

# Kody G. Whisnant

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## Education

**Ph.D. Candidate Chemical Engineering**

Aug. 2020-Present

**M.S.E. Chemical Engineering**

May 2022

University of Michigan

Ann Arbor, MI

**B.S. Chemical Engineering**, Inst. Honors: Cum Laude, Minor: Mathematics

April 2020

Wayne State University

Detroit, MI

## Research Project Experience

**Graduate Research Assistant** | Dr. Nicholas A. Kotov

Department of Chemical Engineering | University of Michigan

Aug. 2020-Present

- Synthesized chiral inorganic nanoparticles assembled into microscale architectures and characterized their chiroptical properties.

**Cornell NanoScale Science & Technology Facility REU Intern** | Dr. Abraham D. Stroock, Hanwen Lu

Department of Chemical and Biomolecular Engineering | Cornell University

June-Aug. 2018

- Utilized conventional photolithography techniques on silicon and glass substrates to develop a MEMS based porous system consisting of high-aspect ratio nanochannels allowing for the observation of the ice-water interface in nanoconfinement.

**Undergraduate Research Assistant** | Dr. Stephanie L. Brock, Da Li

Department of Chemistry | Wayne State University

May 2016-June 2018, Sep. 2018-May 2020

- Synthesized discrete semiconductive and electrocatalytic nanoparticles assembled into hybrid sol-gel films and aerogels tested for the photocatalytic evolution of hydrogen from water utilizing visible light.

## Leadership Experience

Biointerfaces Interlaboratory Committees (BIONIC) Officer: Treasurer

Nov. 2023-Present

Spring Chemical Engineering Graduate Recruitment Committee

Jan.-Mar. 2022 | 2023 | 2024

Fall Chemical Engineering Undergraduate Research Symposium Committee

Jan.-Mar. 2022 | 2023 | 2024

ChEGS Officer: Graduate Recruitment Chair, Symposium Chair, and Secretary

Nov. 2021-Dec. 2023

Michigan Engineering Graduate Three Minute Thesis (3MT) Competition Committee

July-Oct. 2023

Chemical Engineering Graduate Society (ChEGS) Symposium Lead Co-Chair

Nov. 2021-Sept. 2022

Michigan Mentor's: STEMulating Success

Oct. 2021-Jan. 2022

Científico Latino Mentorship Initiative

Aug. 2021-Jan. 2022

## Memberships & Awards

**Center for Complex Particle Systems (COMPASS)**

Sept. 2023-Present

NSF funded collaborative center for theoretical, experimental, and computational researchers who together are developing a systems-level approach to particle-based matter for world-leading energy-efficient manufacturing.

**Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)**

Aug. 2020-Present

**American Institute of Chemical Engineers**

Mar. 2017-Present

- 1<sup>st</sup> Place Catalysis and Reaction Engineering Poster Award: 2019 Annual Conference

Nov. 2019

**Tau Beta Pi: The Engineering Honor Society**

Mar. 2017-Present

**American Chemical Society**

Feb. 2017-Present

- ACS Bridge Travel Award (2019 NOBCChE Annual Conference)

Nov. 2019

**1<sup>st</sup> Place Poster Presentation Award: Distinguished Undergraduate Researcher Workshop**

Sept. 2019

Department of Chemical Engineering and Materials Science, Wayne State University

**Steve and Teri Kurmas Endowed Scholarship**

May 2019

College of Engineering, Wayne State University

**WSU CLAS Undergraduate Research Symposium Poster Presentation Award**

April 2019

- Sievert Family Endowed Scholarship in Research, Internship, Service, and Engagement (RISE)

**North American Catalysis Society, Michigan Chapter**

May 2018-2020

- Outstanding Student Poster Award: 2019 MCS Spring Symposium

May 2019

**Irvin D. Reid Honors College**

Sept. 2015-Dec. 2019

- WSU Gold Scholarship | Scholars Day Award

**ReBUILDetroit** (Building Infrastructure Leading to Diversity)

May 2015-2020

NIH funded research program for underrepresented undergraduate students pursuing STEM degrees.

- President M. Roy Wilson BUILD Scholarship

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## **Teaching Experience and Certifications**

### **Graduate Student Instructor**

Aug.-Dec. 2023

Department of Chemical Engineering, University of Michigan

- ChE 487 – Chemical Process Design: Assisted senior undergraduate chemical engineering students with the Aspen modeling component of their process design course and final design project.

### **Rackham Professional Development Diversity, Equity, and Inclusion Certificate**

May 2022

Rackham Graduate School, University of Michigan

### **BUILD Ambassador/Near Peer Mentor**

July-Aug. 2020

Graduate School, Wayne State University

- Assisted with the Wayne State University programming of the summer portion of the Michigan Louis Stokes Alliance for Minority Participation (MI-LSAMP) Program, which seeks to significantly increase the number of under-represented minority students earning baccalaureate degrees in STEM disciplines and prepare them for entry into graduate STEM degree programs.

### **Research Technician/Program Manager**

June-Aug. 2020

Graduate School, Wayne State University

- Collaborated within a team of four Wayne State University BUILD alum (with degrees in Biological Sciences, Psychology/Linguistics, and Public Health) working with BUILD scholars engaged in a BUILD national cross consortium summer research experience.

### **STEM Peer Mentor**

Aug. 2016-May 2020

Graduate School, Wayne State University

- Prepared and conducted tutoring sessions for BUILD Scholars in general physics, general chemistry, organic chemistry, basic engineering, chemical engineering, calculus, and differential equations.

### **International Mentor Training Program Certification (IMTPC)**

Aug. 2016 | 2017 | 2018 | 2019 | 2020

College Reading and Learning Association, Wayne State University Learning Community Program

## **Volunteer Work & Outreach**

### **University of Michigan Department of Chemical Engineering Undergraduate Open House**

Nov. 2023

- Shared graduate research relating to nanotechnology and experience working in the chemical engineering department with first and second-year undeclared engineering undergraduate students seeking to learn more about chemical engineering as a major.

### **University of Michigan College of Engineering EMERGE**

Oct. 2023

- Assisted with the annual Explore Michigan Engineering Research and Graduate Education (EMERGE) programming which seeks to introduce students from across the nation to Michigan Engineering doctoral programs via a 3-day campus visit consisting of research facility tours, faculty meetings, and department networking events.

### **University of Michigan College of Engineering (UM CoE) Graduate Orientation**

Aug. 2023

- Assisted with annual Welcome and Orientation Week (WOW) events planned by the Office of the Associate Dean for Graduate and Professional Education (ADGPE) for incoming graduate students including a kick-off, campus tours, and a block party.

### **Discover Engineering**

July 2022 | 2023

- Provided 8<sup>th</sup>-10<sup>th</sup> grade students taking part in the UM CoE program for Engineering Camps for Kids a deeper understanding of engineering disciplines through hands-on exercises and tours of research facilities.

### **Xplore Engineering**

June 2022 | July 2023

- Taught 4<sup>th</sup>-8<sup>th</sup> grade students through the UM CoE program for Engineering Camps for Kids how different research labs within the Biointerfaces Institute use engineering to understand disease and find treatments.

## **Selected Research Talks**

**Whisnant, K. G., Alevato, V., Brock, S. L., Kotov, N. A.** Elucidating structure-property relationships of oxidatively assembled metal chalcogenide gels using a graph theoretical approach. Co-presentation given at: Center for Complex Particle Systems (COMPASS) Kick-Off Meeting; 2023 December 1; University of Michigan, Ann Arbor, MI.

**Whisnant, K. G., Lu, J., Manassa, J., Schwartz, J., Hovden, R., Kotov, N. A.** Self-Assembly of semiconductor helices with specific twist counts. Talk given at: AIChE Annual Student Conference; 2023 November 7; Hyatt Regency Orlando, Orlando, FL.

**Whisnant, K. G., Lu, H., Stroock, A.** Development of a MEMS tool to study the physics of water and ice. Talk given at: 2018 National Nanotechnology Coordinated Infrastructure REU Nano-Convocation; 2018 August 7; North Carolina State University, Raleigh, NC.

**Whisnant, K. G., Li, D., Brock, S. L.** Visible light induced photocatalytic hydrogen evolution using a CdS-Ni<sub>2</sub>P hybrid aerogel system. Talk given at: WSU NOBCChE Lectureship Series; 2018 April 5; Wayne State University, Detroit, MI.

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