**Jessica Azele Kolora**

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**EDUCATION**

**Temple University, Philadelphia PA**

College of Science and Technology

Bachelor of Science, Natural Science Concentration in Chemistry

**LABORATORY TECHNIQUES**

* **Laboratory/Research Instruments:** Spectroscopy: UV/Vis, UV/Vis/NIR, FTIR; centrifuges; volumetric glassware; balances: triple-beam, analytical; pH-meter; micropipette
* **Software:** IGOR, Spartan Molecular Modeling, PyCharm, Jupyter Notebooks

**RESEARCH EXPERIENCE**

**Undergraduate Research Chemist May 2023 - Present**

**Temple University, Philadelphia PA**

**Principal Investigator – Dr. Eric Borguet**

* Engage in ongoing research for 12 hours/week on afterglow photocatalysis using metal oxides and metal-organic frameworks to degrade azo dyes and chemical warfare agent stimulants.
* Design and execute experiments, analyze data using UV-vis and UV-vis-NIR spectroscopy, and document findings.
* Participate in weekly group meetings to present research progress, discuss results, and collaborate on experimental strategies.
* Collaborate directly with a team of 9 undergraduate, graduate, and post-doctoral colleagues.

**POSTER PRESENTATIONS**

1. Presentation: “WO3 as Afterglow Photocatalyst for Degradation of Azo Dyes to Combat Water Pollution”, *American Chemical Society & the Younger Chemists Committee (YCC) Philadelphia Society Poster Session.* University of Pennsylvania, Philadelphia, PA, April 2024.
2. Presentation: “Afterglow Photocatalysis using Titanium Metal Organic Framework (Ti-MOF): An Approach to Degrade Chemical Warfare Agents”, *Philadelphia AMP Research Symposium and Mentoring Conference.* The Study at University City Hotel, Philadelphia, PA, October 2023.
3. Presentation: “Afterglow Photocatalysis using Titanium Metal Organic Framework (Ti-MOF): An Approach to Degrade Chemical Warfare Agents”, *American Chemical Society & the Younger Chemists Committee (YCC) Philadelphia Society Poster Session.* Temple University, Philadelphia, PA, August 2023.
4. Presentation: “Afterglow Photocatalysis using Titanium Metal Organic Framework (Ti-MOF): An Approach to Degrade Chemical Warfare Agents”, *Summer Research & Leadership Symposium.* Temple University, Philadelphia, PA, August 2023.

**ORAL PRESENTATIONS**

1. Presentation: “WO3 as Afterglow Photocatalyst for Degradation of Azo Dyes to Combat Water Pollution”, *Symposium for Undergraduate Research and Creativity.* Temple University, Philadelphia, PA, April 2024.
2. Presentation: “WO3 as Afterglow Photocatalyst for Degradation of Azo Dyes to Combat Water Pollution”, *87th Annual Intercollegiate Student Chemists Convention.* Lincoln University, Lincoln University, PA, April 2024.

**PUBLICATIONS**

1. Hao Li, Sharan Dhar, Jessica Azele Kolora, Venkata Swaroopa Datta Devulapalli, and Eric Borguet\*. Electrostatic repulsion promoted electron mobility boosting efficient afterglow photocatalysis. *Journal of American Chemical Society*. (In preparation)

**WORK EXPERIENCE**

**Pharmacy Technician – CVS Pharmacy August 2021 - Present**

**Philadelphia, PA & New York, NY**

* Assist pharmacist in dispensing 60+ prescriptions/week accurately, ensuring compliance with HIPAA, DEA, and EPA guidelines.
* Trained and mentored 10+ new pharmacy technicians, focusing on customer service and prescription processing.
* Assisted patients over the phone, managing 50+ calls weekly, addressing questions about refills and insurance coverage.
* Processed new and refill prescriptions, verifying patient information.
* Resolves problems regarding patient’s prescriptions by editing and reprocessing scripts on Queue Triage.
* Uses IMF Workflow to check- in patients (age 5+) with or without an appointment for various shots.
* Checks in specialty items and double counted control (II) substances while maintain a clean workspace.

**Intern – Temple University March 2024 - Present**

**Philadelphia, PA & New York, NY**

* Assist in the organization and coordination of events for school programs, including planning logistics and managing communications.
* Collaborate with team members to ensure the successful execution of activities, from setup to breakdown.
* Support promotional efforts by creating and distributing event materials and maintaining event schedules and timelines.

**Teaching Assistant – Temple University August 2022 – December 2022**

**Philadelphia, PA**

* Monitored over 50 students’ progress and attendance records and provided appropriate feedback on work.
* Coordinated with program instructors to tailor teaching methods and resources to meet the diverse needs of students.
* Developed educational materials, including worksheets and practice problems, to reinforce key topics.
* Facilitated weekly in person and virtual study sessions to enhance understanding of course materials.
* Held weekly scheduled office hours to advise and assist students and proctored exams.

**Data Entry Clerk – Changing The Present June 2020 – August 2020**

**New York, NY**

* Entered and updated data accurately and efficiently into the company database, maintaining a high level of attention to detail.
* Verified and corrected data discrepancies by cross-referencing information and collaborating with relevant department to resolve issues.
* Utilized various software applications and tools, including Microsoft Excel and company-specific databased, to perform data entry and analysis tasks.

**FUTURE WORK EXPERIENCE**

**Chemistry Teacher – STEM UP Program July 2024 – August 2024**

**Temple University, Philadelphia, PA**

* Develop interactive chemistry lessons with colleagues that caters to diverse learning styles.
* Design lab activities that encourage critical thinking skills among high school students.

**COMMUNITY SERVICE**

**Clothing Donation Drive Organizer November 2018 – Present**

**Bronx, NY**

* Organized and led a community clothing donation drive to collect gently used clothing for individuals in need in the Western Region of Ghana.

**George Washington Carver Science Fair April 2024**

* Assisted in planning and setting up the science fair, including creating informative posters to guide students and parents to designated rooms.

**Greater Philadelphia Seaperch Challenge Judge March 2024**

**Philadelphia, PA**

* Served as a judge for the Greater Philadelphia SeaGlide Challenge, a pilot competition introducing autonomous underwater vehicles to middle and high school students.

**AFFILIATIONS**

Member of Louis Strokes Alliance For Minority Participation (AMP)August 2022- Present

**CERTIFICATIONS**

American Red Cross – ARC Adult and Pediatric First Aid/CPR/AED March 2023

**AWARDS**

Louis Strokes Alliance For Minority Participation (AMP) Award for Research Excellence May 2024

Philadelphia AMP Research Symposium and Mentoring Conference: 1st place October 2023

**REFERENCES**

Dr. Eric Borguet, Principal Investigator of Research & Professor of Chemistry, Temple University, [eborguet@temple.edu](mailto:eborguet@temple.edu)

Dr. Susan Jansen Varnum, Senior Associate Dean of College of Science & Technology, Temple University, [susan.varnum@temple.edu](mailto:susan.varnum@temple.edu)