

William Wang

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EDUCATION

NORTHWESTERN UNIVERSITY

Bachelor of Science in Materials Science & Engineering

Evanston, IL

September 2024 - Present

THE LAWRENCEVILLE SCHOOL

High School Diploma - High Honors (all terms)

Lawrenceville, NJ

September 2021 - June 2024

RESEARCH EXPERIENCE

COOPER UNION

Visiting Student Researcher

New York City, NY

July 2023 - September 2024

- Conducted density functional theory (DFT) and Monte Carlo simulations of hydrogen fluoride clusters under Chemistry Professor Robert Topper
 - Co-author on an American Chemical Society Fall 2024 presentation ([Slides](#) | [ACS Abstract](#))¹
- Developed Lennard-Jones parameters for noble gas clusters and corresponding case studies for TransRot, a portable molecular simulation software ([Adding Noble Gases to TransRot](#) | [Optimization and Benchmarking](#))
 - First-author on a [Single Figure Presentation \(SFP\)](#) for the 2024 Virtual Winter School on Computational Chemistry

STAN-X

Research Assistant

Lawrenceville, NJ

September 2023 - March 2024

- Produced transgenic fruit flies with SX4 P-element inserts containing LexA drivers in the *tapas* gene of *Drosophila melanogaster*, enabling researchers to study gene function and tissue interaction through binary expression systems at Indiana University Bloomington's Drosophila Stock Center
 - Author on a report titled "[SX1238 tapas Gene Insertion](#)"
- Characterized the p-element insertion site using inverse PCR and Sanger sequencing as part of the Stan-X molecular biology program associated with The Lawrenceville School and Stanford University faculty

ACTIVITIES

NUSTARS | *Wind Tunnel Team Member*

Evanston, Illinois | September 2024 - Present

- Developing testing procedure and matrices for full-scale model rockets at Embry-Riddle Wind Tunnel Facility for Northwestern University's entry to NASA's Student Launch Challenge

NORTHWESTERN CONCRETE CANOE | *Mix Team Member*

Evanston, Illinois | September 2024 - Present

- Iteratively testing and producing concrete mixes less dense than water for Northwestern University's entry to the American Society of Civil Engineers' Concrete Canoe Competition

MINTBOX | *Co-Founder*

New York City, NY | June 2020 - June 2024

- Founded a local gardening organization: sold over 110 gardening kits to raise \$2,000; designed an auto-watering planter for Hudson Guild (community center); donated 50 educational kits to Covenant House New York (youth shelter) ([Website](#))

SKILLS/LANGUAGES

- Languages: Mandarin (native), Spanish (working)
- Computer: MATLAB, LaTeX, Avogadro, Java, Swift/SwiftUI, Excel, HTML/CSS
- Laboratory: UV-Vis spectroscopy, electrochemical cell manufacturing, spin-coating, concrete compression testing, inverse PCR, DNA extraction, volumetric pipetting

¹Topper, R.; Topper, S.; Hassan, U.; Kim, A.; Frost, J.; Wang, W. *TransRot: An open-source project for simulated annealing Monte Carlo calculations of molecular clusters, microhydrated species, and surface adsorbates*. American Chemical Society. <https://acs.digitellinc.com/p/s/transrot-an-open-source-project-for-simulated-annealing-monte-carlo-calculations-of-molecular-clusters-microhydrated-species-and-surface-adsorbates-610290> (accessed 2024-12-13).