

## BELINTA NAOMI SIMIYU

1824 W Diamond Street, Philadelphia, PA, 19121

[belinasi02@gmail.com](mailto:belinasi02@gmail.com) | [www.linkedin.com/in/belinta-simiyu](http://www.linkedin.com/in/belinta-simiyu)

### EDUCATION

Temple University, Philadelphia, PA  
College of Science & Technology,  
Bachelor of Science in Chemistry

Expected graduation: May 2025

### 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 fluorescence 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 Summer Research Fellows Symposium, Temple University

August 2024

Oral presentation

**Title:** “Retro-Michael and Exchange Reaction in Quantifying Maleimide Linkers in a Mixed Self-Assembled Monolayer”

**Authors:** [Belinta Simiyu](#), Hao Li, and Eric Borguet

#### The Symposium for Undergraduate Research and Creativity, Temple University

April 2024

Oral presentation

**Title:** “Self-Assembly and Characterization of Alkanethiols on SiO<sub>2</sub> 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<sub>2</sub> Surfaces”

**Authors:** [Belinta Simiyu](#), Wasim Nawaj, Ayan Bhattacharyya, Somaiyeh Dadashi, and Eric Borguet

**NOBCCHE 50<sup>th</sup> 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 programming 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
- 1<sup>st</sup> place physical chemistry presentation at the 87th Intercollegiate Student Chemists Convention
- National Organization for Black Chemists and Chemical Engineers (NOBCCChE)
- Temple University Chemical Society & America Chemical Society- E-board member
- Vice president of African Diasporan Dance and Drumming, Temple University
- Rise Global Winner
- Founder of Ex-share program, Kenya
- 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  
Department of Chemistry  
Temple University, Philadelphia PA 19122  
Email: eborguet@temple.edu

**Dr. Jonathan Smith**, Professor/Mentor  
Department of Chemistry  
Temple University, Philadelphia PA 19122  
Email: Jonathan.m.smith@temple.edu