Dr. Alexandra E. Wolfer

(210) 896-1946 wolfercdat1@gmail.com www.linkedin.com/in/alexandra-wolfer/

EDUCATION

Ph.D.	Dec 2024	University of Florida	Chemistry

Dissertation Title: *Modifications of Bovine Serum Albumin via Toluene and a-Pinene Secondary Organic Aerosol Radicals: An Electronic Paramagnetic Resonance, Mass Spectrometry, and Circular Dichroism Spectroscopy Approach*

Ph.D. Supervisor: Dr. Gail Fanucci
Professor, Department of Chemistry, University of Florida, Gainesville

B.S.	May 2018	Texas State University	Chemistry
Minor	May 2018	Texas State University	Communication Studies

TEACHING EXPERIENCE

Texas State University **San Marcos, TX**

- *CHEM 3410 - Quantitative Analysis - Coordinated labs*
  Fall 2017

University of Florida **Gainesville, FL**

- *CHEM 2045 - General Chemistry 1 - Lecture*
  Fall 2018, Fall 2019, Fall 2020, Fall 2021, Spring 2023, Spring 2024

- *CHEM 2046 - General Chemistry 2 - Lecture*
  Spring 2019, Spring 2020, Spring 2021, Spring 2022

- *IDS 2395 - Why Chemistry Matters - Lecture*
  Fall 2022, Fall 2023, Summer 2023, Fall 2024, Summer 2024

    - Authored learning assessments, lesson plans, and instructional activities
    - Managed teams of up to 10 graduate/undergraduate teaching assistants
    - Lectured diverse audiences from 20 to 350 students every semester
    - Developed distance learning course materials due to COVID restrictions
    - Organized and graded student enrichment activities; familiar with AI algorithms and recognizing when the science is faulty

- Proctored exams; ensured test integrity/followed academic standards
- Facilitated technology-based activities for creating multimedia projects
- Designed both individualized/team instruction to reinforce learning

Texas A&M University – San Antonio **San Antonio, TX**

- *CHEM 1111 - General Chemistry 1 - Lab*
  Summer 2025

- *CHEM 1112 - General Chemistry 2 - Lab*
  Summer 2025

- *Chem 2123 – Organic Chemistry 1 - Lab*
  Summer 2025

- *Chem 2125 – Organic Chemistry 2 - Lab*
  Summer 2025

  - Authored learning assessments, lesson plans, and instructional activities
  - Managed laboratory classrooms up to 25 students
  - Maintained classroom safety standards

RESEARCH EXPERIENCE

Graduate Research Assistant **Aug 2018 - Dec 2024**
University of Florida, Department of Chemistry *Gainesville, FL*
Advisor: Gail Fanucci

- Interpreted production of radical species and subsequent interaction with model biomolecular systems to predict extent of oxidative damage in human systems done by derivative air pollutants
- Designed CW-EPR, LC-MS/MS, CD spectroscopy, and fluorescence methodologies to determine interactions of air pollutants and biomolecules
- Utilized modeling simulation software to study modifications of *in vitro* biomolecules; designed 3-D visual aids of post-oxidized proteins to ensure greater understanding of radical effects

Undergraduate Research Assistant **May 2016 - Dec 2016**
Texas State University, Department of Chemistry *San Marcos, TX*
Professor: Gary Beall

- Quantitatively analyzed formations of novel self-healing polymers using x-ray crystallography techniques; analysis with prime consideration on military applications

- Developed methods for validating clay polymerized films for use in food product samples; learned techniques for working with and reporting usage of sensitive and restricted materials; increased polymer formation by 6%

PRESENTATIONS

Wolfer, A. Investigating the Oxidative Potential of Secondary Organic Aerosols. Presented at the Florida Annual Meeting and Exposition of the American Chemical Society, Tampa, FL. May 2024; Contributed Talk.

Wolfer, A.; Fanucci, G.; White, M.; Han, S.; Basso, K. Oxidative Effects of Secondary Organic Aerosols by Mass Spectrometry and Electron Paramagnetic Resonance Methods. Presented at the Florida Annual Meeting and Exposition of the American Chemical Society, Tampa, FL. August 2022; Poster.

Wolfer, A.; Basso, K. Oxidative Effects of Secondary Organic Aerosols by Mass Spectrometry. Presented virtually at the American Society of Mass Spectrometry Lecture Series. March 2021; Virtual Presentation.

HONORS & AWARDS

B.S. Chemistry, *cum laude,* 2018
BSA Venturing Summit Award, 2018
Lambda Pi Eta (Communications Honor Society), 2016 - present
Alpha Lambda Delta (Freshman Honor Society), 2015 - present

PROFESSIONAL AFFILIATIONS

American Chemical Society, Analytical Division, 2017 - present