

TERRY BONE

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Chemistry Department
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EDUCATION:

Ph.D. in Chemistry, May 1990, University of Missouri, Rolla, Rolla, Missouri, GPA 3.68/4.00

Dissertation Title: Polymer Synthesis and Characterization

- Synthesized a semiconducting coupling agent based on aniline to enhance adhesion of polyaniline to glass substrates.
- Investigated degradation of injection molded PBT and PC of regrind and molding cycles using DSC and GPC.
- Developed BASIC software and assembled hardware interface with Apple I+ for GPC, (gel permeation chromatography) data collection and analysis.

M.S. in Chemistry, 1979, University of Missouri, Rolla, Rolla, Missouri, GPA 3.64/4.00

Master's Thesis Title: Microemulsion Polymerization

- Determined the phase boundaries for W/O microemulsions containing methyl acrylate and methyl methacrylate.
- Investigated the effects of composition and additives on molecular weight of polymers obtained from microemulsions.
- Determined physical structure of microemulsion polymers by use of SEM. B.S. in Chemistry, 1976, GPA 3.41/4.00

PROFESSIONAL DEVELOPMENT COURSES:

Computer Graphics Short Course-UMR, 1981

CAD/CAM Short Course-UMR, 1981

Public Speaking Short Course-Louisville, KY, 1980

Problem Solving and Decision Making-Louisville, KY, 1980

Light Scattering Short Course-Clarkson College, 1979

Fundamentals of Latex Technology-Lehigh University, 1979

Waters Liquid Chromatography School, Milford, MA, 1979

AWARDS

WP Tappmeyer Award

2000-2001, 2005-2006, 2008, 2018

College of A & S Excellence in Teaching Award

2005, 2006

ACADEMIC EXPERIENCE:

Teaching Professor, MST, 2020-present

Associate Teaching Professor, MST, 2015-2020

Taught 2289/2219/2229 organic labs with full responsibility for lectures, tests & grading.

Instructor, University of Missouri-Rolla, Rolla, Missouri, 1990-2015

- Taught freshman chemistry 1310, freshman labs 1319 and qualitative analysis 1510, with full responsibility for lectures, tests and grading.
- Supervised running of general chemistry stockroom.
- Assisted in teaching S.T.I.C. (Science Teaching with In-Classroom Computers) course, Summer 91-93.
- Taught qualitative analysis, 1510 with full responsibility for lectures, tests and grading, 1988-1989.
- Research Assistant, University of Missouri-Rolla, Rolla, Missouri, 1981-1990
- Familiar with operation of IR, FTIR, UV/VIS, NMR, GC, HPLC, GPC, DSC, AA, Apple II+(programming) and Macintosh computers. Experience in repair and maintenance of GC, HPLC and DSC.
- Teaching Assistant, University of Missouri-Rolla, Rolla, Missouri, 1981-1990
- Taught quantitative analysis labs 1559, organic labs 2289, 2219, 2229, instrumental analysis labs 4510, freshman recitation sections 1310, organic II lecture 2220.

NON-ACADEMIC EXPERIENCE:

Polymer Research Chemist, Celanese Polymer Specialties Company, Jeffersontown, KY, 1978-1981

Determined adsorption isotherms on 'cleaned' latexes for various surfactant types and compositions.

Correlated adsorption results to emulsion stability.

Investigated methods of rate enhancement for reduction of free monomer in emulsion polymerization.

Assembled system for LALLS/GPC analysis of water soluble guar polymer derivatives.

Developed procedures for absolute molecular weight analysis. Summer Research Student, Celanese Polymer Specialties Company, 1977-1978

Determined phase boundaries and effects of formulation variables on stability of aqueous polymer microemulsions.

Investigated causes of viscosity loss in aqueous polymer microemulsions during long term storage.

PROFESSIONAL ACTIVITIES:

ACS (American Chemical Society)-Schrenk Society-local ACS student affiliate faculty advisor

COLLEGE ACTIVITIES:

Triangle Fraternity (Alumni)

GDI-MST Independents Association- (Currently Serving as Faculty Advisor)

Phi Kappa Phi, National Scholastic Honor Society

HOBBIES:

Music (Piano), Horticulture, Bicycling, Canoeing, Reading

PUBLICATIONS:

1. J. O. Stoffer and T. Bone, "Polymerization in Water in Oil Microemulsion Systems Containing Methyl Methacrylate", *J. Dispersion Sci. and Technol.*, 1(1), 37 (1980).
2. J. O. Stoffer and T. Bone, "Polymerization in Water in Oil Microemulsion Systems I.", *J. Polym. Sci., Polym. Chem. Ed.*, 18(8), 2641-8 (1980).
3. J. O. Stoffer and T. Bone, "Polymerization in Water in Oil Microemulsion Systems II.", *J. Dispersion Sci. and Technol.*, 1(4), 393-412 (1980).
4. Terry Bone and J. O. Stoffer, "Use of the Apple II+ Personal Computer for GPC Data Collection and Analysis", *J. Water Borne Coatings*, 6(3), 24 (1983).
5. B. R. Vijayendran and T. Bone, "Absolute Molecular Weight Distribution of Guar by Size Exclusion Chromatography and Low-Angle Laser Light Scattering", *Carbohydrate Polymers*, 4(4), 299 (1984).
6. Terry Bone and J. O. Stoffer, "Silane Coupling Agents with Polyaniline", *Polym. Mat. Sci. and Eng.*, 64, 169 (1991).

PRESENTATIONS

"Student Multistep Synthesis Projects" 4/13/17, ppt talk given to Schrenk Society MST

"Chemistry Glassware" 2/2/15, ppt talk given to Schrenk Society MST