BELINTA NAOMI SIMIYU

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EDUCATION

Temple University, Philadelphia, PA — Expected graduation: May 2025
College of Science & Technology,
Bachelor of Science in Chemistry

RESEARCH EXPERIENCE

Undergraduate Research Program, Temple University, PA — January 2023- Present

Principal Investigator: Dr. Eric Borguet

- Hydrolysis of Dimethyl 4-nitrophenyl phosphate (DMNP)
- Deposition and characterization of alkane thiols self-assemble monolayers on oxide surfaces
- Quantification of self-assembled monolayers using florescence spectroscopy
- Scientific writing, research proposal, data analysis and presentation

Principal Investigator: Dr. Jonathan Smith

- Creating a machine learning potential energy surface for Criegee Intermediates
- Literature review and data analysis
- Scientific presentation

RESEARCH PRESENTATIONS

The Symposium for Undergraduate Research and Creativity, Temple University — April 2024
Oral presentation
Title: "Self-Assembly and Characterization of Alkanethiols on SiO_2 Surfaces"
Authors: Belinta Simiyu, Wasim Nawaj, Ayan Bhattacharyya, Somaiyeh Dadashi, and Eric Borguet

Young Chemists Convention ACS, University of Pennsylvania — April 2024
Poster Session
Title: "Quantification of Self-Assembled Monolayers using Fluorescence Spectroscopy"
Authors: Belinta Simiyu, Wasim Nawaj, and Eric Borguet

The 87th Intercollegiate Student Chemists Convention (ISCC), Lincoln University — April 2024
Oral presentation
Title: "Deposition and Self-Assembly of Thiols of SiO_2 Surfaces"
Authors: Belinta Simiyu, Wasim Nawaj, Ayan Bhattacharyya, Somaiyeh Dadashi, and Eric Borguet

NOBCChE 50th Conference, New Orleans — August 2023
Poster Session
Title: "Machine Learning Potential energy Surface for Criegee Intermediates"
Authors: Belinta Simiyu, Dr. Jonathan Smith

Young Chemists Convention ACS, Temple University. August 2023
Poster Session
Title: "Quantification of surface functional groups in mixed self-assembled monolayers by fluorescence spectroscopy"
Authors: Belinta Simiyu, Wasim Nawaj, Ayan Bhattacharyya, Somaiyeh Dadashi, and Eric Borguet

Intercollegiate Student Chemists Convention, Lebanon Valley College April 2023
Oral presentation
Title: "Deposition of alkanethiols of oxide surfaces"
Authors: Belinta Simiyu, Wasim Nawaj, Ayan Bhattacharyya, Somaiyeh Dadashi, and Eric Borguet

Midwest Undergraduate Computational Chemistry Consortium March 2023
Poster presentation
Title: "Machine learning Potential Energy Surface"
Authors: Belinta Simiyu, Dr. Jonathan Smith

WORK EXPERIENCE

Temple University College of Science and Technology, PA August 2023- Present
Teaching Assistant
- Guided students on Elements of Data Science Course
- Hosted Office hours to help students who needed further guidance
- Taught the basics of programing and its application in sciences

Temple University School of health sciences, PA August 2022- Present
Recreation Staff
- Maintain a systematized catalog of guests
- As a licensed CPR provider, I administer first aid care to clients in case of accidents
- Efficiently coordinate and organize the gym recreation center

Mungore Dispensary, Bungoma Kenya January 2021 to December 2021
Pharmacy Assistant
- Assisted the pharmacist with providing safe and appropriate pharmacy services to the patients
- Effectively communicated dose instructions to the patients and responded to any inquiries
- Kept an inventory of all patients' records, medication, and pharmaceutical supplies

VOLUNTEER EXPERIENCE

Text Crisis January 2023- December 2023
- Provided first aid care in case of accidents
- Trained new recruits and oversaw the distribution of donations in my assigned area of service
- Educated youths on sexual education and menstrual health.

Red Cross International January 2019- December 2019
- Provided first aid care in case of accidents
- Trained new recruits and oversaw the distribution of donations in my assigned area of service
- Educated youths on sexual education and menstrual health.

ORGANIZATIONS & AWARDS

- Hazel M. Tomlinson, Ph.D. Memorial Scholarship, Temple University
- Frances Velay Fellowship award, Temple University
- 1st place physical chemistry presentation at the 87th Intercollegiate Student Chemists Convention
- National Organization for Black Chemists and Chemical Engineers (NOBCChE)
- Temple University Chemical Society & America Chemical Society- E-board member
- Vice president of African Diasporan Dance and Drumming, Temple University
- Rise Global Winner
- Future African Ambassador

LANGUAGES

- Swahili: Native Language
- English: Fluent in Speaking, Listening, Reading, and Writing

LABORATORY TECHNIQUES

- Fourier-Transform Infrared Spectroscopy (FT-IR)
- Ultraviolet Visible Spectroscopy (UV-Vis)
- Fluorescence Spectroscopy
- Contact angle measurement and image analysis using FIJI
- Wet lab skills- Titration, chemical properties testing

COMPUTER SKILLS

- **Programming**: Igor, Igor Macro, Python, Spartan
- **Applications**: IQmol, Avogadro, Qchem
- Microsoft office, Google Spreadsheets

REFERENCES

Dr. Eric Borguet, Professor/Mentor
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Dr. Jonathan Smith, Professor/Mentor
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