

MCSWAIN ENGINEERING

An  Company

3320 MCLEMORE DRIVE
PENSACOLA, FLORIDA 32524-0888
(850) 484-0506

AMY MEYERS WELLS, Ph.D.

Curriculum Vitae

PRIMARY INTERESTS:

Chemical composition, non-destructive characterization, physical properties and failure analysis of polymeric and non-metallic materials

EDUCATION:

- 2000: University of West Florida – Bachelor of Science in Chemistry
- 2005: Georgia Institute of Technology – Doctor of Philosophy in Chemistry
Ph.D. Dissertation Title: “Design and synthesis of metal functionalized poly(norbornenes) for potential use in electro-optical devices”

EXPERIENCE:

- | | |
|-----------------|---|
| 2008 to Present | Polymer Chemist Consultant
McSwain Engineering, Inc.
Pensacola, Florida |
| | Analyze chemical composition and chemical and physical properties of failed and accident-related plastic components. |
| 2008 | Visiting Chemistry Lecturer
University of West Florida
Pensacola, Florida |
| | Taught multiple sections of General and Organic Chemistry lecture and laboratory courses. Developed new procedure for laboratory experiments. |

2005 to 2007 Senior Process Engineer
Intel Corporation
Hillsboro, Oregon

Organized and supervised daily activities for 32-person module to improve quality, cycle time, and yield by analyzing metrology and chemical data and statistical process charts, training technicians, working with vendors to improve instrument reliability, and collaborating with other modules to maximize throughput.

MEMBERSHIP IN TECHNICAL SOCIETY:

American Chemical Society – Polymer Division
American Society for Materials (ASM International)
Failure Analysis Society ASM International (FAS)

PRESENTATION AND CONFERENCE PARTICIPATION:

“Synthesis of Alq₃-Containing Polymers Using Ring-Opening Metathesis Polymerization,” 224th ACS National Meeting, August 2002, Boston, MA.

“Synthesis and Characterization of Alq₃-Functionalized Polymers,” Alvin L. Kwiram Symposium on the Electrical, Optical, and Magnetic Properties of Organic and Hybrid Materials, June 2003, Seattle, WA.

“Design and Synthesis of Polymeric Light-Emitting Diodes,” Southeast Regional Meeting of the ACS, November 2003, Atlanta, GA.

“Design and Synthesis of Metal Functionalized Poly(norbornenes) for Potential Use in Electro-optical Devices,” Organic Thin Films for Photonic Applications Session, 228th ACS National Meeting, August 2004, Philadelphia, PA.

“Contamination Identification of CPVC Pipes using DART Open-Beam Mass Spectrometry and Subsequent Fracture Analysis,” William Carden, Amy Meyers, McSwain Engineering, Inc., Materials Science & Technology Conference, Columbus, OH, October 2015.

“DSC and TGA: Tools for Analyzing the Thermal Characteristics of Polymers,” Dr. Amy M. Wells, Dr. Richard McSwain, PE, and Mr. William Carden, MS, PE, McSwain Engineering, Inc., Materials Science & Technology Conference, Salt Lake City, UT, October 2016.

“Tire Analysis Tools and Techniques,” William Carden and Amy Meyers-Wells, McSwain Engineering, Inc., Materials Science & Technology Conference, Pittsburgh, PA, October 2017.

"The Identification of Plastic Additives in a Failure Analysis Investigation," Dr. Amy M. Wells, Dr. Richard McSwain, PE, FASM, and Mr. William Carden, MS, PE, McSwain

Engineering, Inc. Materials Science & Technology Conference, Portland, OR, September 2019.

“Getting Answers from Off-Gassing – How TGA-IR is Utilized in the Failure Analysis of Polymers,” Dr. Amy M. Wells, Dr. Richard McSwain, PE, FASM, and Mr. William Carden, MS, PE, McSwain Engineering, Inc., ASM International Materials, Applications & Technologies Conference, St. Louis, MO, September 2021.

“Dual Pipeline Explosions: Two Pipelines Meet in the Desert with Explosive Results,” William Carden, Amy M. Wells, and Eric Van Iderstine, McSwain Engineering, Inc., ASM International Materials, Applications & Technologies Conference, New Orleans, LA, September 2022.

“How to Conduct a Laboratory Inspection in a Multiparty Failure Investigation,” William Carden, Amy M. Wells, and Eric Van Iderstine, McSwain Engineering, Inc., ASM International Materials, Applications & Technologies Conference, New Orleans, LA, September 2022.

“Chain of Custody Procedures and Practices for Failure Investigations,” William Carden, Amy M. Wells, and Eric Van Iderstine, McSwain Engineering, Inc., ASM International Materials, Applications & Technologies Conference, New Orleans, LA, September 2022.

“The Burning Question – Identifying Flame Retardants in a Failure Analysis Investigation,” Dr. Amy M. Wells, Dr. Richard McSwain, PE, FASM, and Mr. William Carden, MS, PE, McSwain Engineering, Inc., ASM International Materials, Applications & Technologies Conference, New Orleans, LA, September 2022.

PUBLICATIONS AND REPORTS:

Peer Reviewed

A. Meyers and M. Weck, “Design and synthesis of Alq₃-functionalized polymers,” Macromolecules, 2003, Vol 36, 1766-1768.

A. Meyers and M. Weck, “Solution and solid-state characterization of Alq₃-functionalized polymers,” Chemistry of Materials, 2004, Vol. 16, 1183-1188.

A. Meyers, C. South, and M. Weck, “Design, synthesis, characterization, and fluorescent studies of the first zinc-quinolate polymer,” Chemical Communications, 2004, 1176-1177.

A. Meyers, A. Kimyonok, and M. Weck, “Infrared-emitting Poly(norbornene)s and Poly(cyclooctene)s,” Macromolecules, 2005, Vol. 38, 8671-8678.

Non-Peer Reviewed

A. Meyers and M. Weck, “Synthesis of Alq₃-Containing Polymers Using Ring-Opening Metathesis Polymerization,” Polymer Preprints, 2002, Vol. 43(2), 1134.

A. Meyers, X.-Y. Wang, A. Kimyonok, C. South, X. Zhan, Y.-Y. Cho, B. Domercq, B. Kippelen, S. Marder, and M. Weck, "Metal Quinolate Polymers as Materials in Polymeric Organic Light-Emitting Diodes" Polymeric Materials: Science and Engineering, 2005, Vol. 92, 565.

Patent

Amy Meyers and Marcus Weck, "Metal 8-hydroxyquinoline-functionalized polymers and related materials and methods for making the same," US Patent 7,105,617 B2.

HONORS AND AWARDS:

Ralph K. Birdwhistell Scholarship, 1998-2000

Analytical Award for Excellence, 1999

Solutia Academic Achievement Award, 2000

Outstanding Student of Chemistry Department Award, 2000

Cherry Emerson Fellowship, 2000-2002

GAANN Fellowship, 2000-2001

Molecular Design Institute Fellowship, 2001-2004

CONTINUING EDUCATION:

<u>Course Title</u>	<u>Source</u>	<u>Date</u>
Intro to Handheld XRF – Theory and Safety	Olympus	2018
Get Answers Faster for Battery Failures	Thermo Scientific	2023