Hayden E. Fowler

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University of Colorado Boulder (CU Boulder) **Doctor of Philosophy in Chemical Engineering**

The University of Alabama in Huntsville (UAH)

Bachelor of Science in Chemical Engineering

Boulder, Colorado GPA: 3.9 Anticipated Graduation: May 2023

Huntsville, Alabama GPA: 4.0

May 2018, Summa Cum Laude



University of Colorado Boulder | Graduate Research Assistant - Boulder, CO September 2018 - present

PI: Dr. Timothy J. White

- Thesis: Functional Mechanical Responses in Liquid Crystal Elastomers
- Tailor mechanical deformation in liquid crystalline polymer networks and elastomers
- Explore electromechanical effects in liquid crystal elastomers

The University of Alabama in Huntsville | Undergraduate Researcher - Huntsville, AL January 2016 - May 2018

PI: Dr. Yu Lei

- Thesis: Investigation of Copper Catalysts for Propylene Epoxidation
- Conducted independent research involving the design, synthesis, and characterization of copper catalysts for propylene epoxidation via molecular oxidation

Cyclotron Institute, Texas A&M University | Undergraduate Researcher - College Station, TX Mav-August 2017

PI: Dr. Greg Chubaryan

- Established design parameters for significant aspects of the heavy ion guide
- Developed a digital interface for remote control of the gas handling system

University of Alabama | Student Research Assistant - Tuscaloosa, AL *July 2013 - May 2014*

PI: Dr. Ryan L. Hartman

• Investigated the use of cyclodextrin on the solubility of methane into water to aid the synthesis of clathrate hydrates in a laboratory for further investigation into their prevention in natural gas lines Student Success Center, UAH | Tutor - Huntsville, AL

August 2015 - May 2018

- Tutored students in a variety of STEM subjects
- Observed and provided feedback to other tutors

Honors College, UAH | Head Tutor - Huntsville, AL

August 2015 - December 2016

• Spearheaded the first tutoring program internal to the Honors College



Fowler, H. E.; Donovan, B. R.; McCracken, J. M.; White, T. J. Localizing Genesis in Polydomain Liquid Crystal Elastomers. Soft Matter. 2020, 16, 330-336.

Donovan, B. R.; **Fowler, H. E..**; Matavulj, V.; White, T. J. Mechanotropic Elastomers. *Angewandte Chemie*. 2019, 131, 1-6.

McCracken, J. M.; Tondiglia, V. P.; Auguste, A. D.; Godman, N. P.; Bagnall, B. N.; Fowler, H. E.; Baxter, C. M.; Matavuli, V.; Berrigan, J. D.; White, T. J. Microstructured Photopolymerization of Liquid Crystalline Elastomers in Oxygen-rich Environments. Advanced Functional Materials. 2019, 1903761.

resentations

"Localizing Genesis in Polydomain Liquid Crystal Elastomers" | Poster

- International Liquid Crystal Elastomer Conference, September 2019 Eindhoven, Netherlands
- Ferroelectric Liquid Crystal Conference, August 2019 Boulder, CO

"Nonlinear Deformation in Liquid Crystal Elastomers" | Poster

• Anseth-Bowman-White Independent Study Poster Presentations, December 2018 – Boulder, CO

"Investigation of Copper Catalysts for Propylene Epoxidation" | Poster

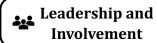
- Higher Education Day, February 2018 Montgomery, AL
- UAH Materials Science Symposium, November 2017 Huntsville, AL
- UAH 3rd Annual Research Horizons Day, April 2017 Huntsville, AL
- 15th Annual Symposium of the Southeastern Catalysis Society, September 2016 Asheville, NC

"The Heavy Ion Guide Gas Handling System: Calculations and Execution" | Poster

• Texas A&M Summer 2017 Undergraduate Poster Session, August 2017 - College Station, TX

"The Effect of α -cyclodextrin on the Solubility of Methane to Aid the Research of Clathrate Hydrates" | Poster

- Intel's International Science and Engineering Fair, May 2014 Los Angeles, CA
- Alabama State Science and Engineering Fair, April 2014 Huntsville, AL
- Central Alabama Regional Science and Engineering Fair, March 2014 Birmingham, AL



GAANN Student Leadership Team, 2019

- Worked as part of a team of GAANN fellows to plan outreach and volunteering events **College of Engineering mentor**, *2019*
- Helped new graduate students to the College of Engineering at CU Boulder navigate their first year
 Department of Chemical and Biological Engineering mentor, 2019
- Helped new graduate students to the Department of Chemical and Biological Engineering at CU Boulder navigate their first year

Honors College mentor, 2015 – 2017

- Guided Honors College freshmen at UAH through their first year of college, assisted in easing the transition from high school to college, and instilled core skills needed to be successful in college Organic Chemistry PASS Leader, 2017
- Planned and led interactive, recitation-style study sessions twice per week



NSF Graduate Research Fellow, 2020-2023

GAANN Fellow, 2018-2020

Dean's Graduate Assistantship, 2018 Highest Academic Achievement, 2018

Outstanding Chemical Engineering Student, 2018

Prevost Research Program Award, 2017 Honors Summer Stipend Award, 2017

Research Horizons Top Undergraduate Poster, 2017

Organic Chemistry Award, 2016

Junior Community Service Award, 2016 **Charger Distinction Scholarship**, 2014

NSF GRFP

Dept. of Chem. Eng., CU Boulder College of Engineering, CU Boulder

Honors College, UAH

College of Engineering, UAH

Honors College, UAH Honors College, UAH

College of Engineering, UAH College of Science, UAH

Honors College, UAH

UAH