tools to Evaluate Them," 05/2003, \$1,000,000, Co-PI, not funded.

Otaigbe, J.U., National Science Foundation-DMR Program, "A Fundamental Study on Processing-Structure-Property Correlations in Novel Inorganic-Organic Hybrid Materials With Enhanced Benefits," 2003, \$474,404, PI, not funded

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Otaigbe, J.U., J. McAvoy and I. Anderson. “Gas Atomization of Polymers”, Final Report #2 of 2 to Center for Technology Development at Iowa State University, December, 1996.

Otaigbe, J.U., H. Goel and T. Babcock. “An integrated Soy Plastics Research, Development and Commercialization”, Final Report #2 of 2 to United Soybean Board and the Center for Advanced Technology Development, September 30, 1996.

Otaigbe, J.U. T. MacDonough and R. Ashbacher. “Processing and properties of biodegradable soy protein plastics”, Final Report to Center for Crops Utilization Research, September 30, 1996.

Otaigbe, J.U. M. Ongui and D. Adams. "Affordable Biodegradable Soy Protein Plastic Composites," Final Report to Vice Provost for Research at Iowa State University, September 3, 1996.

Otaigbe, J.U. and J. McAvoy. "Gas Atomization of Polyethylene", Final Report to Vice Provost for Research at Iowa State University, September 3, 1996.

Otaigbe, J.U. J. McAvoy and I. Anderson. "Gas Atomization of Polymers", Progress Report #1 of 2 to Center for Technology Development at Iowa State University, July 3, 1996.

Otaigbe, J.U. "Making Biodegradable Plastics From Soya Beans", Proceedings of the "4th International Workshop on Biodegradable Plastics and Polymers", Durham, NH, October 11–14, 1995. (with T. Babcock, H. Goel, and J. Jane).

Otaigbe, J.U. H. Goel and T. Babcock. "An integrated Soy Plastics Research, Development and Commercialization", Progress Report #1 of 2 to United Soybean Board and the Center for Advanced Technology Development, July 24, 1995.

Otaigbe, J.U. "Biodegradable Soy Protein Plastics Process Engineering" Progress Report to American Soybean Association, July 1995.

Otaigbe, J.U., "Leadless (OLLIE) Frit Paste Preparation, Rheology & Performance - Progress Report 2", Corning Engineering Report, E-94-36, July 13, 1994. (Internal Company Reviewed Publication).

Otaigbe, J.U. "Surface Design of Silicones for Optimum Thermoplastic Ink Release", Corning Research Report, R- 12573, January 21, 1994. (Internal Company Reviewed Publication).

Otaigbe, J.U. "Leadless TV Frit Paste Rheology and Performance. Pt. I. Effect of Titanium Di (dioctyl pyrophosphate) Oxyacetate Additive and Frit Vehicle Iterations". Corning Research Report R-12440, October 6, 1993. (Internal Company Reviewed Publication).

Otaigbe, J.U. "Viscoelastic Properties of Glass-Polymer (Cortem™) Blends Using Rheometrics Dynamic Analyzer (RDA-II)", Corning Research Report R-12439, September 30, 1993. (Internal Company Reviewed Publication).

Otaigbe, J.U. "Differential Scanning Calorimetry, Dynamic Mechanical, and Microstructural Analysis of Oriented and Amorphous Poly (Ethylene Terephthalate)", Final Report to Sherritt Incorporated of Canada, August 1992.

Otaigbe, J.U. and Williams, M.C. "Engineered Thermoplastic Composites From Ring Opening Polymerizations" Paper (#279 ID-H6) presented at the "75th Canadian Chemical Conference and Exhibition", Edmonton, Alberta, Canada, May, 1992.

Otaigbe, J.U. and Egiebor, N.O. "Petroleum Coke Utilization: Coagglomeration with Silica-Enhanced Sulfur Sorbents for Production of Smokeless Solid Fuels", Final Report to Alberta Oil Sands and Technology Research Authority (AOSTRA).

Otaigbe, J.U. and Egiebor, N.O. "Petroleum Coke Utilization", Proceedings of the 14th Annual AOSTRA, Industry, and University Technical Seminar, Banff, Alberta, Canada, October, 1989.

18. INVITED SEMINARS AND COLLOQUIA

Otaigbe, J.U., "Rheology and Morphology of Waterborne Polyurethane Systems for Film Formation," Invited talk presented at the Bayer MaterialScience Research Center, Pittsburg, PA, 2004.

Otaigbe, J.U., "Soy Protein Plastics," Invited talk presented at the Southern Bio-Products Conference, March 4-6, 2004, Beau Rivage Resort, Biloxi, MS.

Otaigbe, J.U., "New Nanostructured Polymer Blends: Fact or Fiction" Invited Talk presented at the Institute For Polymers, Swiss Federal Institute of Technology (ETH-Zurich), Zurich, Switzerland, July, 2003.

Otaigbe, J.U., "Rheology, Processing and Phase Behavior of New Inorganic-Organic Polymer Hybrid Materials: What We Think We Know and What We Know We Don't" Invited Talk presented at the Institute For Polymers, Swiss Federal Institute of Technology (ETH-Zurich), Zurich, Switzerland, June, 2003.

Otaigbe, J.U., "New Engineered Glass-polymer Hybrid Materials" Invited Talk presented at the Structural Mechanics Seminar Series, Imperial College, South Kessington, London, U.K. July 3, 2002.

Otaigbe*, J.U. and K. Kar, "Towards a non-linear model for die-swell of linear polymers: numerical and experimental studies into role of intrinsic rheological properties," Invited paper to be presented at the Symposium on Polymer Science: New Century Frontiers, Hattiesburg, MS, April 3-5, 2002.

Otaigbe, J.U., "Functional design of nanohybrid organic-inorganic polymeric materials with enhanced benefits," Invited Talk presented at School of Polymers and High Performance Materials, University of Southern Mississippi, Hattiesburg, MS, March 6, 2002.

Otaigbe, J.U., "New Engineered Glass-polymer hybrid materials: Fact or Fiction" Invited Talk presented at the Sandia National Laboratory, Albuquerque, NM, February 22, 2002.

Otaigbe, J.U., "Engineered Glass-polymer hybrid materials" Invited Talk presented at Rensselaer Polytechnic Institute, Troy, NY, October 5, 2001.

Otaigbe, J.U., "Glass-polymer blend rheology, structure and dynamics" Invited Talk presented at the PAC RIM 4 Conference, Maui, Hawaii, November 4-8, 2001.

Barnes*, M. D., J. V. Ford, B. G. Sumpter, D. W. Noid, and J. U. Otaigbe, "Nanoscale optical probes of polymer dynamics in confined geometry," Invited Talk presented at the "2001 OSA/ILS National Meeting, Session-Advanced Optical Techniques for Polymers" Santa Clara CA, Oct. 14-16, 2001 (* speaker).

Yudin*, V.E., J.U. Otaigbe, B.A. Cook, D.C. Cann, and V.N. Artemieva, "Polyimide Foam Composites For Thermal and Electrical Insulation: Processing and Properties," Invited Talk presented at the 7th International Conference on Polymers in Electronic Packaging, McAfee, New Jersey, October 18-20, 2000. (* speaker)

Otaigbe, J. U., "Taking Magnets Into New Environments By Using Polymers and Coupling Agents," Invited Seminar presented in the Rohm and Haas Macromolecules Symposium at the 2000 NOBCChE Conference, Session-Polymer Dynamics Miami, Florida, April 16-22, 2000.

Otaigbe, J.U., "Taking Magnets into New Environments by Using Coupling Agents and Functional Additives," Invited Seminar presented at the 5th International Business Development Conference on the Global Business & Technical Outlook for Coupling Agents and Surface Modifiers 1999, Atlanta, Georgia, September 22–24, 1999. (Organized by Intertech Conferences, Portland, Maine, USA).

Pruski*, M., J. W. Wiench, B. Tischendorf, and J.U. Otaigbe, "Measurements of Connectivities between PO₄ Units in Zinc Polyphosphate Glasses," Invited Talk presented at the 218th ACS National Meeting, in the "Symposium on Applications of NMR to Complex Systems", Session "Glasses", 22–26 August 1999, New Orleans, Louisiana. (* speaker)

Wiench*, J. W., M. Pruski, B. Tischendorf, and J.U. Otaigbe, "Measurements of Connectivities between PO₄ Units in Zinc Polyphosphate Glasses," Invited Talk presented at the NMR Symposium, 41st Rocky Mountain Conference, Denver, August 1–5, 1999. (* speaker)

Otaigbe, J.U., "Polymer Bonded Magnets: Progress, Challenges and Opportunities," Invited Joint Seminar presented at the Electrical Engineering and Center for Non-destructive Evaluation ASNT meeting at Iowa State University, Ames, IA, April 29, 1999.

Otaigbe, J.U., "Low melting polyphosphate glasses and their blends with organic polymers," Invited Seminar presented to the Dept. of Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, July 30, 1997.

Otaigbe, J.U., "Low melting phosphate glasses for thermoplastic composites manufacture," Gordon Research Conference, Ventura, California, January 5–10, 1997.

Sales*, B.C., L.A. Boatner, J.O. Ramey, J.U. Otaigbe, and C.-K. Loong, "Structural Investigations of Intermediate Range Order In Zinc Phosphate Glasses." Invited paper presented at the 1996 Joint Fall meeting of the American ceramic society and Japanese Ceramic Society, San Antonio, TX., October 30 - November 2, 1996. (* speaker)

Otaigbe, J.U., "Reliability of DMTA for the study of structure and dynamics of novel phosphate glasses and glass-polymer blends", Invited Joint Seminar presented to the Materials Science Division and Intense Pulse Neutron Source (IPNS-MSD) of Argonne National Laboratory, Chicago, IL., April 5, 1996.

Otaigbe, J.U., "Role of melt rheology in materials processing", Invited Seminar presented to the ISU Chemical Engineering Dept., Ames, IA., February 22, 1996.

Otaigbe, J.U., "Plastics engineering for Iowa's future", Invited Talk presented to the Society of Plastics Engineers, Iowa Section, Ankeny, IA., February 20, 1996.

Otaigbe, J.U., "Dynamic Mechanical Analysis of Novel Phosphate Glasses and Glass-Polymers", Invited Talk presented to the Chemical and Analytical Sciences Division (CASD) at Oak Ridge National Laboratory, Oak Ridge, TN, September 29, 1995.

Otaigbe, J.U., "Rheological Evaluations and Analysis of Glasses and Glass-Polymer Blends Using Rheometrics Dynamic Analyzer", Invited Talk presented at the Corning Research Seminar, Corning, New York, December 14, 1993.

Otaigbe, J.U., "Continuous Fiber-Reinforced Thermoplastic Composites From Ring Opening Polymerizations" Invited Paper presented at the workshop on "Polymers for Alberta's Future", Alberta Research Council, Edmonton, Alberta, Canada, June, 1991.

19. TECHNICAL PRESENTATIONS AT CONFERENCES

Wu, Yi. B.G. Olson, V.E. Yudin, J. Otaigbe, E.N. Korytkova, V.V. Gusarov and S. Nazarenko, "Oxygen and water barrier of polyimide nanocomposites containing silicate type of nanotubes," Paper presented at the 241st American Chemical Society National Meeting & Exposition, Anaheim, CA, March 27-31, 2011.

Madbouly, S. A., W. Wang and J.U. Otaigbe, "Biodegradable polyurethane/soy protein shape-memory polymer blends prepared via environmentally-friendly aqueous dispersions," Paper presented at the Society of Plastics Engineers ANTEC 2010, Orlando, FL, 5/16–5/20/2010.

Qin, Q., J. Katena, Y. Meng and J.U. Otaigbe, "Unexpected rheological behavior of novel low-Tg tin fluorophosphates glass/polyamide 6 hybrids with enhanced benefits," Paper presented at the Society of Plastics Engineers ANTEC 2010, Orlando, FL, 5/16–5/20/2010.

Wang, W. and J. U. Otaigbe, "Biodegradable poly(ester urethane)/soy protein isolate hybrids: Synthesis and characterization," Paper presented at the 238th American Chemical Society National Meeting, Washington, DC, August 16-20, 2009.

Otaigbe, J.U. and Y. Meng, "Nanoscale blending of polyamide 6 with low-Tg inorganic phosphate glass: Fact or fiction?," Paper presented at the 5th International Conference on Nanostructured Polymers and Nanocomposites," Paris, France, April 15–17, 2009.

Otaigbe, J.U. and S.A. Madbouly, "New polyurethane nanocomposites containing different nanofillers with enhanced benefits," Paper presented at the 5th International Conference on Nanostructured Polymers and Nanocomposites," Paris, France, April 15–17, 2009.

Wang, W., Y. Guo and J. Otaigbe. "Synthesis and characterization of novel biodegradable poly(ester-urethane)". Paper #Poly 446 presented at the 236th American Chemical Society National Meeting, Philadelphia, PA, August 17-21, 2008.

Otaigbe, J.U. and S. Madbouly, "Rheology of Polyurethane Nanocomposite Films Containing Different Nanofillers Prepared From Homogeneous Aqueous Solution Polymerization," Paper #620 presented at the XVth International Congress on Rheology, Monterey, CA, August 3-8, 2008.

Otaigbe, J.U., S. Madbouly and T.M. Alam, "Viscoelasticity and Crystallization of PC/mPP Nanoblends Prepared Via *in situ* Polymerization and compatibilization," Paper #676 presented at the XVth International Congress on Rheology, Monterey, CA, August 3-8, 2008.

Yudin V.E., J.U. Otaigbe, V.M. Svetlichnyi, and V.V. Gusarov, "Rheo-mechanical properties of polyimide nanocomposites based on silicate type nanoparticles with different morphology," Paper presented at the 6th International Symposium on Molecular Order and Mobility in Polymer Systems," St. Petersburg, Russia, June 2-5, 2008.

Otaigbe, J. U. and S.A. Madbouly, "Nanostructured Polymer Blends Prepared Via In Situ Polymerization and Compatibilization: Synthesis, Morphology and Melting Behavior", Paper presented at the 2nd International Conference on Advances in Petrochemicals and Polymers (ICAPP 2007), Bangkok, Thailand, June 25-28, 2007.

Madbouly, S. A., J. U. Otaigbe, A. K. Nanda and Douglas A. Wicks (2006): "Rheology and phase behavior of nanostructured polyurethane/POSS hybrid dispersions prepared from homogeneous solution polymerization," Paper presented at the 78th Annual Meeting of the Society of Rheology, Portland, ME, Oct. 8-12, 2006.

Madbouly, S. A., J. U. Otaigbe, Rheology and crystallization behavior of nanostructured mPP/PC blend prepared via in situ polymerization and compatibilization," Paper presented at the 78th Annual Meeting of the Society of Rheology, Portland, ME, Oct. 8-12, 2006.

Otaigbe, J.U. and V.E. Yudin, Paper presented at the Gordon Research Conference on Composites, Ventura, California, January, 2006.

Madbouly, S. A., J. U. Otaigbe, "Nano-structured blends of in situ polymerized macrocyclic carbonates and polypropylene: melting behavior and crystallization kinetics," Paper presented at the 232nd National ACS meeting, San Francisco, CA, Sept. 10-14, 2006.

Madbouly, S. A., J. U. Otaigbe, A. K. Nanda and D. A. Wicks, "Effect of method of preparation on the viscoelastic behavior of POSS/polyurethane nano-composite films prepared from aqueous dispersions," Paper presented at the 232nd National ACS meeting, San Francisco, CA, Sept. 10-14, 2006.

Madbouly, S.A., J. Otaigbe, A.K. Nanda and D. Wicks, "Effect of Preparation Method on the Rheological Behavior of Waterborne Polyurethane Dispersion, Paper presented at Society of Plastics Engineers ANTEC 2006, Charlotte, NC, 2006.

Nanda A. K. and D. A. Wicks, S. A. Madbouly, J. U. Otaigbe, "Synthesis and characterization of polyurethane-POSS dispersions and films," Paper presented at the 33rd International Waterborne, High-Solids, and Powder Coatings Symposium, New Orleans, 2006.

Kurose T., K. Urman, J. U. Otaigbe, R. Y. Lochhead, and S. F. Thames, "Effect of Uniaxial Drawing of Soy Protein Isolate Films on Mechanical Properties", Paper presented at Society of Plastics Engineers ANTEC 2006, Charlotte, NC, 2006.

Takashi Kurose, Kevin Urman, Joshua U. Otaigbe, Robert Y. Lochhead, and Shelby F. Thames, "Effect of Uniaxial Drawing of Soy Protein Isolate Films on Mechanical Properties", Paper presented at the Annual Meeting of the Polymer Processing Society PPS-22, Yamagata, Japan, 2006.

Takashi Kurose, Samy Madbouly, V. E. Yudin, J. U. Otaigbe, "Rheological investigation of polyamic acid/clay nanocomposites dispersions", Paper presented at the Annual Meeting of the Polymer Processing Society PPS-22, Yamagata, Japan, 2006.

Otaigbe, Joshua U., Samy A. Madbouly, Ajaya K. Nanda, Douglas A Wicks, "Viscoelastic Behavior of POSS/Polyurethane Nano-Composite Films Prepared From Aqueous Dispersions," Paper presented at the 231st National ACS meeting, Atlanta, GA, March 26-30, 2006.

Madbouly, Samy A., Joshua U. Otaigbe, Mohamed K. Hassan, Kenneth A. Mauritz, "Broadband Dielectric Spectroscopy of mPP/PC Blend Prepared Via *In Situ* Polymerization and Compatibilization," Paper presented at the 231st National ACS meeting, Atlanta, GA, March 26-30, 2006.

Nanda, Ajaya K., Douglas A Wicks, Samy A. Madbouly, Joshua U. Otaigbe, "Synthesis and Properties of Nanostructured Ionomeric Polyurethane by Acetone Process," Paper presented at the 231st National ACS meeting, Atlanta, GA, March 26-30, 2006.

Madbouly, Samy A., Joshua U. Otaigbe, Ajaya K. Nanda, Douglas A Wicks, "Thermal Induced Gelation in Waterborne Polyurethane Dispersions: Rheokinetics Studies," Paper presented at the 231st National ACS meeting, Atlanta, GA, March 26-30, 2006.

Otaigbe, J.U. S.A. Madbouly, D. Rhoades, G.P. Holland, B.R. Cherry, P.G. Kotula, "Rationally engineered polymer blends with nanoscale morphology," Paper presented at the Pacific Polymer Federation IX Meeting, Hawaii. December 11 – 14, 2005.

Otaigbe, J.U. S.A. Madbouly, A.K. Nanda, D.A. Wicks, "Thermal-Induced Gelation in Waterborne Polyurethane Dispersions: Rheokinetics Studies" Paper presented at the Pacific Polymer Federation IX Meeting, Hawaii. December 11 – 14, 2005.

Otaigbe, J.U., G.M. Divoux, V.E Yudin, V.M. Svetlichnyi, V.V. Gusarov, E.N. Korytkova, "Rheological properties of polyimide and oligoimide nanocomposites based on novel silicate hydroxide particles with different morphology," Paper presented at the 77th Annual Meeting of the Society of Rheology, Vancouver, Canada, October, 2005.

Otaigbe, J.U., S.A. Madbouly, Rheology and Kinetics of Thermal-Induced Gelation in Waterborne Polyurethane Dispersions," Paper presented at the 77th Annual Meeting of the Society of Rheology, Vancouver, Canada, October, 2005.

Madbouly, S.A., J. U. Otaigbe*, A. K. Nanda and D. A. Wicks, Rheological behavior of waterborne polyurethane dispersions," Paper to be presented at the 76th Annual Meeting of the Society of Rheology, Lubbock, Texas, February, 2005

Madbouly, S.A., J. U. Otaigbe*, A. K. Nanda and D. A. Wicks, "Gelation kinetics of waterborne polyurethane dispersions studied by rheometric methods," Paper presented at the 76th Annual Meeting of the Society of Rheology, Lubbock, Texas, February, 2005.

Divoux, G.M.; V.E Yudin.; J.U., Otaigbe, "Rheological behavior of oligoimide/clay nanocomposite dispersions," Paper presented at the 76th Annual Meeting of the Society of Rheology, Lubbock, Texas, February, 2005.

Urman, K. and J.U. Otaigbe Miscibility and Mechanical Properties of a Novel Low Tg Inorganic Glass/Polyamide 6 Hybrid," Paper presented at the 229th National ACS meeting, San Diego, CA. March 2005.

Madbouly, S.A., J. Otaigbe, A.K. Nanda and D. Wicks, "Thermal induced gelation in waterborne polyurethane dispersions Studied by Rheometric methods" Paper presented at the 229th National ACS meeting, San Diego, CA. March 13–17 2005.

Madbouly, S.A., J. Otaigbe, A.K. Nanda and D. Wicks, "Gelation Kinetics of Waterborne Polyurethane Dispersions Studied by Rheometric Methods.," Paper presented at the 229th National ACS meeting, San Diego, CA. March 13–17 2005.

Madbouly, S.A., J. Otaigbe, A.K. Nanda and D. Wicks, "Effect of solid content, degree of neutralization, chain extension, and temperature on the rheological behavior of polyurethane dispersions," presented at the 229th National ACS meeting, San Diego, CA. March 13–17 2005.

Nanda, A.K., D. Wicks, S.A. Madbouly, J.U. Otaigbe, "Effect of the degree of ionic content, neutralization and chain extension on polyurethane dispersions." Paper presented at the 229th National ACS meeting, San Diego, CA. March 13–17 2005.

Otaigbe, J.U., S. A. Madbouly, D. Rhoades , "Nanostructured Polymer Blends Prepared Via In Situ Polymerization And Compatibilization: Processing, Morphology and Crystallization Behavior, Paper presented at the Society of Plastics Engineers ANTEC 2005, Boston, MA, 5/1–5/5/2005.

Yudin, V.E., V.M.Svetlichnyi, J.U.Otaigbe, and V.V.Gusarov "Polyimide nanocomposites: prepolymer melt blending and rheological properties" Paper presented at the 'Nanoparticles, Nanostructures and Nanocomposites: Topical Meeting of the European Ceramic Society,' 5–7 July 2004, Saint-Petersburg, Russia.

Piao, M., J. Otaigbe, D. Otts, M. Urban, "Rheology And Morphology Of A 2-Component Polyurethane Dispersion", Paper presented at the 227th National ACS Meeting, Anaheim, CA, March 27 – April 1, 2004.

Brian R. Cherry, May D. Nyman, Timothy J. Boyle, Brad C. Tischendorf, Richard K. Brow, Joshua U. Otaigbe and Todd M. Alam "High Speed ¹H MAS NMR and Double Quantum NMR Investigations of Materials", Paper to be Presented at the 44th experimental Nuclear Magnetic Resonance Conference (ENC), March 30th - April 4th, 2003, Savannah, Georgia.

E.P. Taylor, J. U. Otaigbe, and J. Teng "Novel Nanostructured Polymer Blends With Enhanced Benefits," Paper presented at the Society of Plastics Engineers ANTEC 2003, Memphis, TN, 5/4–5/8/2003.

Yudin, V. E., J. U. Otaigbe, V. M. Svetlichnyi, and T. X. Bui, "Structure and Properties of New Polyimide Bonded Magnets With Enhanced Benefits," Paper presented at the Society of Plastics Engineers ANTEC 2003, Memphis, TN, 5/4–5/8/2003.

Taylor, E. P., P. C., Guschl and J. U. Otaigbe, "Engineered Hybrid Organic–Inorganic Thermoplastic Materials: Crystallization Kinetics and Tensile Properties," Paper presented at the Society of Plastics Engineers ANTEC 2003, Memphis, TN, 5/4–5/8/2003.

Yudin, V. E., V. M. Svetlichnyi, J. U. Otaigbe, and J. Teng, "Thermal and Rheological Properties of Novel Thermoplastic Polyimide Blends," Paper presented at the Society of Plastics Engineers ANTEC 2003, Memphis, TN, 5/4–5/8/2003.

Konuklar, G, C.J. Carriere, and J.U. Otaigbe, "Macrostructure and Viscosity of Aggregating Colloidal Casein Micelles Under Strong Shearing Force," Paper presented at the 2002 Food Colloids, Biopolymers and Materials Conference, Wageningen, The Netherlands, April 14-17, 2002.

Liu, Y., P. D. Bloom, V. V. Sheares, and J. U. Otaigbe, "Wear-Resistant Polyamide 12/Quasicrystal Composite" Paper presented at the 2001 MRS Fall Meeting, Advanced Fibers, Plastics, Laminates, and Composites Symposium, Boston, MA, November 26-30, 2001

Guschl, P. and J.U. Otaigbe, "Rheology and Morphology of Phosphate Glass-PS-LDPE Ternary Blends," Paper presented at the 73rd Annual Meeting of the Society of Rheology, Bethesda, Maryland, October 22-25, 2001

Guschl, P. and J.U. Otaigbe, "Melt Rheology of Polyphosphate Glasses," Paper presented at the 73rd Annual Meeting of the Society of Rheology, Bethesda, Maryland, October 22-25, 2001

Otaigbe, J. U. and K. Kamal "Numerical Analysis and Experimental Studies on the Role of Rheological Properties in Effecting Die-Swell of Low-density Polyethylene, Polypropylene and Polystyrene," Paper presented at the Gordon Research Conference on CAE in Polymer Processing, Ventura, California, March 4-9, 2001.

Kar, K., P. Guschl, and J. U. Otaigbe, "An Analysis of Melt Rheology of Liquid Crystal Polymers (Xydar): Development of a Viscosity Equation," Paper presented at the American Institute of Chemical Engineers Fall 2000 Meeting, Session II-Rheology and Polymer Processing, Los Angeles, California, November 12-17, 2000.

Kar K., Adalja, S. and J. U. Otaigbe, " Influence of Interfacial Tension on Deformation and Shape Evolution in Polyphosphate Glasses Imbedded in a Polymer Matrix," Paper presented at the American Institute of Chemical Engineers Fall 2000 Meeting, Session II-Interfacial Phenomena in Materials Processing, Los Angeles, California, November 12-17, 2000.

Kar K., Adalja, S. and J. U. Otaigbe, " Polyphosphate Glass-Polymer Melt Blends: Creep and Recovery Properties of Novel Organic-Inorganic Polymer Hybrids," Paper presented at the American Institute of Chemical Engineers Fall 2000 Meeting, Session II- Rheology and Polymer Processing, Los Angeles, California, November 12-17, 2000.

Yudin, V.E., J.U. Otaigbe and V.N. Artemieva "Polyimide Foam Composites For Thermal and Electrical Insulation: Processing and Applications," Paper presented at the 7th International Conference on Polymers in Electronic Packaging, McAfee, New Jersey, October 18-20, 2000.

Tischendorf, B.C., J.U. Otaigbe and T. Alam, "MD Simulations of Binary Zinc Phosphate Glasses," Paper presented at the 12th Annual Rio Grande Regional Symposium on Advanced Materials, Materials and Modeling Symposium, Albuquerque, New Mexico, October 16, 2000.

Tischendorf, B.C., J.U. Otaigbe S. Adalja, T. Alam, and D. Lange "Structure and Dynamics of Glass-polymer Composites," Paper presented at the 12th Annual Rio Grande Regional Symposium on Advanced Materials, Materials and Modeling Symposium, Albuquerque, New Mexico, October 16, 2000.

Kamal, K., J.U. Otaigbe, and S. Adalja, "Numerical Analysis and Experimental Studies on the Role of Rheological Properties in Affecting Die-Swell of Low Density Polyethylene, Polypropylene, and Polystyrene," Paper presented at the XIIIth International Congress on Rheology – Polymer Melts Symposia, Cambridge, UK, August 20-25, 2000.

Guschl, P. and J.U. Otaigbe, "Rheological Properties of a Thermoplastic-Liquid Crystal Polymer Blend Filled With Nd-Fe-B Particles," Paper to be presented at the XIIIth International Congress on Rheology – Liquid Crystalline Polymers Symposia, Cambridge, UK, August 20-25, 2000.

Adalja, S. C.J. Carriere, and J.U. Otaigbe, "Experimental Study on the Deformation and Shape Evolution of Single Polyphosphate Glass Fibers in a Polymer Matrix," Paper to be presented at the XIIIth International Congress on Rheology – Non-Newtonian Fluid Mechanics, Cambridge, UK, August 20-25, 2000.

Tischendorf B., and J.U. Otaigbe, "Structure Properties and Computer Simulations of Phosphate Glasses," All Iowa Glass Conference, Ames, IA, July 28, 2000.

Guschl, P. and J.U. Otaigbe, "Rheological Properties of a Thermoplastic-Liquid Crystal Polymer Blend Filled With Nd-Fe-B Particles," Paper presented at the Seventh International Conference on Composites Engineering (ICCE/7), Denver, CO, July 2–8, 2000.

Kamal, K. and J.U. Otaigbe, "Viscous and Elastic Effects on Die-Swell During Processing of Polyethylene, Polypropylene and Polystyrene: A Predictive Model," Paper presented at the Seventh International Conference on Composites Engineering (ICCE/7), Denver, CO, July 2–8, 2000.

Tischendorf B., and J.U. Otaigbe, "A Comparison of Short and Intermediate Range order in Zinc Phosphate Glasses," American Ceramic Society Annual Meeting, St. Louis, MO, May 1, 2000.

Otaigbe, J. U., P. Guschl and J. Xiao "Analytic Rheology of Polymer-bonded Nd-Fe-B Magnets," Paper presented at the Gordon Research Conference, Ventura, California, January 9-14, 2000.

Otaigbe, J. U. and V. E. Yudin "Novel Polyimide Foams Reinforced By Organic-Inorganic Fiber Felts," Paper presented at the Gordon Research Conference, Ventura, California, January 9-14, 2000.

Barnes, M.D., J.V. Ford, K. Fukui, B.G. Sumpter, D.W. Noid and J.U. Otaigbe, "Nanoscale Optical Probes of Polymer Dynamics in Ultrasmall Volumes," Paper presented at the 1999 Southeast Regional Conference of ACS (SERMACS 99), Knoxville, TN, October 18, 1999.

Tischendorf, B.C., J.U. Otaigbe, J.W. Wiench, and M. Pruski, "New Insights into the Study of Polyphosphate Glass Structure" Paper presented at 1999 Fall Meeting of the Glass and Optical Materials Division of the American Ceramics Society, Cleveland, OH, 10/3–10/6/1999.

Wiench, J.W., M. Pruski, B. Tischendorf, J.U. Otaigbe, and B.C. Sales. "Structural Studies of Zinc Polyphosphate Glasses by Nuclear Magnetic Resonance," Paper presented at 1999 University Conference on Phosphate Glasses, Rolla, MO, 6/20–6/23/1999.

Adalja, S., B. Tischendorf, C. J. Carriere, and J. U. Otaigbe. "Experimental Study on the Deformation and Breakup Of Single Polyphosphate Glass Fibers in Simple Shear Flows," Paper presented at 1999 University Conference on Phosphate Glasses, Rolla, MO, 6/20–6/23/1999.

Otaigbe, J. U. "Linear Rheology Of Novel Mixed-Alkali Phosphate Glasses," Paper presented at the 1999 University Conference on Phosphate Glasses, Rolla, MO, 6/20–6/23/1999.

Otaigbe, J. U. and B. C. Sales. "Understanding and Controlling Melt Crystallization of Zinc Polyphosphate Glasses," Paper presented at the 1999 University Conference on Phosphate Glasses, Rolla, MO, 6/20–6/23/1999.

Xiao, J. and J.U. Otaigbe. "High Performance, Lightweight Thermoplastic/Rare-Earth Alloy Magnets," Paper presented at the Materials Research Society 1999 Spring Meeting, San Francisco, CA, 5/5–5/9/1999.

Otaigbe, J. U., V. E. Yudin, and V. N. Artemieva. "Development of New Flame-Resistant, Lightweight Composites Based on Polyimides," Paper presented at the Society of Plastics Engineers ANTEC'99, New York, NY, 5/2–5/1999.

Xiao, J., H. Kim, J.U. Otaigbe, and T. Tacke. "The Use of Coupling Agents to Improve the Performance of Polymer-Bonded Nd-Fe-B Magnets," Paper presented at the Society of Plastics Engineers ANTEC'99, New York, NY, 5/2–5/1999.

Li, F., D. Marks, R. C. Larock, and J.U. Otaigbe. "Fish Oil Systems: Synthesis, Structure, Properties and Their Relationships," Paper presented at the Society of Plastics Engineers ANTEC'99, New York, NY, 5/2–5/1999.

Otaigbe, J.U., H. Kim, J. Xiao, and T. Tacke. "Rheological Investigation of Effect of Coupling Agent and Particle Size on Processing of Polymer-Bonded Magnets," Paper presented at the Society of Plastics Engineers ANTEC'99, New York, NY, 5/2–5/1999.

Bloom, P., J.U. Otaigbe, and V.V. Sheares. "High Performance Quasicrystal-Reinforced Polymer Composites," Paper presented at the Spring 1999 National ACS meeting, Anaheim, CA, 4/1/1999.

Otaigbe, J. U. "Polymer Bonded Magnets: Progress and Challenges," Paper presented at the Gordon Research Conference, Ventura, California, January 10-15, 1999.

Barnes, M.D., C-Y. Kung, B.G. Sumpter, H. Fukui, D.W. Noid, and J.U. Otaigbe, "Generation of Homogeneous Polymer Blends From Bulk-Immiscible Multi-Component Systems: A New Class of Nano- and Microscale Polymeric Composites." Paper presented at the Materials Research Society 1998 Fall Meeting, Boston, MA, 11/30–12/4/1998.

Fukui, K., B.G. Sumpter, M. Barnes, D.W. Noid, and J.U. Otaigbe. "Atomistic Simulation and Modeling of Ultra-fine Polymer Particles," Paper presented at the Fall 1998 National ACS meeting, Boston, MA. 8/23/1998.

Kung, C-Y, M.D. Barnes, B.G. Sumpter, , D.W. Noid, and J.U. Otaigbe. "Production of Monodisperse Polymer Nanoparticles From Solution," Paper presented at the Fall 1998 National ACS meeting, Boston, MA. 8/23/1998.

Xiao, J., J.U. Otaigbe, H. Kim, "Thermogravimetric Analysis of Polymer Bonded Magnets to Determine Degree of Mixing of Filler", Paper presented at the Fifth International Conference on Composites Engineering (ICCE/5), Las Vegas, July 5–11, 1998.

Shifang, Han and J.U. Otaigbe, "Investigation on Fiber Spinning Flow of Polymer-Viscoelastic Fluid," Paper presented at the 4th International Conference on Mathematical and Numerical Aspects of Wave Propagation (Session CP10, Elasticity IV), Golden, Colorado, June 1–5, 1998.

Otaigbe, J.U. "Processibility and Properties of Biodegradable Plastics Made from Agricultural Biopolymers," Paper presented at Society of Plastics Engineers ANTEC'98, Atlanta, GA, 4/26/1998.

Otaigbe, J.U. and R.L. Sammler, "Melt Viscoelasticity of Novel Glassy Phosphate Polymers," Paper presented at Society of Plastics Engineers ANTEC'98, Atlanta, GA, 4/26/1998.

Otaigbe, J.U. "Water Durable Bioabsorbable Polyphosphate/Soy Protein Plastic Composites," Paper presented at the Materials Research Society 1997 Fall Meeting, Boston, MA, 12/1/1997.

Otaigbe, J.U. and D.O. Adams. "Novel Bioabsorbable Polyphosphate/Soy Protein Plastic Composites," Paper presented at the 29th SAMPE Technical Conference, Orlando, Florida, 10/28–11/1/1997.

Otaigbe, J.U. and G.H. Beall. "Inorganic Phosphate Glasses as Polymers: Facts and Challenges", Paper presented at the Glass and Optical Materials Fall Meeting of the ACerS, Williamsburg, VA, 10/25/1997.

Otaigbe, J.U. "Affordable, Stiff and Strong Bioabsorbable Soy Protein Plastic Composites for Load-Bearing Applications," Paper presented at the 6th Annual Bio/Environmentally Degradable Polymer Society Conference, San Diego, CA, 9/16/1997.

Otaigbe, J.U., C.J. Quinn and G.H. Beall. "Processibility and Properties of Novel Glass-Polymer Melt Blends", Paper presented at Society of Plastics Engineers ANTEC '97, Toronto, Canada, 4/27/1997.

McAvoy, J. and J.U. Otaigbe. "Gas Atomization of Polymers". Paper to be presented at Society of Plastics Engineers ANTEC '97, Toronto, Canada, 4/27/1997.

Otaigbe, J.U. "Understanding and Controlling Melt Crystallization of Glassy Phosphate Polymers", Paper presented at the Spring 1997 National ACS meeting, San Francisco, CA. 4/13/1997.

Tuzun, R.E., D.E. Noid, B.G. Sumpter, and J.U. Otaigbe. "Molecular Dynamics Simulations of Polymer Flow in Nano-channels", Paper presented at the Spring 1997 National ACS meeting, San Francisco, CA. 4/13/1997.

Otaigbe, J.U. 1996, "Melt Rheology of Zinc Alkali Phosphate Glasses", Paper presented at the "XIIth International Congress on Rheology", Quebec City, Canada, August 18–23, 1996.

Meierdierks, E and J.U. Otaigbe, "Affordable Thermoformable Composites for Lightweight Body Panels", Poster Paper presented at the Partnership for a New Generation of Vehicles (PNGV) Conference, Ames, IA, 1/17/1996.

Otaigbe, J.U. 1995, "Making Biodegradable Plastics From Soya Beans", Paper presented at the "4th International Workshop on Biodegradable Plastics and Polymers", Durham, NH, October 11–14, 1995. (with T. Babcock, H. Goel, and J. Jane).

Otaigbe, J.U. and Williams, M.C., "Engineered Thermoplastic Composites From Ring Opening Polymerizations" Paper (#279 ID-H6) presented at the "75th Canadian Chemical Conference and Exhibition", Edmonton, Alberta, Canada, May, 1992.

Otaigbe, J.U. and Egiebor, N.O., "Petroleum Coke Utilization", Paper presented at the 14th Annual AOSTRA, Industry, and University Technical Seminar, Banff, Alberta, Canada, October, 1989.

20. EXTENSION/OUTREACH ACTIVITIES

Dr. Otaigbe was co-organizer of the Entrepreneurial Medicinal Polymer Science International Immersion meeting in Shanghai, China held on May 4 - May 28, 2005 and May 5 - May 31, 2007. The purpose of this meeting was to educate students about science and business from an international perspective in order to prepare them for careers in the global workplace.

Dr. Otaigbe is a co-principal investigator on a recent \$3.6 million NSF Integrated Graduate Education and Research Traineeship Grant on “*IGERT-Entrepreneurship at the Interface of Polymer Science and Medicinal Chemistry*” and he helped to win the \$6 million NSF Materials Research Science and Engineering Center (MRSEC) on ‘*Response-Driven Polymeric Films*’ both located at USM. He has also significantly contributed to a number of USM departmental research grant proposals submitted to external federal and state government agencies. He is the co-Director of the education and outreach of the above MRSEC. He is working very closely with the Mississippi Polymer Institute in a University/Industry partnership effort to solve technical problems of local polymer companies in Mississippi.

Prior to joining USM, Dr Otaigbe taught the polymers and composites course (MSE 383) over Iowa Cable Network to remote students in Iowa industry, 1995. Dr. Otaigbe has initiated and sustained a long-term industrial research partnership between ISU and companies such as Huntsman Chemical Corporation in Virginia, Arnold Engineering Company in Illinois, and Hoechst–Celanese in New Jersey. He developed research collaborations with scientists at DoE National Laboratories including ORNL, ANL, and Ames Laboratory; and with international scientists in Russia and England.

21. GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

Postdoctoral Fellows Sponsored and Scientific Staff Supported:

Dr Q. Qian, 2009-2010	Dr. H. Wu, 2008-2009	Dr. Y. Meng, 2008-2009
Dr. W. Wang, 2007-2010	Dr. S.A. Madbouly, 2004-2010	Dr. T. Kurose, 2005-2007
Dr. M. Piao, 2003-2004	Dr. E. Taylor, 2002-2003	Dr. Y. Liu, 2000-2002
Dr. K. Kar, 1999–2000	Dr. J. Wiench, Summer 1998-1999	Dr. H. Kim, Fall 1997–1998
Dr. V. Yudin, Spr 1998-2007 (Visiting Scientist, Russian Academy of Sciences)		
Mr. E. Meierdierks, 1995-96	Mr. T. Babcock, 1994-95	

Graduate Research Students:*

Jin Katena (MS/PhD 2009-)	
Gilles Divoux (PhD 2003-2005)††	Dave Rhoades (PhD 2003–2005)
Kevin Urman (PhD 2003–present)	Charles Nason (MS 2003-2004)
Peter Guschl (Chem. Eng)	Jing Teng (MatSci&Eng)
Brad Tischendorf (MatSci&Eng)**†	Bruce Adami (Chem. Eng.)
Sunil Adalja (MatSciEng) †	Peter Guschl (Chem. Eng.)
Jun Xiao (MatSci&Eng) ##	John McAvoy (MatSci&Eng) #
<i>Three graduate students supervised in Nigeria (1984-1989, not listed)</i>	

* Students in other departments co-supervised with other co-principal investigators are not listed.

** Winner of the ACerS 2000 Norbert J. Kriedl, national award for outstanding young scholars, 2000

Winner of Best Paper Award, Society of Plastics Engineers Annual Technical Conference, 1997

Winner of Graduate Research Excellence Award for thesis work, 1999

† Winners of Best Paper Award , 12th Annual Rio Grande Regional Symposium on Advanced Materials, 2000.

†† Winner of Society of Rheology Travel Grant, 2004

Member of Program of Study/Thesis Examination Committee for:

Mark Brei (PhD Polymer Science, 2011-)

Virginia Smith, (PhD Polymer Science, 2003-2004)

Charles Nason (MS Polymer Science, 2003-2004)

Alan Phillips (PhD Polymer science, 2002-2005)

William Miller (PhD Polymer Science, 2002-2006)

Todd Rushing (PhD Polymer Science, 2002-2005)

Melanie Bachemin (PhD Polymer Science, 2002-2004)

Woo-Sung Bae (PhD Polymer Science, 2002-2006)

Grant Barber (PhD Polymer Science, 2002-2003)

James Kopchik (PhD Polymer Science, 2002-2006)

Kelby Simison (PhD Polymer Science, 2002-2004)

Eric A. Hackbarth (MS Civil Engineering 2001-2002)

Brian Anderson (PhD Chemical Engineering 1999-2002)

Nobumichi Fuchigami (MS Materials Science & Engineering 2000-2002)

Brian L. Uhlhorn (PhD Physics 1998-2000)

Sudharsan Ramaswamy (MS Chemistry 1998-2000)

Matt Scott (MS Agricultural Engng 1998-1999)

Paul Bloom (PhD Chemistry 1998-2001)

Dustin Davies (MS Civil Engineering 1998-2000)

Yi Jing (PhD Chemistry 1998-2001)

Anthony J. Pasquale (PhD Chemistry 1997-2000).

Christian J. Schwartz (MS Mechanical Engineering 1997-1998).

Michael L. Royle (PhD Materials Science & Engineering 1998-2000).

Yushen Guo (PhD Chemistry 1994-1997).

Meo Ngui (MS Chemical Engineering 1996-1998).

Siu-Fai Lo (MS Industrial Technology 1997-1999); Jeff R. Anderson (MS Chemistry 1997).

Mohammad Nosrati (PhD Materials Science & Engineering 1996).

Curtis E. Olson (PhD Biomedical Engineering 1996).

Arnold H. Kettenacker (MS Aerospace Engineering and Engineering Mechanics 1996).

Jing Zheng (PhD Materials Science & Engineering 1996).

Alison West (MS Aerospace Engineering and Engineering Mechanics 1996).

Brent Fisher (MS Aerospace Engineering and Engineering Mechanics 1996).

Wu Chen (PhD Chemistry 1995).

Undergraduate Research Experience Students:

Michael Gill (Polymer Science, 2010-)

Ryan Danyus (Polymer Science 2009-2010)

Douglas Iverson (Polymer Science 2005-)

Dennis Duplessy (Polymer Science 2003-)

Kalena Stovall (Polymer Science 2002-2004) *#

Sara Holloman (Polymer Science 2002-2003)

Denise Rodriguez (Polymer Science 2002-2005) #

Arvell DeLaine, III (Polymer Science 2003)

Jason Wells (Chemical Engineering 1999–2002)
 Heather Hunt (Chemical Engineering 2001)
 Andrea Crapisi (Chemical Engineering 2001)
 Michael Determan (Chemical Engineering 2000-2001)
 Michael Carden (Industrial Ed Technology 2001)
 Daniel McCracken (Chemical Engineering 1999–2000)
 Meagen Marquardt (Materials Science & Engineering) 1999–2001
 Melissa McConnell (Materials Science & Engineering) 1998–1999
 Philip McBride (Chemical Engineering) 1998–1999
 Ryan Baum (Chemical Engineering, Honors program) 1998
 Greg Burns (Materials Science & Engineering) 1997–98
 Alan Tkaczyk (Materials Science & Engineering) 1997–1998
 Jason Thalacker (Materials Science & Engineering) 1997–1999
 Timothy Golding (Chemical Engineering, Honors program) 1998
 Clara Tejido (Chemical Engineering, Honors program) 1998
 Troy Tacke (Chemical Engineering) 1998–1999
 Dmitry Andreyev (Biochemistry and Biophysics) 1999
 Chee Tan (Chemical Engineering) 1998
 Kim Windom (Chemical Engineering) 1998
 Paul Duncan-Whitman (Mechanical Engineering) 1998–1999
 Bryant Polzin (Materials Science & Engineering) 1996
 Karl Pepevnick (Chemical Engineering) 1996
 Jason Petrin (Chemical Engineering) 1995
 Randall Hoskin (Chemical Engineering) 1994-95

* Winner of the NSF Graduate Students' Fellowship Award, 2004

Winner of 1st and 2nd places in the engineering category of the AGEM Winter Scholar program, 2004.

22. PROFESSIONAL ACTIVITIES

NSF Advisory Panel Member for the Science & Technology Centers Program Visit to University of Illinois, October 2001.

Session Chair, PAC RIM 4 Conference, Maui, Hawaii, November 2001

Board of Directors, Society of Plastics Engineers-EPDIV, May 2001

Invited Discussion Leader, Gordon Research Conference on Composites, January 1998

Technical reviewer for NSF, DOE, MIT/INEL proposals, Composites Part A, Rheologica Acta, Polymer International, Journal of Materials Science, Journal of Biobased Materials and Bioenergy, Journal of Materials Research, European Polymer Journal, Macromolecular Chemistry and Physics Journal, Polymer composites Journal, Chemistry of Materials Journal, Journal of American Ceramics Society, Journal of Non-Crystalline Solids, Polymer Engineering & Science, Polymer, Composites Part A, J. of Polymer and Environment, etc.

Invited Book Reviewer for Prentice-Hall Publishers, March 1998.

Member, NSF Advisory Panelist for the Presidential Faculty Fellows Awards (PFF) nominees in the Division of Design, Manufacturing, and Industrial Innovation, March 11-12, 1996

Member, NSF Advisory Panelist for the Individual Investigator Award (IIA), proposals in the mechanics and materials program, July 6–7, 1995.

Co-session organizer of the Iowa Coatings Conference: Trends, Options, and How It's Done, May 23, 1995, Iowa State Center, Ames, IA.

Senior Member, Society of Plastics Engineers (SPE).
 Fellow, Institute of Materials (IoM), U.K.; Member, American Society for Metals (ASM)
 Member, Society for Advancement of Materials and Process Engineering (SAMPE)
 Member, American Chemical Society (ACS); Member, Society of Rheology (SOR).
 Member, Sigma Xi, The Scientific Research Society; Member, AICHE.
 Invited Discussion Leader, Gordon Research Conference on Composites, January 2004
 Panel Reviewer, NSF Advisory Panel for the IGERT proposals, January 27, 2005
 Invited Speaker, Dept. of Chemical Engineering, Kasetsart University, Bangkok, Thailand, 2007

23. UNIVERSITY ACTIVITIES

University Committees:

Member, Carver Academy Faculty Council. 2000–2002
 Member, Premium for Academic Excellence (PACE) Awards Committee, 1996-1999

College Committees:

Interviewer, USM CoST 2005 Presidential Scholarship Competition, 2005
 Member, USM Polymer Science Governance Committee, 2003-present
 Mentor, Leadership through Engineering Academic Diversity program, Coll. of Engineering

Departmental Committees:

Member, Governance Committee, Polymer Science & Engineering Dept., 2003-2005
 Member, Seminar Committee, MSE Dept., College of Engineering, 1999-2002
 Member, Grievance Committee, MSE Dept., College of Engineering, 1999-2000
 Member, Undergraduate Studies Committee, MSE Dept., College of Engineering, 1995-1999
 Member, Polymer Program Committee, MSE dept., College of Engineering, 1997-present
 Member, Students Affairs Committee, MSE Dept., College of Engineering, 1996-1998
 Member, Outreach and Industrial Partnership, MSE Dept., College of Engineering, 1996-1999
 Member, Faculty Search Committee, MSE Dept., College of Engineering, 1995-96, 1998

24. OTHER RELATED PROFESSIONAL ACTIVITIES

Professional Development:

Two-day Distance Education Workshop, 1996
 Three-day workshop on Colloid Science Principles & Practice, 1994
 Two-day workshop on Communications and Group Dynamics, 1994
 Two-day workshop on Statistical Experiment Design Strategies, 1994
 Four-day Kepner-Tregoe (K-T)/Corning Problem Solving Skills, 1994
 Four-day workshop on Total Quality Management and Impact, 1993