

Jayden Jones

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Education

University of Michigan - Ann Arbor, August 2023 - expected May 2026

Bachelor of Science in Chemistry

- University honors since December 18th, 2024
- GPA: 3.48/4.0

Prior undergraduate study

Michigan State University - East Lansing, August 2022 - May 2023

- Dean's List

University of Michigan - Flint, August 2021 - May 2022

- Dean's List

Research Experience

Undergraduate Researcher, University of Michigan Chemistry Department

January 2024-Present

Advisor: Professor Stephen Maldonado

- Rehabilitated a non-functional UVISEL 1 spectroscopic ellipsometer to restore daily operational capabilities.
- Authored a precise SOP for the UVISEL 1 that could be used by students/researchers beyond me being in the lab.
- Rehabilitating an atomic force microscope (AFM) for accurate measurements of topography on the nanometer scale.
- Designing and conducting atomic layer deposition (ALD) experiments on Si wafers to determine the number of cycles required for a conformal oxide layer.
- Using AFM to confirm a conformational oxide layer has formed in order to identify how many ALD cycles are needed to form a conformational oxide layer.
- Using ellipsometry to measure an oxide film's thickness in order to identify at what thicknesses an oxide forms a conformational layer.
- Creating a calibration curve of "ALD cycles to oxide thickness" in order to determine the minimum amount of oxide to deposit on a Si wafer for a uniform oxide layer.

Lab Skills

- Nuclear magnetic resonance spectroscopy
- Raman spectroscopy
- Ultraviolet-visible spectroscopy
- Fluorescence spectroscopy
- Fourier-transform infrared spectroscopy
- High-performance liquid chromatography
- Gas chromatography
- Gas chromatography coupled with mass spectrometry
- Column chromatography
- Thin-layer chromatography

- Spectroscopic ellipsometry
- Atomic force microscopy
- Atomic layer deposition
- Schlenk line techniques
- Reflux
- Rotary evaporation

Relevant Coursework

Courses listed are taken at the University of Michigan - Ann Arbor unless otherwise stated

Analytical chemistry track:

- CHEM 241 chemical analysis
- CHEM 242 chemical analysis lab
- CHEM 447 physical methods of analysis
- CHEM 483 advanced methods of physical analysis lab

Organic chemistry track:

- CEM 351 & CEM 352 upper-level organic chemistry I & II (courses taken at Michigan State University)
- CHEM 216 upper-level organic synthesis lab
- CHEM 421 organic drug-design
- CHEM 482 synthesis lab

Other relevant courses:

- CHEM 461 quantum chemistry
- CHEM 462 computational chemistry lab
- CHEM 302 inorganic chemistry

Languages

English

- Native

Chinese (Mandarin Simplified)

- Intermediate-level
- Can read & write (characters & pinyin)
- Can understand & speak