Lauren Towers

# Philadelphia, PA 19121 | (267).788.5551

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Education

**Temple University, Philadelphia PA Expected Graduation: May 2024**

College of Science and Technology

Bachelor of Science: Chemistry

Laboratory Technical and computer skills

* Density
* Thin-layer Chromatography (TLC)
* Gas Chromatography
* Fourier-Transform Infrared Spectroscopy (FT-IR)
* Temperature-Programmed Desorption Mass Spectroscopy (TPD-MS)
* Ultraviolet Visible Spectroscopy (UV-Vis)
* IGOR
* IGOR Macro
* Spartan
* ChemDraw
* MathLab

Research Experience

## Undergraduate Research Chemist December 2022-Present

## Temple University, Philadelphia PA

## *Principal Investigator- Dr. Eric Borguet*

* Perform fundamental investigation on defects and binding sites within new metal-organic frameworks (MOFs) using acetonitrile, acetone, and dimethyl methyl phosphonate.
* Analyze new MOFs ability to adsorb and desorb industrial toxic gases using temperature programmed infrared spectroscopy (TP-IR) and temperature programmed desorption mass spectroscopy (TPD-MS) under ultra-high vacuum (UHV) for various gas storage applications.

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* Work directly with 7 undergraduates, graduates, and post-doctoral colleagues.

Conference PRESENTATIONS

Presentation: **Lauren Towers**, Hao Li, Sharan Dhar, Edward Jang Eric Borguet\*. “Sorption Capacity of DMMP on an Amino-Functionalized UiO-68 Metal-Organic Framework” Philadelphia Inorganic Colloquium. The College of New Jersey, Ewing Township, NJ, April 2023.

Oral Presentation: **Lauren Towers**, Hao Li, Sharan Dhar, Edward Jang Eric Borguet\*. “Sorption Capacity of DMMP on an Amino-Functionalized UiO-68 Metal-Organic Framework” Intercollegiate Student Chemists Convention (ISCC). Lebanon Valley College, Annville, PA, April 2023.

Presentation: **Lauren Towers**, Hao Li, Sharan Dhar, Eric Borguet\*. “Impact of Amino Functionalization of the UiO Metal-Organic Framework on Adsorption of Chemical Warfare Agent Simulants” Young Chemist Committee. Temple University Philadelphia PA 19122, August 2023.

Presentation: **Lauren Towers**, Hao Li, Sharan Dhar, Eric Borguet\*. “Underestimated Impact of Solvent Exchange on the Adsorption Capacity of Metal-Organic Frameworks” Undergraduate Research Symposium. Temple University Philadelphia PA 19122, November 2023.

Oral Presentation: **Lauren Towers**, Hao Li, Sharan Dhar, Eric Borguet\*. “Underestimated Impact of Solvent Exchange on the Adsorption Capacity of Metal-Organic Frameworks.” Intercollegiate Student Chemists Convention (ISCC). Lincoln University, Southern Chester, PA, April 2024.

Oral Presentation: **Lauren Towers**, Hao Li, Sharan Dhar, Eric Borguet\*. “Underestimated Impact of Solvent Exchange on the Adsorption Capacity of Metal-Organic Frameworks.” Temple University Symposium, Temple University Philadelphia PA 19122, April 2024.

**PUBLICATIONS**

Hao Li1, Sharan Dhar1, **Lauren Towers1**, Zoe Sollis2, Edward Jang1, Nathaniel L. Rosi\*2, Eric Borguet\*1 Intrinsic frustrated Lewis pair by ortho-amine functionalization in UiO-68 metal-organic framework gives unusual adsorption behavior of chemical warfare agent simulant. (In preparation).

Sharan Dhar1, Hao Li1, **Lauren Towers1**, Jessica Kolora1, Eric Borguet\*1. Evaluation of host-guest interaction in UiO-66, -67, and -68 with acetone. (In preparation)

Hao Li1, **Lauren Towers1**, Sharan Dhar1, Eric Borguet\*1. Underestimated Impact of Solvent Exchange on the Adsorption Capacity of Metal-Organic Frameworks. (In preparation).

Affiliations

**Central Asian Club**

**Temple University, Philadelphia PA**

* Partake in general body meetings to connect with students that share a similar ethnic and cultural background.
* Meet and collaborate with ethnic peers from Temple and explore different cultures in central Asia through different activities.

Work Experience

Manager- Salvatore’s Cucina Levittown, PA November 2017-Present

* Organize daily schedules manually for multiple coworkers resulting in increased online and word of mouth reviews.
* Resolve disputes with customers and manage daily reservations and orders for 100+ clients, resulting in wait time deductions.
* Monitor inventory levels to ensure timely restocking and maintenance of financial records of the restaurant.
* Deliver consistent excellent serve with 100+ options of food and drinks.

References

Dr. Eric Borguet, Principal Investigator and Hazel Tomlinson Professor of Chemistry, Temple University, Philadelphia PA 19122, Email: [eborguet@temple.edu](mailto:eborguet@temple.edu)

Dr. Roy Keyer, Professor of Instruction, Temple University, Philadelphia PA 19122, Email: [Roy.keyer@temple.edu](mailto:Roy.keyer@temple.edu)