

Daniel Liu

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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

Ross School of Business
B.B.A.

Expected May 2024

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

Ottawa Hills High School

Graduated Summa Cum Laude
Weighted GPA 4.78

Ottawa Hills, OH

2015-2019

Work Experience

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

University of Michigan
Fall 2019 – Winter 2020

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 Electrical Engineering and Computer Science
Advisor: Dr. Manos Kapritsos

May 2021 – present

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:

- Summer Undergraduate Research Program Fellowship Summer 2020 (planned)
(\$5000 / 10 weeks, chemistry research with Dr. Sanford)

The University of Toledo:

- 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:

- U. S. National Chemistry Olympiad High Honors (top 50) 2019, 2018
- Qualification for AIME I 2018, 2016
- AMC12 Honor Roll 2018, 2016
- AP Scholar with Distinction Award 2017
- White House Science Fair 2016 Participant 2016

Ottawa Hills High School:

- National Merit Finalist 2019
- The Phillip W. Longenecker Science Award 2019
- Senior Mathematics Award 2019
- AP Biology Certificate of Honor 2017
- The Tom Docis Phenomenal Physics Award 2016
- AP Calculus Certificate of Honor 2016
- Outstanding Academic Performance in Science
(Educational Service Center of Lake Erie West) 2016
- AP Statistics Certificate of Honor 2015
- High Honor Roll 2015-2019

Skills:

- Programming Languages: C++, Swift, Python, HTML/CSS, command prompt
- Operating Systems: MacOS, Windows 10
- Software: Git, Microsoft Office, ChemDraw, MestReNova, MATLAB, XCode
- Chemistry Lab Skills: GC/MS, Column Chromatography, Rotary Evaporator