Curriculum Vitae

#### Caroline J. Crowder

Department of Chemistry

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**Education:**

**University of South Florida** August 2022 – Present

Ph.D. Chemistry - Chemistry Education Research

**Florida State University** 2019 – 2022

B.S. Chemistry

**Research Experience:**

**University of South Florida** August 2022 – Present

Advisor: Dr. Jeffrey R. Raker

*Research Area:* Organic chemistry learner reasoning regarding reaction mechanisms and representational competence

**Florida** **State University**  August 2021 – July 2022

Advisor: Dr. Justin Kennemur

*Research Area:* Synthesis of Poly(δ-pinene)

**Florida** **State University**  August 2020 – May 2021

Advisor: Dr. Patrick Eastham

*Research Area:* Open-source software development program for organic chemistry reaction animations

**Publications:**

Crowder, C. J., Yik, B. J., Frost, S. J. H., Cruz-Ramírez de Arellano, D., & Raker, J. R. Impact of Prompt Cueing on Level of Explanation Sophistication for Organic Reaction Mechanisms. *Journal of Chemical Education*, 2024, 101, 2, 398-410. DOI: 10.1021/acs.jchemed.3c00710

Crowder, C. J. & Raker, J. R. Patterns in Explanations of Organic Chemistry Reaction Mechanisms: A Text Analysis by Level of Explanation Sophistication.*Journal of Chemical Education*, 2024. DOI: 10.1021/acs.jchemed.4c01042.

Crowder, C. J., Ward, L. W., Popova, M., Komperda, R., Rotich, F., Raker, J. R. (In preparation). Testing a reciprocal causation model between the Organic chemistry Representational Competence Assessment (ORCA) and academic performance in postsecondary organic chemistry. *Journal of Chemical Education*

**Contributed Conference Presentations:**

\*Presenter

Exploring patterns in learner explanations of organic chemistry

reaction mechanisms using text network analysis

Caroline J. Crowder\* & Jeffrey R. Raker. Presented at the 28th Biennial Conference on Chemical Education (University of Kentucky), Lexington, KY, July 30, 2024

**Positions Held:**

**Graduate Teaching Assistant**  August 2022 - Present

University of South Florida

*General Chemistry lecture: Fall 2022 – Present*

*Organic Chemistry II lab: Summer 2023*

*Organic Chemistry I lab: Spring 2024*

**Private General Chemistry Tutor** August 2020 – May 2022

Florida State University

**Awards:**

USF Department of Chemistry Martin Travel Endowment Award Spring 2024