

# Nathaniel G. Gasparovic (He/Him)

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## EDUCATION

*Masters of Science in Analytical Chemistry*

Graduation Date: **August, 2022**

CSU, Fort Collins, CO

*Bachelor of Science in Chemistry*

Graduation Date: **May, 2019**

Minor in Physics

Mercyhurst University, Erie, PA

## CHEMISTRY COURSEWORK

Advanced Chemical Analysis II  
Statistical Analysis in Analytical Chemistry  
Environmental Chemical Analysis  
Environmental Measurements Laboratory  
Methods of Chemical Biology

Chemical Separations  
Fundamentals of Thermodynamics  
Environmental Carcinogenesis  
Absorption & Emission Spectroscopy

## LAB PROFICIENCIES

### *Beginner:*

Use of FCF Calculator

### *Intermediate:*

Use of Gaussian09  
<sup>51</sup>V and <sup>1</sup>H NMR  
Lipid Preparation  
Langmuir Trough  
Speciation Diagrams

## TECHNICAL SKILLS

*Spectrum 5.30, HYSS, Chem3D 15.0, ChemDraw, Microsoft Word, PowerPoint, Excel, Teams, Zoom, iClicker, iCloud*

## LABORATORY RESEARCH

*Interactions of Pyrazinamide and Pyrazinoic Acid with Model Membrane Systems.*

**March 2022 – August 2022**

- Investigated interactions of PZA/POA with tuberculosis using model membranes
- Used <sup>1</sup>H NMR, Langmuir trough and a leakage assay
- Reworked previously collected data and prepared the paper for publications

*Measuring Arsenic Levels in the Fountain Creek Watershed based on uptake by the bryophyte *Hygrohypnum ochraceum**

**May 2020 – November 2020**

- Mentored an REU student
- Investigated arsenic levels in water using ICP-MS
- Evaluated a dose-response relationship between the bryophyte and the water using statistical analysis
- Produced speciation diagrams using HYSS to determine what species of arsenic would be present

## PROFESSIONAL PRESENTATIONS

*27<sup>th</sup> Annual Sigma Xi Research Conference, Penn State Behrend, Erie, PA*

**April 2018**

- Oral presentation on Computational Analysis of Ligand Binding Energies research

*2020 Rocky Mountain Regional Meeting, Colorado State University, Fort Collins, CO*

**November 2020**

- Oral presentation on Measuring Arsenic Levels in the Fountain Creek Watershed based on uptake by the bryophyte *Hygrohypnum ochraceum*

## PUBLIC SPEAKING

*Conference on Autism in Higher Education, Mercyhurst University, Erie, PA*

**November 2016**

- Spoke on a Q&A panel regarding my experiences as a higher education student on the autism spectrum

## AWARDS & HONORS

*2<sup>nd</sup> Place in Chemistry, Physics, & Math, 27<sup>th</sup> Annual Sigma Xi Research Conference*

**April 2018**

*COACS Chair Award, 2020 Rocky Mountain Regional Meeting*

**November 2020**

## WORK EXPERIENCE

*Graduate Teaching Assistant, Colorado State University, Fort Collins, CO*

**August 2019 – August 2022**

- Led recitations to reinforce material learned in lecture
- Preparing review sessions for general chemistry I exams
- Proctoring general chemistry I exams
- Held office hours every week to provide additional help to students
- Supervised general chemistry I lab students to make sure they were practicing proper laboratory safety
- Instructed general chemistry I lab students in proper usage of chemistry lab techniques

## PUBLICATIONS

Van Cleave, C. *Interactions of Pyrazinamide and Pyrazinoic Acid with Model Membrane Systems*. Manuscript in Preparation