

**Eric McClanahan**  
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3758 Cascades Boulevard      Kent, OH 44240      (440)-251-8179 (Cell)

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**OBJECTIVE:** Diligent, accomplished, versatile, and ambitious Polymer Engineering doctoral candidate interested in an industrial PhD-level position with opportunity for advancement.

**EDUCATION:** The University of Akron, Akron, OH  
Doctorate of Philosophy in Polymer Engineering  
Expected Graduation Date: May, 2016

The University of Akron, Akron, OH  
Bachelor of Science in Chemical Engineering  
Polymer Specialization, Minor in Chemistry  
Graduation: May, 2009

**LABORATORY AND PROFESSIONAL SKILLS:**

- **1 combined year of professional research and development experience in a military laboratory setting (Wright-Patterson Air Force Base Coatings Technology Integration Office in Dayton, Ohio)**
- **1 year of professional research and development experience in an industrial laboratory setting (Tesla NanoCoatings, a start-up company based in Massillon, Ohio)**
- **Experience in business and technical writing, which includes collaboration in writing a National Science Foundation (NSF) Phase I SBIR grant, completing a NSF Innovation Corps class for start-up entities, and writing multiple technical reports for the Air Force**
- **Expertise in the use of the nanoparticle additives (sol-gels, carbon nanostructures) for enhancement of coating properties**
- Expertise in a wide variety of coating mechanical tests, including abrasion resistance, adhesion, impact, and tensile properties (Instron, fracture toughness, etc.)
- Proficiency in the formulation of epoxy and polysulfide coating systems
- Proficient in polymer/coating characterization, including but not limited to differential scanning calorimetry and dynamic mechanical thermal analysis, Fourier Transform Infrared Spectroscopy, electron microscopy
- Proficiency in rheology testing of coatings and thermoplastics (polypropylene)
- Expertise in a wide variety of analytical and mechanical tests for thermoplastics (polypropylene), notably tensile testing (uniaxial and biaxial), wide angle X-ray diffraction, and birefringence

**GRADUATE INDUSTRY AND GOVERNMENT WORK EXPERIENCE:**

*Wright-Patterson Air Force Base, Coatings Technology Integration Office, Fairborn, Ohio*

6/2013 – Current    Graduate Research Intern

- Military specification of novel coating systems for aerospace applications
- Formulation of epoxy-polysulfides as flexible primers for aerospace applications
- Research into and grant writing for inorganic clad coatings for aerospace applications

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***Tesla NanoCoatings, North Canton, Ohio***

2/2014 – Current    Graduate Intern

- Research and product development of novel coating systems incorporating carbon nanotubes as anti-corrosion additives
- Applied for NSF Phase I SBIR Grant on behalf of company

**ACADEMIC WORK EXPERIENCE:**

***University of Akron, Polymer Engineering Department, Akron, Ohio***

8/2009 – Current    Graduate Research Assistant

- Extensive experience in coatings and plastics film processing fields:
  - Coatings: formulation, characterization, and mechanical testing of coatings with the addition of functional sol-gels, carbon nanotubes
  - Formulation, synthesis of polysulfide sealant coatings
  - Plastics film processing: processing of polypropylene films for capacitors, biaxial and uniaxial stretching of polypropylene, determination of mechanical-optical orientation of plastic films.

***University of Akron, Institute of Polymer Science and Engineering, Akron, Ohio***

1/2011 – Current    Student Operational Assistant

- Operation of department polymer processing equipment.
- Assistance in industrial, governmental, and academic work projects, laboratory and class demonstrations, departmental teaching assistance.
- Utilized the following polymer processing equipment for tutoring and industrial purposes:
  - Brabender Plastic Mixers, Manual and Automatic Compression Presses, Instron 5567 Tensile Tester, Iwamoto Biaxial Stretcher, Wayne Blown Film Line, and Milacron S Pak 75 Single Screw Extruder.

**OTHER SKILLS:**

- Computer Skills: Microsoft Office, Sigma Plot, Minitab, Instron, ChemCAD.
- Computer Experience: Visual Basic, MatLab, Polymath.
- Excellent interpersonal skills, ambitious, team leader, excellent analytical skills, productive, excellent communicator.

**ACTIVITIES:**

- Member, Society of Plastic Engineers (SPE), 2009 - Present  
Treasurer, University of Akron Student Chapter, 2011-2012
- Hobbies include golfing and music (trombone)

**REFERENCES:**

Available upon request.