CURRICULUM VITA

JULIE P. HARMON, Ph.D.
Chemistry Department
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Education

1983 Ph.D. Materials Science, University of Rochester, Rochester, NY.
1973 M.S. Biochemistry, Duquesne University, Pittsburgh, PA.
1971 B.A. Chemistry, Mercyhurst College, Erie, PA, Cum Laude.

Specialization

Polymer Materials Science - optical, thermal, mechanical, transport properties and structure-property relations, vinyl polymerizations, polymer nanocomposites, and radiation chemistry.

Employment

Chemistry Department University of South Florid, Tampa, FL:
1998-Present Associate Professor.
2000-2004 Graduate Coordinator, Chemistry
1993-1998 Assistant Professor.

University of Florida, Gainesville, FL:
1988-1993 Associate Research Scientist, Physics Department
1987-1988 Visiting Scientist, Department of Materials Science and Engineering

Eastman Kodak Research Laboratories, Rochester, NY
1983-1987 Polymer Research Scientist

University of Rochester, Rochester, NY
1978-82 Ph.D. Candidate

UCO Optics, Scottsville, NY
1976-1977 Polymer Research Chemist

PPG Industries, Pittsburgh, PA
1973-1975 Technical Service Representative

Research Grants Funded at University of South Florida

1. Bismuth Oxide and Barium Titanate Nanocomposites
NASA Kennedy
09/05-12/05
J. Harmon is **Principal Investigator**
$20,807

2. High Performance Polymer Nanocomposites for Radiation Shielding
National Aeronautic and Space Administration (N ASA) Space Explorations Mission Directorate
10/05-10/09
J. Harmon is **Principal Investigator**
$588,194

3. Development of Dip Molded Polyurethane and Silicone Balloons for Latex-Free Biomedical Systems II Renewal
NDH Medical, Inc/ Florida High Tech Corridor
08/05-08/06
J. Harmon is **Principal Investigator**
$75,000

4. Development of Dip Molded Polyurethane and Silicone Balloons for Latex-Free Biomedical Systems
NDH Medical, Inc/ Florida High Tech Corridor
08/04-08/05
J. Harmon is **Principal Investigator**
$75,000

5. Glucose Sensor Tissue Interactions
National Institute of Health (NIH)
08/03-07/08
J. Harmon is **Co-Investigator** Harmon's portion is:
$373,727

6. Relaxation Dynamics of Polymeric Materials Used in Aerospace Applications
Honeywell Corporation
12/03-12/04
J. Harmon is **Principal Investigator**
$22,055

7. Development of Novel Underfill Formulations with High Thermal Conductivity
Honeywell Corporation/ Florida High Tech Corridor
03/04-03/05
J. Harmon is **Principal Investigator**
$150,000

8. MRI Acquisition of a Transmission Electron Microscope for Research and Education
National Science Foundation (NSF)
08/02-08/04

J. Harmon is **Co-Principal Investigator**
$738,646

9. Integrated Interdisciplinary Nanomaterials REU Site
National Science Foundation (NSF)
04/04-03/06
J. Harmon Co-PI and mentor
M. Zaworotko PI
$279,900

10. Development of Novel Underfill Formulations with High Thermal Conductivity
Honeywell Corporation/ Florida High Tech Corridor
9/02-1/04
J. Harmon is **Principal Investigator**
$150,000

11. Radiation Effects on Polymeric Systems Used in Space Environments
Honeywell Corporation/ Florida High Tech Corridor
9/01-1/03
J. Harmon is **Principal Investigator**
$75,000

12. Curable Coatings with controlled Rheology
Honeywell Corporation/ Florida High Tech Corridor
1/01-6/02
J. Harmon is **Principal Investigator**
$150,000

13. Development of Novel, Highly Permeable, Contact Lens Materials- a University-Research Initiative
Benz R&D/ Florida High Tech Corridor
1/00-1/01
J. Harmon is **Principal Investigator**
$75,000

14. Development of Radiation Resistant Optical Fiber Polymers
Honeywell Corporation/ Florida High Tech Corridor
1/00 –1/01
J. Harmon is **Principal Investigator**
$54,000

15. Optical Fiber Research
Honeywell Corporation
Clearwater, FL
1/99 –1/00
J. Harmon is **Principal Investigator**
$17,000

16. Proposal to Map Thermal Transitions in Optical polymers Via MDSC
Benz Research and Development, Inc.
Sarasota, FL

1/98-3/99
J. Harmon is **Principal Investigator**
$1,500

17. Thermoreversible Dendrimer Gels
USF Division of Sponsored Research
Research and Creative Scholarship Award
5/97-5/98
J. Harmon is **Principal Investigator**
$7,500

18. Contact Lens Research
Bausch and Lomb, Sarasota, FL,
1/97-6/97
J. Harmon is **Principal Investigator**.
$2,700

19. Proposal to Investigate Calorimetric Properties of Viscous Hydrocarbon Polymer Matrices
R. P. Scherer Company
Clearwater, FL, 11/97-11/98
J. Harmon is **Principal Investigator**
$6,239

20. Low Refractive Index Optical Fiber Cladding Materials
Optical Polymer Research, Inc., Gainesville, FL
Department of Defense (DOD) AARPA SBIR Subcontract
5/96-5/98
J. Harmon is **Principal Investigator** on subcontract.
$196,022

21. Novel Materials for Optical Fibers with High Numerical Apertures
Optical Polymer Research, Inc., Gainesville, FL
National Science Foundation (NSF) SBIR Subcontract
10/95-3/96
J. Harmon is **Principal Investigator** on subcontract.
$18,770

22. Acquisition of GC/MS for Advanced Undergraduate Laboratories and Undergraduate Research
National Science Foundation (NSF)
01/96-01/01
J. Harmon was a **Contributor**.
$32,575

23. Acquisition of a MALDI-TOF Mass Spectrometer
National Science Foundation (NSF)
09/95-08/96
J. Harmon is **Co-Principal Investigator**.
$164,444

Research Grants Funded at University of Florida as a Research Scientist

1. Proposal to Purchase a Luminescent Micro-Spectrometer
National Science Foundation (NSF)
01/94-01/98
Principal Investigator: D. Tanner, **Co-Principal Investigators**: J. Harmon and J. Reynolds
$199,423

2. A Plan to Incorporate Rad Hard, Low T_g Plastic Scintillator into SSC
Technology Texas National Research Commission
01/93-01/94
J. Harmon is **Principal Investigator**
$75,000

3. Development of Radiation Hard, Mechanically Stable Scintillator for Use at the SSC
Department of Energy (DOE)/ Superconducting Super Collider
01/03-01/04
J. Harmon is **Principal Investigator**
$35,238

4. Fluorinated Methacrylate Cladding Materials
Optical Polymer Research, Inc.
Department of Defense (DOD) AARPA SBIR Subcontract
7/93-1/94
J. Harmon is **Principal Investigator** on subcontract
$13,500

5. Research and Development Award for Graduate Student Funding
Division of Sponsored Research
University of Florida
01/93-01/94
J. Harmon is **Principal Investigator**
$9,400

6. Radiation Hard Scintillator Development: Production and Study of Materials
Department of Energy (DOE)/ Superconducting Super Collider
01/93-01/94
J.K. Walker and J.P. Harmon are **Co-Principal Investigators**
$189,678

7. Proposal for Scintillating Fiber and Avalanche Photodiode Assembly
Department of Energy (DOE)
01/01-01/02
J.K. Walker and J.P. Harmon are **Co-Principal Investigators**
$180,000

8. Processing Monitoring for Scintillating Optical Fiber Spinning
Research Development Award, Division of Sponsored Research

01/89-01/90
J. Harmon is **Principal Investigator**
$25,000

Books Edited:

1. "Optical Polymers: Fibers and Waveguides", Edited by Julie P. Harmon and G. K. Noren, ACS Symposium Series 795, American Chemical Society, Washington DC, 2001.

Referred Research Articles:

1. "Probing Interactions between Poly(methyl methacrylate) and nanoIron Particles" , K. Mohomed, B. Knudsen, J. L. Wilson, P. Poddar, Hariharan Srikanth, S. Kotha, T. S. Sudarshan and J. P. Harmon, submitted to Advanced Functional Materials, July, 2005.

2. "A New Generation of Ultra-soft, Non-blocking Polyurethanes with Superior Mechanical Properties for Biomedical Applications", K. Kull, T. Gerasimov and J. P. Harmon, submitted to TOPCON 2005 Bounce Back with TPE's meeting proceeding, Akron Ohio, 2005.

3. "Thermal Analysis of Novel Underfill Materials with Optimum Processing Characteristics", Y. Liu, Yi-Feng Wang, T. G. Gerasimov, K. H. Heffner and J. P. Harmon, J. Applied. Polymer Science, 98, 3, 1300 (2005).

4. "A Broad Spectrum Analysis of the Dielectric Properties of Poly (2-hydroxyethyl methacrylate)", K. Mohomed, T. G. Gerasimov, F. Moussy and J. P. Harmon, Polymer, 46, 3847 (2005).

5. "Persistent Interactions Between Hydroxylated Nanoballs and Atactic Poly(hydroxyethyl methacrylate) (PHEMA", K. Mohomed, H. Abourahma, M. J. Zaworotko and J. P. Harmon, Chemical Communications, 3277 (2005).

6. "The Effect of Host Nanoparticle Interactions on Polymer Relaxations", K. Mohomed, T. Gerasimov, H. Abourahma, M. Zaworotko and J. P. Harmon, Accepted for publication in Materials Science and Engineering A, March, 2005.

7. "Modifying Electronic Properties of Single-Walled Carbon Nanotubes through Anisotropic Polymer Interaction: A Raman Study", B. Chen, M. Cinke, M. Meyyappan, Z. Chi, J. Harmon, P. Muisener, L. Clayton, and J. D'Angelo, Advanced Functional Materials, 1183 (2005).

8. "Transparent PMMA/SWNT Composites with Increased Dielectric Constants", L Clayton, T. Gerasimov, M. Meyyappan and J. P. Harmon. Advanced Functional Materials, Vol. 15, No. 1, 101 (2005).

9. "Characterizations of Enriched Metallic Single-walled Carbon Nanotubes in Polymer Composite", B. Chen, J.Yijian, M. Cinke, D. Au, J. P. Harmon, P. Muisener and L. Clayton, RS Proceedings, Volume 856 E, Multicomponent Polymer Systems-Phase Behavior, Dynamics and Applications, Editors: K.I. Winey, M. Dadmun, C. Leibig, R. Oliver, 2004, BB4.10

10. "Thermal Analysis of Novel Underfill Materials with Optimum Processing Characteristics", Y. Liu, T, Gerasimov, K. Heffner, Y. F. Wang and J. P. Harmon, accepted by Journal of Applied Polymer Science, February, 2005.

11. "In Situ Synthesis and Performance of Titanium Oxide/Poly(methyl methacrylate) Nanocomposites", Uttam C. Bandugula, L.M. Clayton, J.P. Harmon, Ashok Kumar, Journal of Nanoscience and Nanotechnology, 5 (5) 814 (2005).

12. "Probing Multi-walled Nanotube/PMMA Composites with Ionizing Radiation" Shelli R. Tatro, L. Clayton, Patricia A. O'Rourke Muisener, Apparao M. Rao, and J.P. Harmon. Polymer, Vol. 45, No. 6, 1971 (2004).

13.'Investigation of Mechanical Integrity and its Effect on Polishing for Novel Polyurethane Polishing Pad.'' P. Zantye, S. Mudhivarthi, A. K. Sikder, A, Kumar, S. Ostapenko, J. Harmon, MRS Meeting Proceedings, Vol. 816, (Advances in Chemical-Mechanical Polishing), 113 (2005).

14. "In-Situ Synthesis and Magnetic Properties of Polystyrene/Polypyrrole Nanocomposite Materials With Uniformly Dispersed Nanoparticles", H. Srikanth, P. Poddar, J. L. Wilson, K. Mohomed and J. P. Harmon, MRS Meeting Proceedings, Fall 2003, Vol. 788(Continuous Nanophase and Nanostructured Materials), 243 (2004).

15. "Gamma Radiation Effects on the Glass Transition Temperature and Mechanical Properties of PMMA/SOOT Nanocomposites", L. Clayton, T. Gerasimov and J. P. Harmon, Polymer Bulletin, 52, 259 (2004).

16. "Modeling and Simulation of Aggregation Processes in Colloidal Systems," Gita T. Iranipour, Luis H. Garcia-Rubio, and Julianne P. Harmon, J. of Dispersion Technology, 25(4), 555 (2004).

17. "Synthesis and Magnetic Properties of Polymer Nanocomposites with Embedded Iron Nanoparticles", J. L. Wilson, P. Poddar, N. A. Frey, H. Srikanth, K. Mohomed, J. P. Harmon, S. Kotha, & J. Wachsmuth, Journal of Applied Physics, 95(3), 1439 (2004).

18. "Processing of Transparent Polymer Nanotube Composites via Heat, UV Radiation and Ionizing (Gamma) Radiation Using Ultrasonication and Solvent Dissolution", L. Clayton, R. Muisener, J. P. Harmon, A. Sikder, A. Kumar, A. Cassell, M. Cinke and M. Meyyappan, Materials Research Society Proceedings, Vol. 773, M 2.4 (2003).

19. "The Evolution of Surface Morphology of Hydroxyl Ethyl Methacrylate Copolymer Exposed to Gamma Radiation", K-F. Chou, S. Lee, and J. P.Harmon, Macromolecules, 36 (15), 5683 (2003).

20. "A MALDI, TGA, TG/MS and DEA Study of the Irradiation Effects on PMMA", S. R. Tatro, G. R. Baker, K. Bisht and J. P. Harmon, Polymer, 44, 167 (2003).

21. "2, 3-Dihydroxypropyl Methacrylate and 2-Hydroxyethyl Methacrylate Hydrogels: Gel Structure and Transport Properties", G. Gates and J. P. Harmon, Polymer, 44, 215 (2003).

22. "Intra and Intermolecular Relaxations 2, 3-Dihydroxypropyl Methacrylate and 2-Hydroxyethyl Methacrylate Hydrogels"G. Gates and J. P. Harmon, Polymer, 44, 207 (2003).

23. "Transparent Polymer-Nanotube Composites Produced Via Solar Radiation, Ionizing Radiation and Heat", L. M. Clayton, J. P. Harmon, M. Meyyappan, M. Cinke, A. Cassell, A. Kumar and A. K. Sikder, Materials Research Society Proceedings, Vol. 697, P9.7 (2002).

24. "Thermally-Induced Crack Healing in Poly(Methyl Methacrylate)"., J. S. Shen, J. P. Harmon, S. Lee, Journal of Materials Research, 17, No. 6, 1335 (2002).

25. "Effects of Gamma Radiation on Poly(methyl methacrylate)/ Single-wall Nanotube Composites," P. O'Rourke Muisener, L. Clayton, J. D'Angelo, and J. P. Harmon, Journal of Materials Research, 17, No. 10, 2507 (2002).

26. "Ionizing Radiation Effects on Interfaces in Carbon Nanotube-Polymer Composites," Julie P., Muisener, P. A. O., Clayton, L., D'Angelo, J., Sikder, A. K., Kumar, A., Meyyappan, M., and Cassell, A. M., Materials Research Society Proceedings, Vol. 697, P9.7 (2002).

27. "Matrix Assisted Laser Desorption/Ionization (MALDI) Mass Spectrometry: Determining Mark-Houwink Sakaurada Parameters and Analyzing The Breadth of Polymer Molecular Weight Distributions", S. Tatro, G. Baker, R. Fleming and J. Harmon, Polymer, 43 (8) 2329 (2002).

28. "Evaluation of Mechanical and Triboloical Behavior, and Surface Characteristics of CMP Pads", A. K. Skidder, I. M. Irfan, A. Kumar, S. Ostapenko, M. Calves, J. P. Harmon and J. M. Anthony, Materials Research Society Symposium Proceedings, Vol. 671, M1.81 (2001).

29. "Viscoelastic Properties and Phase behavior of 12-*tert*-Butyl Ester Dendrimer/Poly (Methyl Methacrylate) Blends", S. Emran, Y. Liu, G. Newkome and J. P. Harmon, Journal of Polymer Science Part B: Polymer Physics, Vol. 39, 1381 (2001).

30. "Water Structure in Hydroxyethyl-Co-Glycerol Methacrylate Materials," G. Gates, J. P. Harmon, J. Ors and P. Benz, ANTEC, Proceedings of the Annual Technical Conference and Exhibition, Vol. XLVII, Dallas, Texas, May 6-11, 2001, 1891.

31. "Creep and Stress Relaxation in Methacrylate Polymers; Two Mechanisms of Relaxation Behavior Across the Glass Transition Region," P. Bertolucci and J. P. Harmon, Polymer Engineering and Science, Vol. 41, No. 5, 873 (2001).

32. "Polymers for Optical Fibers and Waveguides," J. P. Harmon, Advances in Optical Fibers and Waveguides, Eds. J. P. Harmon and G. Noren, American Chemical Society Symposium Series 795 (2001) 1.

33. "Miscibility Investigation of Fluorocarbon Copolymer and Methacrylate Copolymer Blends", M. Calves and J. P. Harmon, Advances in Optical Fibers and Waveguides, Eds. J. P. Harmon and G. Noren, American Chemical Society Symposium Series 795 (2001) 91.

34. "Polymer Scintillators - Continuous Versus Intermittent Gamma Irradiation Effects", E. Biagtan, E. Goldberg, R. Stephens, E. Valeroso, M. Calves and J. P. Harmon, Advances in Optical Fibers and Waveguides, Eds. J. P. Harmon and G. Noren, American Chemical Society Symposium Series 795 (2001) 221.

35. “Enzyme Catalyzed Ring-Opening Copolymerization of 5-methyl-5-benzyloxycarbonyl-1,3-dioxan-2-one (MBC) with Trimethylene Carbonate (TMC): Synthesis and Characterization,” T. F. Alzemi, J. P. Harmon and K. S. Bisht, Biomacromolecules, Vol. 1, 493 (2000).

36. “Molecular Relaxations in Ester-Terminated, Amide-Based Dendrimers,” S. Emran, G. Newkome, C. Weis and J. P. Harmon. Journal of Polymer Science Part B: Polymer Physics, Vol. 37, 2025 (1999).

37. "Radiation Resistant, Low Refractive Index, Fluorinated Methacrylate Polymers for Fiber Cladding," P. Bertolucci, E. Biagtan, E.P. Goldberg, P. Schuman, W. Schuman and J.P. Harmon. Polymer Engineering and Science, Vol. 38, No. 4, 699 (1998).

38. "An Empirical Correlation Between Glass Transition Temperatures and Structural Parameters for Polymers With Linear and Branched Alkyl Substituents," H. Gao and J.P. Harmon, Journal of Applied Polymer Science, 507 (1997).

39. "Dipole-Dipole Interactions in Controlled Refractive Index Polymers," P. Bertolucci and J.P. Harmon, Photonic and Optoelectronic Polymers, Eds., S.A. Jenekhe and K.J. Wynne, American Chemical Society Symposium Series 672 (1997) 79-97.

40. "The Effects of High Energy Radiation on Optical Properties of Polymers," Julie P. Harmon, Emmanuel Biagtan, Gregory Schueneman, and Eugene P. Goldberg,
Radiation Effects on Polymers: Chemical and Technological Aspects, Eds., R.L. Clough and S.W. Shalaby, ACS Symposium Series 620 (1996) 302-312.

41. "Gamma Radiation Dose Rate Effects on a Polymer Scintillator Containing a Large Stokes Shift Dye, 3-Hydroxyflavone," E. Biagtan, E. Goldberg R. Stephens, E. Valeroso and J.P. Harmon, Nuclear Instruments and Methods in Physics Research, B114, 88 (1996).

42. "ESR Analysis of Gamma Radiation Dose Rate Effects on Scintillator Light Output," E. Biagtan, E.P. Goldberg, R. Stephens and J.P. Harmon, Nuclear Instruments and Methods in Physics Research, B114, 302 (1996).

43. "Para Substituted Polystyrenes: Stress Relaxation, Creep, Dynamic Mechanical and Dielectric Analyses," H. Gao and J.P. Harmon, Thermochimica ACTA, 284, 85 (1996).

44. "Gamma Dose and Dose Rate Effects on Scintillator Light Output," E. Biagtan, E.P. Goldberg and J.P. Harmon, Nuclear Instruments and Methods in Physics Research, B108, 1235 (1995).

45. "Effect of Gamma Radiation Dose Rate on the Light Output of Commercial Polymer Scintillators," E. Biagtan, E. Goldberg, J. Harmon and R. Stephens, Nuclear Instruments and Methods in Physics Research, B93, 296 (1994).

46. "Ethanol Induced Crack Healing in Poly (Methyl Methacrylate)," P. Wang, S. Lee and J.P Harmon, Journal of Polymer Science Part B: Polymer Physics, Vol. 32, 1217 (1994).

47. "Effects of Fluorinated Substituents on the Refractive Index and Optical Radiation Resistance of Methacrylates," J. Gaynor, G. Schueneman, P. Schuman, and J.P. Harmon, Journal of Applied Polymer Science, 50, 1645 (1993).

48. "Development of Radiation Hard Scintillators," F. Markley, M. Davidson, J. Keller, G. Foster, A. Pla-Dalmau, J. Harmon, E. Biagtan, G. Schueneman, V. Senchishin, G. Gustafson, and M. Rivard, in Press, Proceedings from the IV International Conference in High Energy Physics, La Biodola, Isola d'Elba, Italy, Eds., A. Menzione and A. Scribano, World Scientific, New York, 534 (1993).

49. "Radiation Resistant Materials for High Performance Scintillators", J.P. Harmon, E. Biagtan, G. Schueneman, and P. Schuman, Proceedings from the IV International Conference in High Energy Physics, La Biodola, Isola d'Elba, Italy, Eds., A. Menzione and A. Scribano, World Scientific, New York, 561 (1993).

50. "Combustion Products from Commercial Polymers," J.P. Harmon, Air and Waste Management Association Annual Technical Proceedings, 93-TP-67.03 (1993).

51. "Radiation Effects in Scintillator Materials," J. Harmon, G. Schueneman, F. Markley and W. Foster, Proceedings of the III International Conference on Calorimetry in High Energy Physics, Corpus Christi, Texas, October, 1992, Eds., P. Hale and J. Siegrist, World Scientific, New York, 581 (1993).

52. "Stability of UV/Visible Transmission Spectra of Cross-linked Poly(methylphenylsiloxane) After Gamma Irradiation - A Note," J.P. Harmon, A.G. Taylor, G.T. Schueneman, and E.P. Goldberg, Polymer Degradation and Stability, 41, 319 (1992).

53. "Structure and Dose Rate Effects on Optical Radiation Hardness in Scintillator Polymers," A.G. Taylor and J.P. Harmon, Radiation Physics and Chemistry, 41, No. 1/2, 115 (1992).

54. "Effects of Irradiation on the Transmission Spectra of Stressed Fluorescent Fibers," J.F. Gaynor and J.P. Harmon, Radiation Physics and Chemistry, 41, No. 1/2, 205 (1992).

55. "Approaches to Optimize Scintillator Polymers for Optical Radiation Hardness," J.P. Harmon, J.F. Gaynor, and A.G. Taylor, Radiation Physics and Chemistry, 41, No. 1/2, 153 (1993).

56. "The Effect of Dibutyl Phthalate, DBP, Plasticizer on the Stability of Optical Properties of Polystyrene, PS, After Exposure to Gamma Radiation," A.G. Taylor and J.P. Harmon, Polymer Degradation and Stability, 41, 9 (1993).

57. "The Effect of Gamma Irradiation on Color Center Formation in Optical Polymers," J.P. Harmon and J. Gaynor, Journal of Polymer Science Part B: Polymer Physics, 31, 235 (1993).

58. "Miscible Blends of Fluorocarbon Copolymers with Poly(methyl methacrylate), PMMA, and Poly(vinyl acetate), PVAc: New Alternatives to Low Refractive Index Cladding Materials," J. Gaynor, V. Fischer, J.K. Walker, and J.P. Harmon, Nuclear Instruments and Methods in Physics Research, B69, 332 (1992).

59. "Rheological Properties of a Phenyl Substituted Siloxane Polymer," Z. Chen, T. Jhaveri, J. Walker and J.P. Harmon, Journal of Applied Polymer Science, 46, 2055 (1992).

60. "Studies in Optical Properties and Optical Radiation Hardness of Polyorganosiloxanes," J. Harmon, T. Jhaveri, J. Gaynor, J. Walker and Z. Chen, Journal of Applied Polymer Science, 44, 1695 (1992).

61. "New Linear Polydiorganosiloxanes as Plastic Bases for Radiation Hard Scintillators," J. Harmon, J. Gaynor, V. Feygelman, and J. Walker, Nuclear Instruments and Methods in Physics Research, B53, 309 (1991).

62. "Polysiloxane - Based Scintillators Doped with Oligophenylene: Effect of Color Centers on Radiation Stability," V. Feygelman, J. Walker and J. Harmon, Nuclear Instruments and Methods in Physics Research, A290, 131 (1990).

63. "A Review of Polymeric Scintillator Materials for Use at the SSC," J.P. Harmon and J. K. Walker, Symposium on Detector Research and Development for the Superconducting Super Collider, Eds., T. Dombeck, V. Kelley, and G.P. Yost, World Scientific, Fort Worth, Texas, 680 (1990).

64. "Review of Detector Development Work at the University of Florida," J.K. Walker, J.P. Harmon, C.W. Park and S. Lee, Symposium on Detector Research and Development for the Superconducting Super Collider, Eds., T. Dombeck, V. Kelley, and G.P. Yost, World Scientific, Fort Worth, Texas, 294 (1990).

65. "Fabrication of a Step Index Scintillating Optical Fiber by a Coextrusion Process," C.W. Park, J.P. Harmon, S. Li, and J.K. Walker, Symposium on Detector Research and Development for the Superconducting Super Collider, Eds., T. Dombeck, V. Kelley, and G.P. Yost, World Scientific, Fort Worth, Texas, 284 (1990).

66. "Polysiloxane Scintillator," J. Harmon and J. Walker, Proceedings of The Workshop on Radiation Hardness of Scintillators, Ed., K.F. Johnson, Florida State University, Tallahassee, Florida, 61 (1990).

67. "Polysiloxane - Based Scintillators: 1, 1', 2, 2' - Tetraphenylbutadiene as a Secondary Fluor," V. Feygelman, J. Harmon and J. Walker, Nuclear Instruments and Methods in Physics Research, A295, 94 (1990).

68. "Internal Stresses and Physical Aging," J.P. Harmon and C.L. Beatty, Engineering Materials Handbook, Vol. 2, Engineering Plastics, Ed., Cyral A. Dostal (1988).

69. "Anisotropic Methanol Transport in PMMA After Mechanical Deformation," J. Harmon, S. Lee and J.C.M. Li, Polymer, 29, 1221-1226 (1988).

70. "Methanol Transport in PMMA: The Effect of Mechanical Deformation," J.P. Harmon, S. Lee and J.C.M. Li, Journal of Polymer Science Part A: Polymer Chemistry, 25, 3215-3229 (1987).

Non- refereed Instrumentation Bulletins:

1. "Dielectric Spectroscopy and Phase Separation in Polymer Blends," S. Emran and J. P. Harmon, TA Instruments Bulletin, 2000.

2. “Thermal Analysis of Dendrimers,” S. Emran and J. P. Harmon, *TA Instruments Bulletin*, 2000.

3. "Recent Advances in Scintillator Polymers," J.P. Harmon and G.T. Schueneman, International Committee for Future Accelerators Instrumentation Bulletin, No. 9, April, 30 (1993).

Non-refereed Polymer Preprints:

1. “Tutorial on Optical Polymers For Fibers and Waveguides,” J. P. Harmon, Polymer Preprints, August ACS Meeting, New Orleans, LA, 40, No. 2, 1256 (1999).

2. “Transparent Fluorocarbon Polymer Blends for Fiber Cladding Applications,” M. Calves and J. P. Harmon, Polymer Preprints, August ACS Meeting, New Orleans, LA, 40, No. 2, 1256 (1999).

3. “Secondary Transitions in Polymers Probed by Differential Scanning Calorimetry,” P. Bertolucci and J. Harmon, Polymer Preprints, March ACS Meeting, Dallas, TX, 78, 219 (1998).

4. "Relaxation Processes in Fluorinated Methacrylate and Acrylate Polymers Via Thermal Analysis," P. Bertolucci, J. Harmon, and S. Lee, Polymer Preprints, August ACS Meeting, Orlando, Florida, 37, No.2, 234 (1996).

5. "Viscoelasticity of p-Alkylated and Halogenated Polystyrenes," H. Gao and J. Harmon, Polymer Preprints, August ACS Meeting, Orlando, Florida, 37, No.2, 236 (1996).

6. "Molecular Relaxations In Amide Based Dendrimers," J. Harmon, S. Emran, H. Gao, B. Wang, G. Newkome, G. Baker, and C. Moorefield, Polymer Preprints, August ACS Meeting, Orlando, Florida, 37, No.2, 421 (1996).

7. "Thermal Analysis of Optical Polymers: DMA, MDSC, and DEA," Julie P. Harmon, Patti Bertolucci, and Hang Gao, Polymer Preprints, 36, No.1, 225 (1995).

8. "The Effects of High Energy Radiation on Optical Properties of Polymers," Julie P. Harmon, Gregory T. Schueneman, Emmanuel Biagtan, and Eugene P. Goldberg, Polymer Preprints, 35, No.2, 926 (1994).

Patents and Invention Disclosures:

1. “PMP/CNT Composites”, J. P. Harmon and L. Clayton, USF Provisional Patent Application, 04A044PR.

2. “Ionizing Radiation Resistant Carbon Nanotube/Polymer Composites,” J. P. Harmon, P. Muisener, L. Clayton and J. D’Angelo, Invention Report USF Ref No: 01B090PR, November 2001. Patent Application, 01B090PRCCP, February, 2005.

3. “Reprocessable Electrically-Insulating Thermal Management Composite For Electronic Applications, ” J. P. Harmon, Y. Liu, K. H. Heffner, W. Dalzel and S. Fleischman, Disclosure H0006075, October, 2003.

4. "Transparent Polymer Nanotube Composites," J. P. Harmon, L. Clayton, P. Muisener, Invention Report USF Ref No: 01B100, December 2001.

5. "Colored Electroscopic Toners Containing Quenched Esterified Rhodamine Dyes," W.T. Gruenbaum, J.P. Harmon and L.C. Roberts, Eastman Kodak Company, Rochester, NY, U.S. Patent No. 4,711,832.

6. "Toners and Yellow Dye Compounds Used Therein," D.D. Chapman and J.P. Harmon, Eastman Kodak Company, Rochester, NY, U.S. Patent No. 4,734,349.

7. "Colored Toners Containing Dicyanomethane Dye Compounds," W. Moore and J. Harmon, Eastman Kodak Company, Rochester, NY, U.S. Patent No. 4,788,121.

8. "Styrene Butylacrylate Toner with Magenta Dye," J. Harmon and L. Rossi, Eastman Kodak Company, Rochester, NY, U.S. Patent No. 5,102,764.

Teaching Modules;

"Materials Science Module", J. P. Harmon, for Science that Matters written in conjunction with, "Preparing for the 21st Century: Helping College Students Learn Science - A Workshop for Faculty -. "Brain Research and Learning," "Teaching Critical Thinking and Assessing Students Understanding." Organized and delivered by R.L Potter, G. Meisels and B. Tecklehamonot (1998).

Presentations at Professional Scientific Meetings, Industry and Universities:

1. "A New Generation of Ultra-soft, Non-blocking Polyurethanes with Superior Mechanical Properties for Biomedical Applications", K. Kull and J. P. Harmon, TOPCON, Akron, Ohio, September 12-12, 2005.

2. "A New Class of Biocompatible and Biostable Polyurethane Elastomers", K. Kull and J. P. Harmon, 81st Annual ACS Florida Annual Meeting and Exposition (FAME), FL., May, 2005.

3. "Interfacial Interactions in Self-Assembled Nanoball-Methacrylate Polymer Composites", K. Mohomed and J. P. Harmon, 81st Annual ACS Florida Annual Meeting and Exposition (FAME), FL., May, 2005.

4. "Polymer Facilities and Research at USF- A link Between Academia and Industry", J. P. Harmon and K. Mohomed, Hosts of Society of Plastic Engineers Regional Meeting (SPE) (USF), FL. April, 2005.

5. "Silicon Carbide & Poly(Methyl Methacrylate): Mechanical Analysis of Advanced Nanocomposites", D. Ouellette and J. P. Harmon, Abstracts, 56th Southeast Regional Meeting of the American Chemical Society, Research Triangle Park, NC, United States, November 10-13, 2004,

6. "Beta-Silicon Carbide-PMMA Nanocomposites. M. Roman, P. Dow, J. Harmon, J. Wolan, John. 55th Southeast Regional Meeting of the American Chemical Society, Atlanta, GA, United States, November 16-19, 2003.

7. "Mechanical and Thermal Properties of Polymer Nanoball Composites", K. Mohomed, T. Gerasimov, H. Abourahma, M. Zaworotko and J. P. Harmon, TME Annual Meeting, San Francisco, Ca, February, 2005.

8. "Hydrophilic Host Polymers and Network Structures" J. P. Harmon, MRSEC Mini-Symposium, University of South Florida, January 15, 2005.

9. "Hydrophilic Host Polymers: Interactions, Structure and Biomedical Applications", Julie P. Harmon, University of Florida Chemistry Department, Gainesville, FL, October 28, 2004.

10. "Radiation Response of Polymers Used in Space Mission Environments." Kenneth H. Heffner and J. P. Harmon. 2004 Symposium, Industrial and Academic Advances in Polymer Science in Florida May 6-8, Orlando Florida.

11. "Composites of Magnetic Nanoparticle and Polymers: Synthesis, Properties and applications." P. Poddar, J. Gass, J. L. Wilson, and H. Srikanth, Department of Physics, University of South Florida, Tampa, Fl-33620, K. Mohomed, and J. P. Harmon, FAME 2004 Symposium, Industrial and Academic Advances in Polymer Science in Florida May 6-8, Orlando Florida.

12. "Dielectric and Mechanical Analysis of PMMA-Iron Nanocomposites." Kadine Mohomed, J.L. Wilson, B. Knudsen, P. Poddar, H. Srikanth, J.P. Harmon. , FAME 2004 Symposium, Industrial and Academic Advances in Polymer Science in Florida May 6-8, Orlando Florida.

13. "Molecular relaxations in polymer nanocomposite materials", J Harmon, K Mohomed, L Clayton, T. Gerasimov, Florida International University. Chemistry Department, Miami, Florida, February 20, 2004.

14. "Beta-silicon carbide-PMMA nanocomposites", Roman, Maria; Dow, Peter; Harmon, Julie; Wolan, John. 55th Southeast Regional Meeting of the American Chemical Society, Atlanta, GA, United States, November 16-19, 2003 (2003), 1003.

15. " Transparent PMMA/SWNT Composites with Increased Dielectric Constants", L.M. Clayton, Martin Cinke, Meyya Meyyappan, Julie Harmon, Optics in the Southeast 2003, OISE 2003 November 12-13th, School of Optics/Creol, University of Central Florida, Orlando, Fl.

16. "Processing of Transparent Polymer Nanotube Composites via Heat, UV Radiation and Ionizing (gamma) Radiation using Ultrasonication, In-situ polymerization and Solvent Dissolution Techniques", L.M. Clayton, P.A. Muisener, J. P. Harmon, A. Sikder, A. Kumar, M. Cinke, A.M. Cassell, M. Meyyappan, Material Research Society (MRS) Spring Meeting (San Francisco, California), April 22, 2003.

17. "Novel Processing Techniques for Transparent Polymer Carbon Nanotube Composites", L. Clayton and J. P. Harmon, NASA Ames Research Center (Moffet Field, California), April 24, 2003.

18. "Raman Study on Electronic Property of Single-walled Carbon Nanotubes Composite" L.M. Clayton, P.A. Muisener, J. P. Harmon, A. Sikder, A. Kumar, M. Cinke, A.M. Cassell, M. Meyyappan, Dr. Chen B., NASA Ames Research Center, USA, 15th Annual European Symposium on Polymer Spectroscopy, Crete, Greece, May, 2003.

19. "Polymer Underfills with Enhanced thermal Conductivity", Honeywell, December, 2003.

20. "Synthesis of Novel Optically Transparent "Nanoball-Polymer" Composites Using In Situ Polymerization", Kadine Mohomed, Heba Abourahma, Michel J. Zaworotko, and Julie P. Harmon, Optics in the Southeast 2003, OISE 2003 November 12-13th, School of Optics/Creol, University of Central Florida, Orlando, Fl.

21. "Modeling and Simulation of Aggregation Processes in Colloidal Systems," Gita T. Iranipour, Luis H. Garcia-Rubio, and Julianne P. Harmon, Particles 2003, August 23-26, Toronto, Canada.

22. "Synthesis and Analysis of Novel Polymer Nanocomposites Using In Situ Ultrasonic Polymerization", K. Mohomed, H. Abourahma, Jessica Wilson, M. J. Zaworotko, S. Hariharan and J. P. Harmon, 7th International Symposium on Polymers for Advanced Technologies, PAT 2003, Fort Lauderdale, FL, 09/21-09/24.

23. "Ionizing Radiation Effects on Poly (Methyl Methacrylate)/Soot and Polystyrene/Soot Nanocomposites", L. M. Clayton and J. P. Harmon, 7th International Symposium on Polymers for Advanced Technologies, PAT 2003, Fort Lauderdale, FL, 09/21-09/24.

24. Novel Poly (Butylene Terephthalate) (PBT) Underfill Materials, Yang Liu and Julie P. Harmon, 7th International Symposium on Polymers for Advanced Technologies, PAT 2003, Fort Lauderdale, FL, 09/21-09/24.

25. "Modeling and Simulation of Aggregation Processes in Colloidal Systems", G. Iranipour, L. Garcia-Rubio and J. P. Harmon, Particles 2003, August 23, 2003, Toronto, Canada.

26. "Irradiation Effects on Multi-walled Nanotube-Polymer Composites", Julie P. Harmon and Shelli R. Tatro, American Physical Society Meeting, Austin, Texas, March 2003.

27. "Conductivity Study of Carbon Nanotube/Polymer Composites via Raman Spectroscopy", Bin Chen, Julie P. Harmon, LaNetra M. Clayton, Patricia Muisener, Jing Li, Meyya Meyyappan, American Physical Society Meeting, Austin, Texas, March 2003.

28. "Static and Dynamic Magnetic Studies of Magnetic Nanoparticles Embedded in a Polymer Matrix", J.L. Wilson, P. Poddar, H. Srikanth, L. Clayton, K. Mohamed, J. Harmon, G. Markovich, T. Hyeon, American Physical Society Meeting, Austin, Texas, March 2003.

29. "Fluorine, An Important Tool for Advanced Coatings", Fluorine in Coatings V, International Conference in Orlando Florida, January 21-22, 2003.

30. "Raman Study of Carbon Nanotube Composite Conductivity", B. Chen and J. P. Harmon, American Chemical Society Meeting, 224, Polymer Chemistry Division, Boston MA, 2002.

31. "Gamma Radiation effects on Carbon Nanotube-Polymer Composites, American Physical Society Meeting, Indianapolis Indiana, and March, 2002.

32. "Radiation Effects on Nanocomposites" CAS Arts & Sciences Informational Session, January 18, 2002.

33. "Radiation Effects on Polymers and Polymer Nanocomposites", Florida Southern University, Lakeland Fl., September, 25, 2002.

34. "Graduate Studies in Chemistry at USF," E. Turos, J. P. Harmon, B. Baker, Florida Southern University, Lakeland, FL. January 30, 2002.

35. "University of South Florida, Graduate Studies in Chemistry," J. P. Harmon, University of Houston, November, 2002.

36. "A New Graduate Program at USF," E. Turos, J. P. Harmon, University of Tampa, Tampa, FL, February 21, 2002.

37. "Water Structure in Hydroxyethyl-Co-Glycerol Methacrylate Materials," G. Gates, J. Ors P. Benz and J. P. Harmon, ANTEC, Dallas, Texas, May 8, 2001.

38. "Evaluation of Mechanical and Triboloical Behavior, and Surface Characteristics of CMP Pads", A. K. Skidder, I. M. Irfan, A. Kumar, S. Ostapenko, M. Calves, J. P. Harmon and J. M. Anthony, MRS Symposium, San Francisco, CA, Spring Meeting, April 26, 2001.

39. "Relaxations and Transport in Hydrophilic polymers," G. A. Gates, J. Ors, B. Benz and J. P. Harmon. Optics in the Southeast Conference, Clemson University, Clemson, SC, October 2, 2001. Invited Talk.

40. "Polymers at USF – History in The Making", J. P. Harmon, Southeastern Meeting of the American Chemical Society, Savanna, GA, September 26, 2001. Invited Talk.

41. "Radiation Effects on Polymer Nanotube Composites" P. A. O. Muisener, L. Clayton, J. D'Angelo, A. Sikder, A. Kumar, M. Meyyappan, A. Cassell and J. p. Harmon, Materials Research Society Meeting, Boston, MA, November 30, 2001. Invited Talk.

42. "Molecular Relaxations in Amide-Based Dendrimers," S. Emran and J. P. Harmon, East Tennessee State University, September 29, 2000. Invited Talk.

43. "Thermal Analysis of Arboreal Macromolecules," S. Emran and J. P. Harmon, Eckerd College, October 25, 2000. Invited Talk.

44. "Polymers for Optical Fibers and Waveguides," J. P. Harmon, DSM Desotech, February 29, 2000. Invited Talk.

45. "Tutorial on Optical Polymers For Fibers and Waveguides," J. P. Harmon, August ACS Meeting, New Orleans, LA (1999).

46. “Transparent Fluorocarbon Polymer Blends for Fiber Cladding Applications,” M. Calves and J. P. Harmon, August ACS Meeting, New Orleans, LA (1999).

47. “Secondary Transitions in Polymers Probed by Differential Scanning Calorimetry,” P. Bertolucci and J. Harmon, March ACS Meeting, Dallas, TX (1998).

48. "Thermal-Physical Measurements on Fluorinated Fiber Cladding Polymers," Patti Bertolucci and Julie P. Harmon, Florida ACS Meeting, Orlando, Florida, May (1997).

49. "Viscoelastic Properties of Unidisperse Macromolecules," Shayla Emran and Julie P. Harmon, Florida ACS Meeting, Orlando, Florida, May (1997).

50. “Probing Viscoelastic Properties of Macromolecules,” J. P. Harmon, University of South Florida, October 30, 1997. Invited Talk.

51. “Characterizing Molecular Motion in Polymers; Creep and Stress Relaxation”, J. P. Harmon, Florida State University, September 23, 1997. Invited Talk.

52. "Relaxation Processes in Fluorinated Methacrylate and Acrylate Polymers Via Thermal Analysis," P. Bertolucci, J. Harmon and S. Lee, 212th ACS Meeting, Orlando, Florida (1996).

53. "Relaxations in Polymers," J.P. Harmon, Florida Institute of Technology, Melbourne, Florida, October 10 (1996). Invited Talk.

54. "Dielectric and Mechanical Relaxations in High Polymers," J. Harmon, University of Florida, Physical Chemistry Division, Gainesville, Florida, September 24 (1996). Invited Talk.

55. "Viscoelasticity of P-Alkylated and Halogenated Polystyrene," H. Gao and J.P. Harmon, 212th ACS Meeting, Orlando, Florida (1996).

56. "Molecular Relaxations in Amide-Based Dendrimers," J.P. Harmon, S. Emran, H. Gao, B. Wang, G. Newkome, G. Baker and C. Moorefield, 212th ACS Meeting, Orlando, Florida (1996).

57. "Dipole-Dipole Interactions in Controlled Refractive Index Polymers," J.P. Harmon and P. Bertolucci, 4th Pacific Polymer Conference, Kauai, Hawaii (1995).

58. "Relaxations in Para Substituted Polystyrenes: MDSC, DMA and DEA Analysis," H. Gao and J. Harmon, 24th North American Thermal Analysis Society Meeting, San Francisco, California (1995).

59. "Optical Fiber Polymers- Para-Alkylated Polystyrenes - Studied by MDSC, DEA and DMA," H. Gao and Julie P. Harmon, ACS Annual Meeting of the Florida Section, Orlando, Florida (1995).

60. "A Comparison Study of Thermal Properties of PEM and PTFEM," Patti Bertolucci and Julie P. Harmon, ACS Annual Meeting of the Florida Section, Orlando, Florida (1995).

61. "Thermal Analysis of Optical Polymers; DMA, MDSC and DEA," Julie P. Harmon, Patti Bertolucci and H. Gao, 209th ACS National Meeting, Anaheim, California, April 2-6 (1995).

62. "The Effects of High Energy Radiation on Optical Properties of Polymers," Julie P. Harmon, Gregory T. Schueneman, Emmanuel Biagtan and Eugene P. Goldberg, 208th ACS National Meeting, Washington, DC, August 21-25 (1994).

63. "Physical Properties and Radiation Resistance of Fluorinated Methacrylate Polymers," J.P. Harmon, G.T. Schueneman, E. Biagtan, E. Goldberg, P. Schuman and P. Bertolucci, ACS Annual Meeting of the Florida Section, Orlando, Florida (1994).

64. "Radiation Resistant Materials for High Performance Scintillators," J.P. Harmon, E. Biagtan, G. Schueneman, and P. Schuman, In Press, Proceedings from the IV International Conference in High Energy Physics, La Biodola, Isola d'Elba, Italy, September (1993).

65. "New Polymers for Scintillator Bases and Dose Rate Testing of Scintillator," J.P. Harmon, G.T. Schueneman and E. Biagtan, Raddam Conference, Fermi National Accelerator Laboratory, Batavia, Illinois, June (1993).

66. "Radiation Resistant Scintillator Polymers," J.P. Harmon, G. Schueneman, E. Goldberg and E. Biagtan, ACS Annual Meeting of the Florida Section, Orlando, Florida (1993).

67. "Optical Properties of Glassy Polymers Exposed to High Energy Radiation," G. Schueneman, J.P. Harmon and E.P. Goldberg, ACS Annual Meeting of the Florida Section, Orlando, Florida (1993).

68. "Radiation Damage on Light Output of Scintillator Polymers," G.T. Schueneman, J.P. Harmon, E.P. Goldberg and E. Biagtan, ACS Annual Meeting of the Florida Section, Orlando, Florida (1993).

69. "Summary of Scintillator Polymers and Dyes," J.P. Harmon, G.T. Schueneman, and E. Biagtan, DOE SSC Laboratory, Dallas, Texas (1993). Invited Talk.

70. "Radiation Effects on Optical Polymers," J. Harmon, G. Schueneman, and E. Biagtan, Hoechst Celanese Fiber Division, Summit, New Jersey (1992). Invited Talk.

71. "Scintillator Materials for Use at the SSC," J. Harmon, E.P. Goldberg, G. Schueneman and E. Biagtan, University of Western Michigan, Kalamazoo, Michigan (1992). Invited Talk.

72. "Optimizing Scintillator Polymers for Radiation Hardness," J. P. Harmon, J. Gaynor and A. Taylor, Raddam Conference, Florida State University, Tallahassee, Florida (1992).
"Radiation Damage to Thermoplastics and Thermosetting Resins," J. Harmon, Materials Science Department, University of Washington, Seattle, Washington (1991). Invited Talk.

73. "Optical Properties of Polymers; The Effect of Ionizing Radiation," J. Harmon, North Carolina State University, Raleigh, North Carolina (1991). Invited Talk.

74. "Synthesis, Processing and Performance of Radiation Resistant Polymer Composites," J. Harmon, University of Texas, San Antonio, Texas (1990). Invited Talk.

75. "Radiation Hard Scintillating Fibers," J. Harmon, Dow Corning Corporation, Midland, Michigan (1990). Invited Talk.

76. "The Effects of Ionizing Radiation on Transparency of Optical Polymers," J. Harmon, Florida State University, Tallahassee, Florida (1990). Invited Talk.

77. "Radiation Hard Polymers," J. Harmon, Material Science and Engineering Department, University of Florida, Gainesville, Florida (1989). Invited Talk.

78. "Liquid Transport in Anelastically Deformed Glassy Polymer," J.P. Harmon, S. Lee and J.C.M. Li, Polymer Processing Society, Fourth Annual Meeting, Orlando, Florida (1988).

79. "Fatigue Resistant Anti-Corrosion Coatings," J. Harmon, S. Singleton, and C.L. Beatty, Polymer Processing Society, Fourth Annual Meeting, Orlando, Florida (1988).

80. "Dynamic Mechanical Properties of PVC Plastisols: The Effects of Cure Conditions and Plasticizer Migration," W. Daher, C. Garrett, J. Harmon, and C.L. Beatty, Polymer Processing Society, Fourth Annual Meeting, Orlando, Florida (1988).

81. "Sorption of Liquids into Foams and Subsequent Changes in Mechanical Properties of the Foams," J. Harmon, D. Wingard, D. Bennett, J. Dixon, W. Williams, and C.L. Beatty, Polymer Processing Society, Fourth Annual Meeting, Orlando, Florida (1988).

82. "Nuclear Magnetic Resonance Imaging of Flow During Polymer Extrusion," T.H. Mareci, J. Harmon, and C.L. Beatty, Polymer Processing Society, Fourth Annual Meeting, Orlando, Florida (1988).

83. "Alcohol Transport in Deformed PMMA," J. Harmon, Florida Advanced Materials Society, Palm Coast, Florida (1987).

84. "Microhardness of Polymer Composites," J. Harmon, R. Crawford and C.L. Beatty, Florida Advanced Materials Society, Palm Coast, Florida (1987).

85. "Diffusion in Deformed Polymer Matrices," J. Harmon, Southeastern Section, American Chemical Society, Orlando, Florida (1987).

86. "Study of Anti-Corrosion Coatings for Stainless Steel," J. Harmon and C.L. Beatty, Southeastern Section, American Chemical Society, Orlando, Florida (1987).

87. "The Effect of Sorbed Hydrocarbons on Polymeric Foam Properties," J. Harmon, W. Williams, J. Dixon and C.L. Beatty, American Chemical Society, Orlando, Florida (1987).

88. "Use of Deformation in Different States of Stress to Bias the Glass Transition Temperature and Relaxation Behavior," Y. Katz, J. Harmon and C.L. Beatty, The Society of Rheology, Atlanta, Georgia (1987).

89. "Enthalpy Recovery in Polystyrene," J. Harmon, New York Academy of Science, New York, New York (1980).

90. "Penetrant Transport in Deformed Polymers," J. Harmon, Syracuse University, Syracuse, New York (1980). Invited Talk.

Teaching Experience:

2005	**Spring**	CHM 4932 Polymer Physics
		CHM 6938 Polymer Physics
	Summer	CHM General Chemistry
2004	**Spring**	CHM 4932 Polymer Chemistry
		CHM 6938 Polymer Chemistry
	Summer	CHM General Chemistry
	Fall	CHM 2045 General Chemistry for Engineers
2003	**Spring**	CHM 4932 Polymer Physics
		CHM 6938 Polymer Physics
	Summer	CHM 2045 General Chemistry
	Fall	CHM 2045 General Chemistry for Engineers
2002	**Spring**	CHM 5931 Materials Chemistry
		CHM 4932 Polymer Chemistry
		CHM 6938 Polymer Chemistry
	Summer	CHM 2045 General Chemistry
	Fall	CHM 2045 General Chemistry for Engineers
2001	**Spring**	CHM 4932 Materials Chemistry
	Summer	CHM 6938 Polyurea Chemistry
		CHM 2021 Chemistry for Today Laboratory Discussion section
	Fall	CHM 2045 General Chemistry for Engineers
2000	**Spring**	Administrative Assignment
	Fall	CHM 6938 Polymer Chemistry
1999	**Spring**	CHM 6938 Applied Polymer Physics
	Summer	CHM 2045 Undergraduate General Chemistry
	Fall	CHM 6938 Polymer Chemistry
1998	**Spring**	CHM 2041 Undergraduate General Chemistry
	Summer	CHM 2041 Undergraduate General Chemistry
	Fall	CHM 5452 Polymer Chemistry
		CHM 6938 Polymer Chemistry
		CHM 2041 General Chemistry Recitation Section
1997	**Spring**	CHM 2041 Undergraduate General Chemistry
	Summer	CHM 2041 Undergraduate General Chemistry
	Fall	CHM 5452 Polymer Chemistry
		CHM 6938 Polymer Chemistry
1996	**Spring**	CHM 5724 Applied Polymer Physics Distance learning
		CHM 6938 Applied Polymer Physics Distance learning
	Summer	CHM 2041 Undergraduate General Chemistry
	Fall	CHM 5452 Polymer Chemistry
		CHM 6938 Polymer Chemistry

1995	**Spring**	CHM 2041 Undergraduate General Chemistry
	Summer	CHM 2041 Undergraduate General Chemistry
	Fall	CHM 5452 Polymer Chemistry
		CHM 6938 Polymer Chemistry
1994	**Fall**	CHM 5452 Polymer Chemistry
		CHM 6938 Polymer Chemistry

<u>Students and Post Doctoral Researchers Advised at University Of South Florida:</u>

Ph.D. Degrees:

1. LaNetra Clayton Ph.D 2005
"The Design, Fabrication and Characterization of Polymer Carbon Nanotube Nanocomposites"
Now at MDS Waters, Inc, St. Petersburg, Florida

2. Gita Irranipour Ph.D. 2004
Co-Advisor with Dr. Luis Garcia Rubio in Chemical Engineering
"Light Scattering Model for Aggregation Process"

3. Shelli Soltis Tatro Ph.D. 2003
"Irradiation Effects on Polymers Via MALDI Analysis"
Now at MDS Waters, Inc., St. Petersburg, FL.

4. Ken Heffner Ph.D. 2003
"Irradiation Effects on Stereospecific PMMA; MALDI, FTIR Microscopy"
Now at Honeywell, Inc, Largo Florida.

5. Melissa Foster Evans Ph.D 2003
"Characterization and Formation of Particulate Nitrate in a Coastal Area"
Co-Advisor with Dr. Noreen Poor in Public Health
Now at MDS Waters, Inc. St. Petersburg, FL

6. Michael Charles Murray Ph.D. 2002
"Aqueous Closed Loop Method for Sacrificial Metal Use"
Co-Advisor with Dr. Clausen at University of Central Florida
Now at Memtec America in Deland Florida

7. Kamal Ayoub Ph.D. 2001
"Irradiation Effects on PE via FTIR Microscopy"
Now at Tyco Healthcare Kendall, Deland, FL.

8. Glen Gates Ph.D. 2001
"Material Properties of 2, 3-Dihydroxypropyl Methacrylate and 2-Hydroxyethyl Methacrylate Hydrogels"
Now at Detroit Institute for Art, Detroit, MI.

9. Shayla Emran Ph.D. 2000
"Thermal Properties of Dendrimers and Dendrimer Gels"
Now at American Technical Ceramics, Jacksonville, FL

10. Patti Bertolucci Dare Ph.D. 1998
“Viscoelastic Properties of Fiber Cladding Materials”
Now at Honeywell Inc, Largo, Florida

11. Dr. Hang Gao Ph.D. 1997
"Viscoelasticity of p-alkylated and Halogenated Polystyrenes"
Now at General Electric, Pittsfield, Massachusetts

Current Graduate Students:

1. Ken Kull Ph.D. Program
Ultra soft thermoplastic polyurethanes

2. Kadine Mohomed Ph.D. Program
Nanocomposites and biocompatible hydrophilic polymers

3. Krystal McCann Ph.D. Program
Metal organic rotaxane polymer composites

4. Shisi Liu Ph.D. Program
Polyolefin carbon nanotube composites

5. Bernard Knudsen PhD. Program
In situ Zeigler Natta synthesis of carbon nanotube composites

6. Oscar De La Cruz PhD. Program
Polymer composites with enhanced shielding against gamma radiation

Undergraduate Students:

1. Steven Girard 2005
REU student, metal organic rotaxane composites

2. Fazir Mohammed 2005
Data analysis

3. Diana Ouellette 2004
REU student SiC polymer nanocomposites

4. Kristen Butler 2003-2004
Polymer Diffusion

5. Bernard Knudsen 2003-2004
Thermal analysis

6. Peter Dow 2003
REU student, SiC polymer nanocomposites

7. Jason Kuczynski 2002
Nanocomposites

8. Kartik Pandya 2002-2003
Polymer Synthesis

9. Ryan Copley 2001- 2003
Thermal Management

10. John D'Angelo 2001-2003
Radiation Effects

11. Lorraine Mendez 2001- 2001
Diffusion in Polymers

12. Lana Halabi 2000- 2001
Radiation Effects on Polymers

13. Tina Marie Smith 1997-1999
Thermal Analysis

14. Timothy McGory 1997
Plastisol Research

15. Patrick Stevens 1996
Monomer Synthesis

16. Kevin White 1995
Thermal Analysis of Dendrimers

Post Doctoral Researchers:

1. Dr. Timofey Gerasimov 2003-2005

2. Dr. Patricia Muisener 2001-2003

Graduate Committee Participation:

Ph.D. Degrees:

1. Anton Byelyayev Electrical Engineering Ph.D. 2005
"Stress Diagnoosis and Crack Detection in Full-Size Silicon Wafers Using resonance Ultrasonic Vibrations"

2. David Flanigan Chemistry Ph.D. 2004
"Studies in Rhodium Catalyzed Intramolecular C-H Insertion of Amino Acid Derived α–Diazo–(α–Substituted)-Acetamides and its Application Toward the Total Synthesis of *clasto*-Lactacystin β–Lactone"

3. Bart Heldreth Chemistry Ph.D. 2004
"N-Thiolated Beta-Lactams: Chemistry, SAR and Intracellular Target of a Novel Class of Antimicrobial and Anticancer Agents"

4. Jianjiang Lu Chemistry Ph.D. 2004
"Crystal Engineering of Metal-Carboxylate Based Coordination Polymers"

5. Brian Moulton Chemistry Ph.D. 2003
"Intelligent" Design of Molecular Materials: Understanding the Concepts of Design in Supramolecular Synthesis of Network Solids"

6. Robert Mamazza, Jr. Electrical Engineering Ph.D. 2003
"Ternary Spinel Cd_2SnO_4, $CdIn_2O_4$, and Zn_2SnO_4 and Binary SnO_2 and In_2O_3 Transparent Conducting Oxides as Front Contact Materials for CdS/CdTe Photovoltaic Devices"

7. Michelle L. Janowiak. Chemical Engineering Ph.D. 2003
"Dynamic Model for the Interpretation of Optical Sensors"

8. Veneet Shastry Chemical Engineering Ph.D. 2003
"Spectroscopic Techniques for Continuous Monitoring of Emulsion Polymerization Reactions"

9. Jeung-Yeop Shim Chemistry Ph.D. 2003
"Studies on Antibacterial Activities of *N*-Thiolated β-Lactams and Their Polymeric Nanoparticles Against MRSA"

10. Chad Slawson Chemistry Ph.D. 2002
"Characterization of Novel Single Sugar Protein Modifications in Proliferative Systems"

11. Talal F. Al-Azemi Chemistry Ph.D. 2002
"Synthesis and Characterization of Novel Biodegradable Polymeric Materials"

12. Heather L. Ahlborn Chemistry Ph.D. 2002
A theoretical description of the vibrational spectroscopy of liquids / by Heather L. Ahlborn

13. Craig Bertolucci Chemistry Ph.D. 2001
"1H Nuclear Magnetic Resonance Investigations of the Paramagnetic Derivatives of the Metalloproteins Parvalbumin, Fixl, and Aminopeptidase"

14. Andres Cardenas Chemical Engineering Ph.D. 2001
"A Study of Spectroscopic Techniques for the Characterization of Concentrated Particle Dispersions : Multiple Scattering"

15. Maria Celis deArc Chemical Engineering Ph.D. 2000
"Studies of Initial Conditions in Emulsion Polymerization reactors"

16. Heidi Kay Chemistry Ph.D. 1999
"Recovery of Fractal and Solute Dimensions from Fluorescence Quenching in Liquids"

17. Noel Neuman Chemical Engineering Ph.D. 1999
"Analysis of Operation in Multizong Autoclave Reactors for LDPE Production"

18. Seema Mohammed Amin Chemistry Ph.D. 1998
"Finite Sink Parametrization of Flourescence Quenching in Mixed Solvent Karkain"

19. Enfei He Chemistry Ph.D. 1998
"Design, Syntheses, and Characterization of Electroactive Supramolecular Metallodendrimers Possessing BIS(2, 2':6',2"-Terpyridine)Ruthenium(II) Connectivity"

20. William Martin Barrett Environmental Engineering Ph.D. 1998
"Determination of the Effect of Exposure to Gasoline Components on a High Density Polyethylene Geomembrane Using the Comprehensive Test System"

21. Venkatraj Venkatrao Narayanan Chemistry Ph.D. 1997
"Design, Syntheses, Characterization, and Molecular Recognition Based Supramolecular Chemistry of Novel, Electroactive, Anthraquinonoid Dendrimers".

22. Sylvia Hsiao-Yun Chang Chemical Engineering Ph.D. 1996
"Modeling and Analysis of Fiber Optic Sensors"

23. Kevin Shannon Chemistry Ph.D. 1995
"Synthesis, Characterization and electrochemistry of poly (emeraldine styrenesulfonate) : an Electrically Conductive, Water-soluble, Polymeric Blend"

24. Howard Wong Chemical Engineering Ph.D. 1995
'Sorption of Organic Vapors by Polymers Using a Piezoelectric Microbalance"

M.S. and M.A Degrees:

1. Uttam Chandra Bandugula Mechanical Engineering M.A. 2004
"Synthesis and characterization of polymer nanocomposites"

2. Jessica L. Wilson Physics M.S. 2004
"Synthesis and Magnetic Properties of Polymer Nanocomposites"

3. Leslie Ann Morales Chemistry M.S. 2003
"Crystal Engineering of Binary Compounds Containing Pharmaceutical Molecules"

4. Mubitcel Moorefield M.A. 1998
Review Paper, "Thermal Analysis of Dendrimers"

Current Ph.D. Committees:

1. Olesea Gherco Member Chemistry

2. Kerriann Greenhalgh Member Chemistry

3. Helen Wang Member Chemistry

4. Sampath Abeylath Member Chemistry

5. Julio Garay Member Chemistry

6. Phasha Khan Member Chemistry

7. Ruizhi Wu Member Chemistry

8. Surbhi Bhatt	Member Chemistry
9. Fushang Cui	Member Civil Engineering
10. Lan Yao	Member Civil Engineering
11. Fushang Cui	Member Civil Engineering
12. Lan Yao	Member Civil Engineering
13. Parshuram B. Zanty	Mechanical Engineering
14. Prasamna Mahawela	Member Electrical Engineering
15. Young Min Ju	Member Biomedical Engineering
16. Mile Beamguard	Member Civil Engineering

***Graduate Students Advised at University of Florida*:**

1. Dr. E. Biagtan Ph.D. 1995
"Effects of Gamma Radiation on Polymer Degradation and Surface Graft Polymerization"
Now at Guidant Company in Temecula, California

2. Mr. Gregory Schueneman M.S. 1994
"Radiation Stability of Polymers for High Energy Radiation Detectors"
Ph.D. University of Massachusetts, Amherst, Massachusetts
Chairman of the Adhesion Society
Now at Henkel Corporation, Rocky Hill, CT.

3. Dr. Justin Gaynor M.S. 1992
"Optimal Materials for Use in Fluorescent Optical Fibers at the Superconducting SuperCollider "
Now at Texas Instruments, Dallas, Texas

4. Dr. Anne Taylor Gaynor M.S. 1992
"Radiation Resistant Materials for Use in the Superconducting Super Collider"
Now a Home Maker in Dallas, Texas

5. Ms. Ami Jhaveri M.S. 1991
"Polymer-Dye Compositions for Improved Scintillation Counters"
Now at Vasu Chemical Company, Bombay, India

6. Mr. Tushar Jhaveri M.S. 1990
"Optically Radiation Resistant Polymeric Scintillator Base Materials"
Now at Vasu Chemical Company, Bombay, India

USF Governance Activities:

Chemistry Department Service:

Administrative Service:

2000-2004	Graduate Coordinator

Committee Service:

2005	Chair of Departmental Advisory Committee
2000-2004	Graduate Council
2002-Present	Recruiting Committee
2001-2003	Chairman Graduate Council
2001	Faculty Graduate Retreat Committee
2001	Chairman of the Recruiting Committee
2000-2002	Chemistry Building Committee
2000	Chair of Departmental Advisory Committee
1997-2000	Chair Instrument Committee
1996-2000	Faculty Development Committee
1995-2000	Library Committee
1995-96	Seminar Committee
1995-2003	Chairman's Advisory Committee

Faculty Searches:

2003	Chair of Search Committee for Assistant Chair
2002	Chair of Search Committee for Assistant Chair
2000	Chair of Search Committee for Assistant and Associate Professor
1999	Chair of Search Committee for Department Chair
1998	Chair of Search Committee for Materials Polymer Synthesis
1996	Search Committee Member for Two Tenure Track Faculty Members

Other Departmental Service:

2004	Mechanical Engineering Search Committee
1999	Physics Search Committee
1999	Microelectronics Search Committee
2000	Physics search Committee

USF College of Arts and Sciences Service:

2004	Grievance Committee
1996-2004	Diversity Committee
2001-2004	Diversity Committee Chair
2003-2004	Chair of Search for Faculty Enrichment Program
2002-2003	Chair of Search for Faculty Enrichment Program
2001-2002	Chair of Search for Faculty Enrichment Program
1995-1996	Chair Faculty Development Committee

Awards and Recognition:

Invited to Deliver Opening Fluorine in Coatings V, International Conference in Orlando Florida (2003)

Honeywell University Research Award (1999).

Research and Creative Scholarship Award, Division of Sponsored Research, University of South Florida (1997)

Research and Development Awards, Division of Sponsored Research, University of Florida (1989, 1990, 1993)

Research Cited in New Technology Week, April 22, 1991

Allied Chemical Fellow, University Of Rochester, 1978-1980

Cum Laude, Mercyhurst College

Full Honors Scholarship, Mercyhurst College

Professional Society Memberships:

Member of Materials Research Society (2001 to present)

Member of the American Physical Society (2002 to present)

Member of the Institute for Biomolecular Science, University of South Florida (1993-2000)

Member of the Center for Molecular Design and Recognition, University of South Florida (1997-2000)

Member of the Society of Plastics Engineers (1985 to present)

Member of American Chemical Society (1990 to present)

- Member of the American Chemical Society Division of Polymer Chemistry (1990 to present)
- Member of the Organizational Committee of the American Chemical Society Division of Polymer Chemistry (1997-2000)
- Member of American Chemical Society Division of Polymer Materials Science and Engineering (1990 to present)

Member of North American Thermal Analysis Society (1995-2000)

Technical Reviewer for Journals:

Journal of the American Chemical Society

Journal of Applied Polymer Science

Polymer

Polymer Engineering and Science

Macromolecules

Journal of Polymer Science Part B: Polymer Physics

Journal of Materials Research

Advanced Functional Materials

Advanced Materials

Carbon

Journal of Physical Chemistry

Macromolecular Rapid Communications

Journal of the American Ceramic Society

Industrial & Engineering Chemistry Research

Journal of Lightwave technology

Radiation Physics and Chemistry

ASCS Symposium Series Articles

Proposal Review Panels:

NSF Advisory Panel for SBIR/STTR Natural Biomaterials, April 12, 2004.

NSF Advisory Panel for Biosystems at the Nanoscale, NER, January 13-14, 2005.

NSF Advisory Panel for SBIR/STTR Natural Biomaterials, March 17, 2004.

NSF Advisory Panel for Biosystems at the Nanoscale, NER, January 27-28, 2004.

NSF Advisory Panel for Biosystems at the Nanoscale, NIRT, January 5-6, 2003.

NSF Advisory Panel for Biosystems at the Nanoscale, NIRT, March 11-13, 2002.

NSF Advisory Panel for Biosystems at the Nanoscale, NIRT February 5-6, 2001.

Proposals Review Agencies:

Reviewer for National Science Foundation

Reviewer for Petroleum Research Grants

Reviewer for US Civilian Research and Development Foundation for the Independent State of the Former Soviet Union

Reviewer for Research Grants Council of Hong Kong

Reviewer for International Science and Technology Center

Reviewer for NASA EPSCoR

Netherlands Organization for Scientific Research

Textbook Reviews:

General Chemistry Houghton Mifflin

General Chemistry John Wiley and Son

Symposium Chairs:

FAME, American Chemical Society Symposium Organizer, Industrial and Academic Advances in Polymer Science in Florida, Orlando, Florida, May 6-8 (2004)

International ACS Symposium Organizer, Optical Polymers: Advances in Optical Fibers, ACS, New Orleans, Louisiana (1999)

Symposium Chair, High-Performance Polymers, Florida ACS Meeting, Orlando, Florida (1993)

Symposium Chair, Polymer Processing Society 4th Annual Meeting, Orlando, Florida (1988)

Service to Florida and Tampa Bay Community:

2000 Florida American Chemical Society Award Committee Member

International and Local Science Fair Judging

High School Students Science and Engineering Summer Laboratory Internship Program, 1995, 1996, 1997.

Chemathon for Local High School Students, 1995, 1996, 1997.

Great American Teach-In, Tampa Palms Elementary School, 1995 and 1996.

Women and Minorities in Science Efforts:

Participated as an NSF STARS Mentor, 2002-2005.

Recruiting Minorities in Science, Hillsborough County High School Students Visit to USF, July, 2001.

City of Tampa Elementary School Minority Tour, June, 1997

USF Institute for Biomolecular Science Summer Program for Minority Students,
Panelist, 1996 and 1997

Polymer Laboratories Tour for "Town and Gowns", local Tampa women's group, 1997

1997 USF Governor's Summer Leadership Program for Young Women's Shadow Day
Women in Science in Tampa meeting participant, 1996

Visiting Speaker for Course, WST 4350, Women in Science, Women's Study Department, USF, 1996

Girls + Math + Science = Success, for grade school in Clearwater, Florida, 1995

USF University-wide seminar organizer:
Speaker: Dr. Mary Krenzeski, Eastman Kodak, "Women in Science, is There a Glass Ceiling?" 1995

"Lifting the Veil" panelist for women in science discussion, USF, 1995