Daniel Onyekachi Madukwe, PhD
Science and Technology Building (STB) 425
Department of Chemistry & Biochemistry
University of South Carolina
Email: dmadukwe@email.sc.edu

Education

- **Ph.D., Organic Chemistry**, University of South Carolina, Columbia, SC, USA
- **B.Tech., Industrial Chemistry**, Federal University of Technology, Owerri, Nigeria

Academic Appointments

- **Lecturer, Organic Chemistry** (2023–Present)
  University of South Carolina, Columbia, SC
- **Graduate Instructor & Research Assistant** (2018–2023)
  University of South Carolina, Columbia, SC

Teaching & Service Highlights

- Teach Organic Chemistry I & II; mentor students and teaching assistants
- Recipient, Joseph W. Bouknight Teaching Award (2023)
- Recognized as one of the Top 250 Professors Nationwide on CircleIn (2024 & 2025)
- Recipient, Career Influencer Award, University Career Center (2024)

Teaching Philosophy

- Dedicated to fostering conceptual understanding and problem-solving in organic chemistry through active learning, mentorship, and evidence-based pedagogy.

Research Interests

- Study of non-covalent interactions using molecular rotors and balances

Professional Affiliations

- American Chemical Society (ACS)
- National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE)

Selected Oral Presentations

- NOBCChE National Conference, Sep. 2023 — “Sterically Compressed Hydrogen Bond”
- ACS National Meeting, Aug. 21, 2022 — “Transition State Stabilization by a Single Hydrogen Bond”
- Pfizer Chemistry Connect, Nov. 2021 — “Relationship Between Hydrogen Bond Strength and Transition State Stabilization”

Selected Publications

1. Vik, E. C.; Li, P.; **Madukwe, D. O.**; *et al.* Large Transition State Stabilization from a Weak Hydrogen Bond. *Chem. Sci.*, 2020, 11, 7487–7494
2. Vik, E. C.; Li, P.; **Madukwe, D. O.**; *et al.* Analysis of the orbital and electrostatic contributions to the lone pair–aromatic interaction using molecular rotors. *Org. Lett.*, 2021, 23, 8179–8182
3. Lin, B.; Liu, H.; Scott, H. M.; Vik, E. C.; **Madukwe, D. O.**; *et al.* Transition State Stabilizing Effects of Oxygen and Sulfur Chalcogen Bonds. *Chem. Eur. J.*, 2024