

Casey Huettman

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EDUCATION

University of Michigan

Doctoral Student in Chemistry

Cumulative GPA: 3.91/4.00

Ann Arbor, MI

Anticipated May 2029

University of Iowa

Bachelor of Arts in Chemistry, Bachelor of Arts in International Studies, Minor in Spanish

University Honors, High Distinction, Presidential Scholar, Phi Beta Kappa

Cumulative GPA: 3.98/4.00

Iowa City, IA

May 2024

RESEARCH EXPERIENCE

Graduate Researcher, University of Michigan

PI: Professor Stephen Maldonado

Ann Arbor, MI

Sept. 2024-Present

- Developed new methodology for establishing the electrochemical response of liquid metal electrodes
- Established procedure for the formation of intermetallic thin films for use in X-ray reflectivity studies

Undergraduate Researcher, University of Iowa

PI: Professor Johna Leddy

Iowa City, IA

Jan. 2023-Aug. 2024

- Developed methodology to synthesize sulfonated cellulose acetate proton-exchange membranes for use in a magnetically modified ethanol fuel cell
- Characterized ethanol crossover, surface morphology, and electrochemical response of developed membranes using gas chromatography, scanning electron microscopy, and cyclic voltammetry techniques
- Quantified magnetic effects on the hydrogen evolution reaction when used in conjunction with a graphitic carbon nitride semiconductor using electrochemical techniques

Undergraduate Researcher, University of Iowa

PI: Professor Elizabeth Stone

Iowa City, IA

June 2022-April 2024

- Completed quantitative analysis of microscopic pollen concentrations in passive bioaerosol samples from arid grassland climates during the summertime using ImageJ software
- Identified differing pollen genera present in passive bioaerosol samples and established temporal trends
- Collected samples from the *Bioaerosols and Convective Storms* field site in Fort Collins, CO using a Burkard spore sampler and URG medium volume sampler and assisted in analysis preparation

PRESENTATIONS

- Huettman, C., Lazicki, A., Leddy, J., "Sustainable Ion Exchange Membranes for Clean Energy Application in Ethanol Fuel Cells." *18th Annual Research in the Capitol* (Poster), Des Moines, IA, March 2024

WORK EXPERIENCE

Natural Fiber Welding

Research and Development Intern

Peoria, IL

May 2023-Aug. 2023

- Developed a wet-chemical synthesis to produce sustainable and entirely biodegradable fibers for use as a vegan alternative to noble fibers
- Designed and constructed a wet spinning apparatus for successful and timely fiber production
- Characterized as-developed fibers using techniques such as scanning electron microscopy, ADMET material tensile testing, rheometry, and nuclear magnetic resonance
- Operated the CLARUS® fiber welding machinery to produce welded cotton and welded recycled ecowool

TEACHING EXPERIENCE

Graduate Student Instructor, University of Michigan

General Chemistry Lab

Ann Arbor, MI

Aug. 2024-Present

- Oversaw two laboratory sections of General Chemistry I by explaining procedures, assisting with background concepts, and enforcing safety guidelines
- Prepared supplementary materials to assist students with practical and theoretical understanding of lab concepts
- Provided constructive feedback and grades on student pre-lab, post-lab, and data processing assignments.

College Transition Workshop Leader, University of Iowa

Iowa City, IA

General Chemistry I and Principles of Chemistry I

Aug. 2021-Dec. 2023

- Managed two classrooms annually of ~10 college first-years enrolled in General Chemistry I and Principles of Chemistry I
- Developed lesson plans and course materials customized to each class's specific needs to facilitate a discussion-based learning environment
- Provided constructive feedback and grades on student presentations, classwork, and participation

OUTREACH AND INVOLVEMENT

Electrochemical Society Student Chapter at University of Michigan

Ann Arbor, MI

Communications Chair

June 2025 – Present

- Led communications between the ECS Student Chapter and the larger University of Michigan community
- Wrote and submitted periodic articles to the ECS *Interface* highlighting recent chapter activities

Open Heartland

Iowa City, IA

Volunteer

Oct. 2022-Aug. 2024

- Assisted in organizational and administrative tasks to provide community members with resources needed to feed, clothe, and educate themselves and their families
- Managed donations, organized materials, and developed management system for the free exchange of goods between community members in a "free store"
- Assembled multicomponent meals and kitchen-prep materials for distribution to the community
- Assisted in the operation of and worked as a translator for vaccine drives, mobile clinics, and mock interviews
- Conducted all community member relations entirely in Spanish

AWARDS AND HONORS

- ACS Undergraduate Division of Analytical Chemistry Award *Spring 2024*
- Senior Chemistry Alumni Award *Spring 2024*
- Iowa Center for Research by Undergraduates Research Fellowship *Spring 2024*
- Leeper Junior Chemistry Alumni Award *Spring 2023*
- University of Iowa Old Gold Scholar *Fall 2020*
- Cengage Group Scholar *Fall 2020*