

Daniel Liu

(734)-585-4865 danlliu@umich.edu

Education

University of Michigan

College of Literature, Science, and the Arts
B.S. in Chemistry

Ann Arbor, MI

Expected May 2023

College of Engineering
B.S.E. in Computer Science

Expected May 2023

Current GPA: 3.9

The University of Toledo

Dual enrollment with Ottawa Hills High School
through the College Credit Plus program.

Toledo, OH

2016-2019

Work Experience

EECS Instructional Aide
for EECS281 and EECS370
(20 hours / week, 40 hours / week during spring term)

University of Michigan
Fall 2020 – present

Mathematics tutoring with the Comprehensive Studies Program
for MATH105, MATH115, MATH116, and EECS203
(10 hours / week)

University of Michigan
Fall 2019 – Winter 2021

One-to-one chemistry tutoring with peers

University of Michigan
Fall 2019

Mentored two high school students through ACS Project SEED
Stuart Wells – St. Francis De Sales High School, Toledo, OH
Reece Tatchell – Northview High School, Toledo, OH

The University of Toledo
June-August 2019

Chemistry tutor for college students

The University of Toledo
2016 - 2018

Research Experience

University of Michigan, Ann Arbor, MI
Department of Chemistry
Advisor: Dr. Melanie Sanford

September 2019 – present

The University of Toledo, Toledo, OH.
Department of Chemistry and Biochemistry
Advisor: Dr. Michael Young

March 2017 – August 2019

The University of Toledo, Toledo, OH.
Department of Mathematics
Advisor: Dr. Ekaterina Shemyakova

September 2017 – May 2018

Publications

- Kapoor, M.; **Liu, D.**; Young, M. C. "Carbon Dioxide Mediated C(sp³)–H Arylation of Amine Substrates." *J. Am. Chem. Soc.* **2018**, *140*, 6818-6822.
- **Liu, D.**; Kapoor, M.; Kennedy, J. F.; Young, M. C. "Carbon Dioxide Mediated ortho C–H Halogenation of Free Benzylamines." *2018 Ohio Inorganic Weekend poster presentation*, November 8, 2018, Ohio University, Athens, OH.
- Kapoor, M.; Chand-Thakuri, P.; Maxwell, J. M.; **Liu, D.**; Zhou, H.; Young, M. C. "Carbon Dioxide-Driven Palladium-Catalyzed C–H Activation of Amines: A Unified Approach for the Arylation of Aliphatic and Aromatic Primary and Secondary Amines." *Synlett* **2019**, *30*, 519-524.
- Young, M. C.; Djernes, K. E.; Payton, J. L.; **Liu, D.**; Hooley, R. J. "Resorcin[4]arenes: A Simple Scaffold to Study Supramolecular Self-Assembly and Host:Guest Interactions for the Undergraduate Curriculum." *J. Chem. Ed.* **2019**, *96*, 4, 781-785.

Honors and Awards

The University of Michigan:

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| • Margaret & Herman Sokol Award
(\$5000 / 10 weeks, chemistry research with Prof. Sanford) | Summer 2020 |
| • Invitation to Tau Beta Pi, National Engineering Honor Society | January 2021 |
| • Dean's List | 2020 |

The University of Toledo:

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| • Biochemistry Award, Department of Chemistry and Biochemistry | 2019 |
| • Physical Chemistry Award, Department of Chemistry and Biochemistry | 2018 |
| • University of Toledo President's Honor List with GPA 4.0 | 2017-18 |
| • Organic Chemistry Award, Department of Chemistry and Biochemistry | 2017 |
| • Lim Sup Award: Outstanding Achievement in Mathematics | 2017 |
| • Certificate of Pi Mu Epsilon, National Honorary Mathematics Society, Ohio Gamma Chapter for Superior Achievement in the Field of Mathematics | 2016 |
| • Certificate of Outstanding Achievement in Chemistry from Department of Chemistry and Biochemistry | 2015 |

National Competitions:

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| • U. S. National Chemistry Olympiad High Honors (top 50) | 2019, 2018 |
| • White House Science Fair 2016 Participant | 2016 |

Skills:

- Programming Languages: C++, C, Swift, Python, HTML/CSS/JS, command prompt
- Front-end Frameworks: React.js, Vue.js, Bootstrap
- Operating Systems: MacOS, Windows 10
- Software: Git, Microsoft Office, ChemDraw, MestReNova, MATLAB, Xcode, Gaussian