

Noah Froelich, Ph.D.

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Education

2019 – 2024	University of Central Florida Orlando, FL Doctor of Philosophy Chemistry (Analytical) Advisor: Andres D. Campiglia, Ph.D.
2019 – 2021	University of Central Florida Orlando, FL Master of Science Chemistry
2015 – 2019	Bowling Green State University Bowling Green, OH University Honors Summa Cum Laude Bachelor of Science 1 st Major: Chemistry 2 nd Major: Forensic Science Specialization: Forensic Examination (Trace and Latent Prints)

Employment

August 2024 – Present	Lecturer Department of Chemistry University of Central Florida Orlando, FL Department Chair: Michael Hampton, Ph.D. Duties: Serve as the Instructor of Record for General Chemistry II Labs and General Chemistry I Virtual Labs. Design General Chemistry II Virtual Labs
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August 2019 –
August 2024

Graduate Student Researcher
Department of Chemistry
University of Central Florida
Orlando, FL
Advisor: Andres D. Campiglia, Ph.D.

Research Projects:

The Analysis of Nylon Microplastic Trace
Evidence with Room-Temperature
Fluorescence Spectroscopy
Investigation of the Photodegradation of
Textile Dyes on Fibers During
Forensic Microscopic Analysis

January 2022 –
August 2024

Graduate Teaching Associate
Department of Chemistry
University of Central Florida
Orlando, FL
Department Chair: Michael Hampton, Ph.D.

Duties: Serve as Instructor of Record for General
Chemistry II Lab and Analytical
Chemistry Lab.

August 2019 –
December 2021

Graduate Teaching Assistant
Department of Chemistry
University of Central Florida
Orlando, FL
Department Chair: Cherie Yestrebsky, Ph.D.

Duties: Teach General Chemistry II Lab, Analytical
Chemistry Lab, and Advanced
Analytical Chemistry Lab.
Grade all assignments and lab reports.
Write weekly quizzes and Final Exam.
Host weekly tutoring sessions.

August 2018 –
May 2019

Stockroom Supervisor
Department of Chemistry
Bowling Green State University
Bowling Green, OH
Chemical Laboratory Supervisor: Mary Toth

Duties: Manage the four Stockroom Assistants.
Ensure the General Chemistry, Analytical
Chemistry, Organic Chemistry, and
Biochemistry instructional
laboratories' experiments are
prepared correctly and on time.
Ensure all the instructional laboratory
spaces are safe and usable for
students.

May 2017 –
July 2019

Research Assistant
Department of Chemistry
Bowling Green State University
Bowling Green, OH
Supervisor: Travis J. Worst, Ph.D.

Research Projects:
Oxidizing and Cleaning Fentanyl Spills with
Household Reagents
Improving GC-MS Methodology for
Separating Synthetic Cathinones

February 2016 –
August 2018

Stockroom Assistant
Department of Chemistry
Bowling Green State University
Chemical Laboratory Supervisor: Mary Toth

Duties: Prepare chemicals and
equipment for General and
Analytical Chemistry
instructional laboratory
experiments.
Maintain the General and Analytical
Chemistry instructional
laboratories, ensuring they
are all up to safety standards
and usable for students.

Honors and Awards

2024	Kathleen McIntyre Award Chemistry Department University of Central Florida Orlando, FL
2022	Outstanding Graduate Teaching Assistant Chemistry Department University of Central Florida Orlando, FL
2019	Mayeux Award for Outstanding Honors Project Honors College Bowling Green State University Bowling Green, OH
2017	ACS Undergraduate Award in Organic Chemistry Chemistry Department Bowling Green State University Bowling Green, OH
2016	ACS Undergraduate Award in Analytical Chemistry Chemistry Department Bowling Green State University Bowling Green, OH
2015	Presidential Scholars Award Bowling Green State University Honors College Bowling Green, OH
2015	Forsyth Award Bowling Green State University Honors College Bowling Green, OH

Certifications

Asynchronous Design and Teaching
Asynchronous Teaching
Essentials of Webcourses@UCF

Publications and Presentations

Publications in Peer-Reviewed Journals

Froelich, N.; Compton-James, T.; Holender, Z.; Campiglia, A. D. Improving the signal-to-background ratio of room-temperature fluorescence measurements for the non-destructive analysis of nylon trace evidence. *Microchem. J.* **2025**, *217*, 115030. DOI: 10.1016/j.microc.2025.115030

Froelich, N. M.; Azcarate, S.; Goicoechea, H.; Campiglia, A. D. Differentiating between nylon samples with visually indistinguishable fluorescence using Principal Component Analysis and Common Dimension Partial Least Squares Linear Discriminant Analysis with synchronous fluorescence spectroscopy. *Appl. Spec.* **2024**, *78* (9), 962–973. DOI: 10.1177/00037028241255150

Froelich, N. M.; Showerman, R. E.; Campiglia, A. D. Nondestructive Forensic Comparison of Nylon Trace Evidence Using Room-Temperature Fluorescence Spectroscopy. *Anal. Chem.* **2022**, *94* (35), 12078–12085. DOI: 10.1021/acs.analchem.2c01957

Froelich, N. M.; Sprague, J. E.; Worst, T. J. Letter to the Editor—Elbow Grease and OxiClean™ for Cleaning Fentanyl- and Acetylfentanyl-contaminated Surfaces. *J. Forensic Sci.* **2018**, *63*, 336–338. DOI: 10.1111/1556-4029.13675

Knecht, G. T.; Froelich, N. M.; Campiglia, A. D. Screening method for the analysis of Rhodamine B in chili powder. *Food Chem.* **2024**, *447*, 138936. DOI: 10.1016/j.foodchem.2024.138936

Presentations

American Academy of Forensic Sciences 76th Annual Scientific Conference, Denver, CO, February 19 – 24, 2024. An Improved Analysis of Nylon Microplastic Trace Evidence Through Enhanced Signal-to-Noise Ratio in Room-Temperature Fluorescence Spectroscopy. **N.M. Froelich, A.D. Campiglia**, Oral Presentation B164.

Pittcon Conference and Exposition 2023, Philadelphia, PA, March 18 – 22, 2023. Tracing the Source of Microplastics Evidence with Nondestructive Fluorescence Spectroscopy. **N. M. Froelich, A. D. Campiglia**, "Better Methods in Forensics" Oral Presentation Session C44-08.

Pittcon Conference and Exposition 2022, Virtual Conference, March 28, 2022.
Using Room-Temperature Fluorescence Spectroscopy for Forensic
Comparisons of Nylon Trace Evidence. **N. M. Froelich, R. E.
Showerman, A. D. Campiglia**, Poster Presentation.

The Ohio Academy of Science 127th Annual Meeting, Bowling Green, OH, April
14, 2018. Improving Gas Chromatograph-Mass Spectrometry Methods for the
Separation of Synthetic Cathinone Derivatives. **N.M. Froelich, T.J. Worst,
J.E. Sprague**, Poster Presentation 90.

American Academy of Forensic Sciences 70th Annual Scientific Meeting, Seattle,
WA, February 19 – 24, 2018. The Prevention of Occupational Exposure to
Fentanyl and Fentanyl-like Compounds: Elbow Grease and OxiCleanTM. **T.J.
Worst, N.M. Froelich, J.E. Sprague**, Poster Presentation B27.

Book Chapter

Froelich, N. M.; Campiglia, A. D.; Barbosa, Jr., F. Fluorescence Developments
for the Non-destructive Analysis of Forensic Fiber Evidence. In *Fundamentals
and Applications of Multiway Data Analysis*, 1st ed.; Olivieri, A., Escandar,
G. M., Goicoechea, H. C., Muñoz de la Peña, A., Eds.; Elsevier, 2024.

Professional Memberships

2016 – Present	American Chemical Society Member
2017 – Present	Phi Beta Kappa Society Bowling Green State University Chapter Member
2018 – 2019	Mortar Board Honor Society Bowling Green State University Chapter Member

Grants and Scholarships

2024	Dean's PhD/MFA Student Conference Travel Award College of Science University of Central Florida Orlando, FL
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2024	UCGSA Travel Award UKnighted Chemistry Graduate Student Association University of Central Florida Orlando, FL
2018	Dr. Thomas Kinstle and Student Excellence in Academics Scholarship Chemistry Department Bowling Green State University Bowling Green, OH
2018	Gordon McQueston Scholarship Chemistry Department Bowling Green State University Bowling Green, OH
2018	Richard E. and Judy L. Kuhlman Scholarship College of Arts and Sciences Bowling Green State University Bowling Green, OH
2017	Chemistry Summer Undergraduate Research Fellowship Chemistry Department Bowling Green State University Bowling Green, OH
2015	Dr. Peggy Hurst Scholarship Bowling Green State University Chemistry Department Bowling Green, OH