Erica Browne

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EDUCATION

Bachelor of Science in Chemistry — Expected May. 2023
Georgia State University
GPA: 3.82/4.0

Associate of Science in Chemistry — Fall 2021
Georgia State University-Perimeter College
GPA: 3.73

EXPERIENCE

Computational Chemistry Researcher — January 2022-Present
Georgia State University| Atlanta, Ga
Research Advisor: Dr. Samer Gozem

- Understanding the effect of the long-range correction on time-dependent density functional theory calculations of vertical and adiabatic excitation energies in different redox states of flavin.

Chemistry Analyst Intern — June 2021-Aug 2021
Environmental Protection Division Laboratory|Norcross, Ga

- Analyzed presence of 28 metals using various spectroscopy EPA methods: 200.7, 200.8, 245.1 and 180.1
- Ensured acidified drinking water samples were within a pH of <2 and turbidity of <1
- Conducted lab training for 50% of summer 2021 inbound
- Developed calibration curves to determine contamination within 0.05%

Supplemental Instructor — June 2020-Aug 2020
Georgia State University| Decatur, Ga

- Created supplemental sessions that resulted in the increase of 0.5 of a letter grade for students that attended at least 1 session

Research and Development Intern — May. 2019 - Aug. 2019
Johnson Research and Development Co. | Atlanta, Ga

- Designed experimental procedures that tested resistor capabilities between 20-80 ohms
- Utilized quantum computing techniques to check for electrode surface discrepancies
- Communicated progression of projects to upper management during biweekly meeting

Chemistry Intern — May 2019
Georgia State University |Clarkston, Ga
Research Advisor: Dr. Vivian Mativo

- Lab tested BRITA, PUR, ZeroWater filters and homemade filters that contained organic material (apples,bananas, cilantro,rice, and lentil beans) to determine their efficacy filtering 30ppm, 50ppm, and 100 ppm metal (Pb, Ni, Cr, Cd, Fe, Zn) contaminated water
- Reported the following results: Brita 0% efficacy, PUR 50-70% efficacy, ZeroWater 90% efficacy, apple, rice, and lentil beans 80-97% efficacy, and bananas and cilantro 25-80% efficacy.

PRESENTATIONS AND AWARDS

- Southeastern Regional Meeting (SERMACS) | Savannah, Ga | October 2019
  Title: *Comparing the efficacy of commercialwater filters with homemade water filters using atomic emission spectroscopy*

- Herty Medal Undergraduate Research Symposium | Lawrenceville Ga | September 2019
  Title: *Comparing the efficacy of commercialwater filters with homemade water filters using atomic emission spectroscopy*
- Georgia State Undergraduate Research Conference|Atlanta, Ga| March 2020
  Title: *Comparing the efficacy of commercial waterfilters with homemade water filters using atomic emission spectroscopy*
- Peach States Louis Stokes Alliance for Minority Participation Conference| Atlanta, Ga| April 2022
  Title*: Calculating Vertical Excitation Energies in Flavin: Comparing Computational Methods*

AWARDS AND ORGANIZATION

- Peach States Louis Stokes Alliance for Minority Participation (LSAMP) Fellowship| 2018-2020, 2022
- Sustainability Awards in Engineering, GSURC|Georgia State University, Atlanta, GA|April 2020
- Chemistry Research Presentation 3rd place, STEM Innovators' Conference|University of Georgia|2019
- Hope Scholarship| 2018-Present
- Dean's List| 2018-2019, 2021-2022
- President's List|2020-2021

SKILLS

- iCAP 7000 Series
- NexIon 1000
- Spectroscopy
- Unix/Bash
- FIMS 400
- iQmol