

Zanders Peraza

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EDUCATION

Yale, New Haven, CT

Dec 2029

PhD in Theoretical Chemistry

Florida International University, Miami, FL

Dec 2022

Bachelor of Biological Sciences

Bachelor of Biochemistry

Broward college, Davie, FL

Aug 2019

Associate of Arts

RESEARCH EXPERIENCE

Research Intern (Kavallieratos Lab)

August 2021- June 2023

Florida International University, Miami, FL

- Synthesized organic ligands for use in f-element coordination and extraction.
- Experimentally determined binding constants by fluorescence and ¹HNMR titrations to determine efficacy.
- Theoretically calculated binding constants of organic ligands using DFT.

REU Participant (Gascon Lab)

June 2022- August 2022

University of Connecticut, Storrs, CT

- Elucidated the fragmentative pathway of a porpholactone species by computational methods.
- Calculated geometry optimized structures using Gaussian.
- Deduced chemical mechanisms by semiempirical molecular dynamics

Stockroom Assistant (Biscayne Bay Campus)

Feb 2021- Jan 2022

Florida International University, Miami, FL

- Organized chemical inventory
- Procured solutions
- Ran and prepped experiments for students

TEACHING EXPERIENCE

Lecturer/Adjunct (General Chemistry II Lab)

August 2023- Present

Yale, New Haven, CT

- Supervised general chemistry lab for undergraduate students; helping them
- Attended meetings with other TAs, running experiments beforehand to ensure smooth operation for students.
- Graded papers, advising students of their progress.

Lecturer/Adjunct (Organic chemistry I Lab)

September 2022- December 2022

Florida International University, Miami, FL

- Supervised organic chemistry lab for undergraduate students; helping them to build a strong foundation of laboratory techniques.
- Attended meetings with other TAs, running experiments beforehand to ensure smooth operation for students.
- Graded papers, advising students of their progress.

CONFERENCES & PRESENTATIONS

Waste Management Symposium

March 2022

Department of Energy, Pheonix, AZ

- Co-authored poster "Complexation and extraction of f-elements by Bis- and Tris- Pyrazolyl Extractants"

University of Connecticut REU Poster Symposia

August 2022

UCONN, Storrs, CT

- Authored poster "Quantum Chemistry of Porpholactone Fragmentation: Insights into Mass Spectrometry"

SKILLS

Technical: Gaussian, Molecular Dynamics, Organic synthesis, Experimental Design, NMR

Languages: Python

Soft: Teamwork, Presentation, Communication