Brandi James

Visiting Assistant Professor - The College of Wooster - Wooster, Ohio - LinkedIn

Summary

Trained physical organic chemist with 5+ years of research experience including direct training of over 10 undergraduate and graduate peers collectively in technical characterization and analysis techniques including UV-Vis, NMR, IR, GC-MS, matrix isolation spectroscopies, XRD, and molecular modeling using Gaussian 16.
Led a team of 2-3 peer graduate scholars and implemented a plan of action for the Department of Chemistry NSF-funded research experience to maximize the overall student experience of over 50 undergraduate scholars and their graduate mentors for 4 summers and presented at selected professional development seminars.
Originated an efficient method for 8+ lab staff to be well-informed of new contributions to the field by increasing literature discussions by ~10% per month.

Education

Ph.D. University of Cincinnati, Ph.D. in Physical Organic Photochemistry August 2018 – December 2023

Motivated physical organic chemist with 5+ years of research experience in photochemistry, and synthesis of minimally studied small organic materials (azides) leading to the discovery of fundamental mechanistic pathways and understanding the macroscopic effects of these molecules (solid-state photochemistry).

Trained undergraduate and graduate peers in technical characterization techniques such as UV-Vis, NMR, IR, GC-MS, matrix isolation spectroscopies using UV-Vis and Argon-IR, X-ray crystallography (XRD), and molecular modeling using Gaussian 16.

Directly trained and mentored four (4) undergraduates in conducting research including synthesis and have effectively communicated findings of complex scientific concepts to audiences of various backgrounds.

Proficient in rheology techniques, formulation of gels, Microsoft Office, and handling chemicals and chemical equipment.

Undergraduate Research Associate January 2017 – April 2018
Advisor: Professor, Dr. Dore Meinholtz
Wilmington College, Wilmington, OH

Gained proficiency in technical expertise on multiple characterization techniques such as UV-Vis, NMR, IR, GC-MS Spectroscopies, and Atomic Absorption (AA).

Designed an experimental plan to understand the fundamental components of a single hair strand, and the properties of hair, and test the efficacy of the hair dye removal main ingredient, sodium hydrosulfite, on different color and types of hair strands.

Laboratory Manager | Skill gained as a graduate scholar. May 2022 -
University of Cincinnati | ~20-25 hours per week