James Ho

Corvallis, OR · (702)-824-2869
hojam@oregonstate.edu
https://jameshomies.github.io/hojam/

Inquisitive junior undergraduate researcher interested in exploring the dimensions of chemistry and engineering within inorganic materials and development of practical skills in the laboratory for preparation into graduate programs within material science or material chemistry

WORK EXPERIENCE

RESIDENT ASSISTANT · *UHDS*
SUMMER TERM 2020 - PRESENT

- Peer leader for first year college students that facilitated a sense of community, ensured a safe living environment, and promoted social justice education and residential education for over 500 students overall in the dormitories

SCHOLAR HOUSING ASSISTANT · *UHDS*
SUMMER TERM 2020

- Collaborated with a small team and developed an extensive plan to coordinate different tasks preparing for residence hall transition in accordance with COVID-19 regulations as well as prepped and organized linen for scholar housing guests

TEACHING ASSISTANT · *OSU DEPARTMENT OF CHEMISTRY*
FALL TERM 2020 - SPRING 2021

- Led small break out groups during zoom lectures for the General Chemistry series at OSU, independently taught several small lab sections, held office hours, and facilitated chemistry study groups within the dorms.

LEARNING ASSISTANT · *OSU DEPARTMENT OF MATH*
FALL TERM 2020

- Assisted in the learning for Math 251 students in synchronous remote learning and e-campus modality by answering questions promptly in chat and referring to resources

EDUCATION

HONORS B.S. CHEMICAL ENGINEERING · *OREGON STATE UNIVERSITY*
SPRING 2023

- 3.71/4.00 GPA
- Chemistry minor · Material Science minor

RESEARCH EXPERIENCE

SUBRAMANIAN RESEARCH GROUP
WINTER 2021 - SUMMER 2021

- Assisted a graduate student with properties characterization of novel double perovskites
- Prepared and synthesized several samples through weighing out material, mortar and pestle, and solid-state reactions within ovens
- Analyzed purity and crystallinity through PXRD and prepared pellets for dielectric measurements

MATERIALS DISCOVERY LAB
SUMMER 2021 - CURRENT

- Principal researcher investigating chiral metal-organic frameworks (MOFs) for enantioselective drug separation
- Developed a SOP for FT-IR and Millipore water purification system for new research members
- Synthesized five novel MOFs with the use of dipeptides and pillar analog ligands
- Analyzed novel materials through PXRD, FT-IR, TGA, BET, and SC-XRD

SKILLS AND TECHNICAL SKILLS

- Microsoft Apps (Excel, Sheet, Word)
- MATLAB, Python, Origin
- Chemistry Software (ChemDraw, ChemFinder, CCDC)
- Teaching and Mentorship
- Collaboration and Presentation
- Solid-State Synthesis
- Powder X-Ray Diffractometer
- Thermogravimetric Analysis
- Fourier-Transform Infrared Spectroscopy
- Dielectric Constant Measurements
- Colorimeter
- Learning GC, HPLC and NMR