

James Ho

Student leader and materials researcher focused on students' residential, social justice and academic education

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EDUCATION

Oregon State University Honors College

- Honors Bachelor of Science; GPA: 3.69
 - **Major:** Chemical Engineering, **Minor:** (Chemistry)

Sept. 2019 - Jun 2023

TEACHING EXPERIENCE

Oregon State University

- **Learning Assistant** • *Department of Math, CBEE Department* *Fall 2020, Present*
 - Answered questions for 120 students in Differential Calculus students during Zoom and on E-campus.
 - Led studios with 48 students, held office hours and two guest lectures for Fluids Transport Phenomena.
- **Chemistry Tutor** • *Honors College* *Fall 2021 – Present*
 - Created a Discord server and coded a teaching website for General and Organic chemistry, platforming these services to 5 residential dorms
- **General Chemistry Teaching Assistant** • *Department of Chemistry* *Fall 2020 - Present*
 - Independently taught 6 labs totaling over 100 students and facilitated learning in 7 lecture sections
- **Resident Assistant** • *University Housing and Dining Services* *Fall 2020 - Present*
 - Facilitated a sense of community, ensured a safe living environment, and promoted social justice and residential education for over 2,000 students in 9 living-learning communities.

RESEARCH EXPERIENCE

Oregon State University

- Materials and Discovery Lab** • *Department of Chemistry* *Spring 2021-Present*
 - Projects: Reticular synthesis of chiral MOFs for enantioselective drug separations; value-added carbon dioxide catalysis using ruthenium-MOF (see publication); encapsulating metal-nanoparticles into MOF frameworks for dual-promoting carbon dioxide hydrogenation
 - Publication: **James Ho**, Makenzie T. Nord, Jared Stafford and Kyriakos Stylianou (2022); *Ruthenium-based Metal-Organic Framework Catalyst for CO₂ Fixation onto Epoxides*; *Catalysis Science and Technology*.
<https://doi.org/10.1039/D2CY01170K>
- Subramanian Research Group** • *Department of Chemistry* *Winter 2021-Present*
 - Projects: Assisted a graduate student in synthesizing and characterizing solid solutions to better understand structure-property relationships and assisting in writing a second-author manuscript
- Electrocereamics Group** • *Mechanical, Industrial, and Manufacturing Engineering* *Fall 2021-Spring 2022*
 - Project: Collaborated with an international company to synthesize a new thermoresistant ceramic capacitor within cellphones

SKILLS

- **Laboratory**: materials synthesis, PXRD, TGA, NMR, FT-IR, circular dichroism (CD), UV-Vis, SEM, dielectric measurements, colorimetry, neutron, and optical characterization.
- **Coding languages/software**: Excel, MATLAB, Julia, COMSOL, Origin, HTML, CSS, JavaScript, Python
- **Personal**: American Sign Language (6 years), website design, pedagogy, science outreach

ACTIVITIES

- **LGBTQ-Advocacy**: O-STEM (Out in STEM), Trevor Project Crisis Line Operator *Present*
- **ChemE-Car**: Designing chemical starting reaction for engineered car to compete in AIChE nationals *Present*

HONORS AND AWARDS

- **Goldwater Scholar Nominee**: Nominated to represent OSU nationally for Goldwaters *January 2022*
- **Dianne Finklein Scholarship**: Awarded to 1 RA for contribution to their residential community *May 2021*