

# A Helmin

## Education

Full Stack Developer Certificate, University of Minnesota, edX Boot Camps

March 2024

**Skills:** GitHub, JavaScript, HTML, CSS, JQuery, Bootstrap, Tailwind, Node.js, Express, React, REST API, MySQL, MongoDB, ORM, MVC

**Bachelor of Arts in Chemistry**, University of Minnesota, Morris

May 2018

Major GPA 3.91

**Honors:** Dean's List, CRC Award for Exemplary Performance for First Year Chemistry Students

## Work History

10/2019-08/2023

**Chemical Technician**, Republic Services South Hennepin HHW

- Sorting household hazardous wastes by hazardous category
- Determining unknown waste composition
- Placing waste in appropriate waste grouping
- Following safety procedures and protocols
- Conducting work while practicing good customer service
- Loading trailers and unloading deliveries using forklift

**Researcher**, Aerotek Scientific, LLC, Contingent worker at 3M, Maplewood, MN

07/2018-07/2019

- Preparing test specimens
- Collecting and logging data
- Organizing and reporting data
- Adhesive resin formulation
- Analyze resin formulation components for compatibility
- Color match resin formulations to specifications
- Determine best components to achieve desired formulation properties
- Work collaboratively to accomplish goals
- Perform additional duties as required

**Undergraduate Researcher**, University of Minnesota, Morris, MN

09/2017 - 12/2017

Goal: To create a ferrocene-based ligand for use with a palladium catalyst

- Preparation of precursors
- Synthesis and characterization of pre-ligand
- Maintain a clear, concise lab notebook
- Good lab safety practices
- Able to increase yield by applying knowledge from another project

**Chemistry Inventory Clerk**, University of Minnesota, Morris, MN

07/2017 - 11/2017

Work-study grant position

- Became familiar with procedures by managing and tracking chemical inventory
- Spearheaded process to migrate paper tracking to electronic system
- Resulted in more effective tracking and locating of chemicals

**Undergraduate Researcher**, University of Minnesota, Morris, MN

06/2017 - 08/2017

Paid research position through the Howard Hughes Medical Institute grant

Goal: Create a new donor-acceptor copolymer for use as an organic photovoltaic

- Synthesis and characterization of precursors, monomers, copolymer
- Optimizing precursor synthesis
- Maintaining a lab notebook
- Adhering to safety protocols involving lab techniques and chemicals
- Primary literature searches
- Identifying future work for improvements in process and properties of copolymer
- Compiling results and preparing poster for presentation
- Presented by poster at the 255th ACS national conference

**Undergraduate Researcher**, University of Minnesota, Morris, MN

**06/2016 - 05/2017**

Paid research position through Louis Stokes Alliances for Minority Participation (LSAMP) grant

Goal: Finding a metal-organic framework (MOF) that selectively adsorbs the amyloid- $\beta$  peptide

- Synthesis and characterization of organic ligand precursors, organic ligands, and MOFs
- Post-synthetically modified MOFs
- Quantifying protein adsorption after incubation period with gel electrophoresis and fluorometry
- Analyzing and interpret data
- Compiling results and preparing poster for presentation and final lab report
- Poster presented at the 253rd ACS national conference

**Undergraduate Researcher**, University of Minnesota, Morris, MN

**09/2015 - 12/2015**

Goal: Discover a GC-MS method to determine the percent composition of recovered TLC eluent Responsibilities:

- Develop calibration curve from hexanes and ethyl acetate standards
- Test unknown mixtures to ensure calibration curve was accurate
- Worked without direct supervision
- With this method TLC eluent can be recycled

**Laborer/Equipment Operator**, Riley Brothers Construction, Morris, MN

**Summers 2013, 2014, & 2015**

- Further established strong work ethic working up to 18 hours a day in heat and humidity
- Develop a stronger sense of safety practices operating heavy equipment around different crews on a jobsite

**Drill Operator/Blaster**, Wisconsin Industrial Sand, Maiden Rock, WI

**2004-2009**

- Demonstrated responsibility being accountable to federal regulations from ATF for blasting inventory count
- Responsible for mine during blasting operations
- Directed other crews to avoid equipment from running over explosives
- Established self-reliance working without direct supervision
- Developed strong work ethic working 12-hour shifts in a lightless environment
- Established personal safety practices being around explosives and roof collapses

**Slot Department Supervisor**, Grand Casino Mille Lacs, Onamia, MN

**2002-2003**

- Oversee daily operations of slot attendants
- Conduct interviews of potential employees
- Pay-out large jackpots
- Ensure compliance of both employees and guests
- Manage scheduling of employees
- Ensure proper coverage of the gambling floor with employees

## **Publication**

### **Benzodithiophene homopolymers via direct (hetero)arylation polymerization**

<https://link.springer.com/article/10.1007/s00289-018-2346-6> May 2018

Direct (hetero)arylation polymerization of a monobrominated benzo[1,2-b:4,5-b']dithiophene (BDT) monomer was carried out using the Herrmann–Beller catalyst and two ligands, P(o-OMePh)<sub>3</sub> and P(o-NMe<sub>2</sub>Ph)<sub>3</sub>, in different trials. Both ligands resulted in a respectable yield however the P(o-NMe<sub>2</sub>Ph)<sub>3</sub> resulted in almost a double MW polymer. An additional finding revealed that the monobrominated and dibrominated BDT can be separated via simple column chromatography.