

Alexandra D. Easley

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Education

Texas A&M University
Biomedical Engineering
Current Status: Junior
Expected Graduation: May 2017

August 2013 to Present

Research Experience

Engineering Intern- Shape Memory Therapeutics

- Developed polymer formulations for incorporation in vascular medical devices.

February 2016 to Present

Undergraduate Research Volunteer

Spring 2015: Volunteered 15 hrs/week
Fall 2015: Volunteered 25 hrs/week

Synthesis and characterization of shape memory polymers for use in medical devices.

- Synthesized and characterized MRI-visible shape memory nanocomposites.
- Synthesized and characterized custom polyurethane foaming surfactants.
- Synthesized and characterized novel x-ray visible foam coatings.

February 2015 to Present

Undergraduate Research Assistant

Summer 2015: 40 hrs/week

- Modified shape memory polymers chemically to enhance their mechanical properties.

May 2015 to September 2015

Publications

Easley AD, Hasan SM, Frederick J, Maitland DJ. “Thermo-Mechanical Properties and Actuation Profiles of Shape Memory Polyurethane-urea Foams.” In preparation for submission to *Journal of Applied Polymer Science*.

Hasan SM, **Easley AD**, Monroe MBB, Maitland DJ. “Development of Siloxane-Based Amphiphiles as Cell Stabilizers for Porous Shape Memory Polymer Systems.” Submitted to *Journal of Colloid and Interface Science*.

Weems AC, **Easley AD**, Wierzbicki ME, Raymond JE, Gustavson TE, Maitland DJ. “Synthesis of Visible and Near-Infrared Fluorescent Medical Shape Memory Polymers.” Submitted to *RCS Advances*.

Weems AC, **Easley AD**, Szafron JM, Maitland DJ. “Synthesis of MR-visible Shape Memory Polymers for Medical Applications.” In preparation for submission to *Biomaterials*.

Honors and Awards

George Bush Presidential Library Foundation Undergraduate Student Travel Grant

January 2016 to Present

Undergraduate Research Scholar

August 2015 to Present

- Topic: Thermo-Mechanical Properties and Actuation Profiles of Shape Memory Foams to Determine Suitability for Integration into Endovascular Coils
- One of 200 undergraduates and one of 45 juniors admitted into the undergraduate thesis program.

Skills

Software: Matlab, LabVIEW, and Microsoft Office

Experimental: Polyurethane synthesis and gas foaming

Instrumentation: Differential scanning calorimetry (TA Instruments Q200), transmission and attenuated total reflection Fourier transform infrared spectroscopy (Bruker ALPHA infrared spectrometer), tensile testing (MTS Synergie 400 Tensile Test Machine), and thermogravimetric analysis (TA Instruments Q50).