Madilyn Paul

5668 W Bloom St. Boise, ID, 83703|(509)941-7442|madilynpaul@u.boisestate.edu

Linkedin: linkedin.com/in/madilynpaul

# Skills Summary

Molecular Dynamics, Density Functional Theory, Data Analysis, Python, Coding, Debugging

# Education

## PhD in Materials Science and Engineering

Research Area: Molecular Dynamics of Complex Conjugated Copolymers

Dissertation: Screening of Complex Conjugated Copolymers for Organic Photovoltaics by Molecular Dynamics

Supervisor: Prof. Eric Jankowski

## BS in Chemistry

Emphasis in Biochemistry

Minor in Applied Mathematics

Research Area: Density Functional Theory of Pharmaceuticals

Thesis: Crystal Disorder vs. True Polymorphic Phase Transitions in Crystalline Pharmaceuticals: a Solid-State DFT Study of Barbituric Acid Dihydrate

Supervisor: Prof. Matthew King

# Experience

## Boise State University

### Graduate Assistant – Micron School of Materials Science and Engineering

Teaching Assistant – Physical Chemistry, Introduction to Materials Science

## Boise State University

### Learning Assistant Mentor

Managing students

*Learning Assistant – Calculus I, II and III*

## Boise State University

*Laboratory Instructor – Introduction to Chemistry*

# Awards and Acknowledgements

## Story Collider Fellow

Participant

# Research Presentations

## AIChE

Presentation Title: Reproducible workflows for parameterizing and simulating models of complex conjugated copolymers for organic photovoltaics

## Three Minute Thesis

Presentation Title: Using computers to investigate materials that can generate power sustainably and inexpensively.

## Boise State Graduate Student Showcase

Presentation Title: The Analysis of Crystalline Disorder in Violuric Acid Monohydrate

## ACS Conference

Presentation Title: Methionine 234 Participates in Orientating Substrate Catalysis by Human Carbonyl Reductase I

# Publications

Madilyn E. Paul, Thiago H. da Silva, and Matthew D. King. True polymorphic

phase transition or dynamic crystal disorder? an investigation into the unusual

phase behavior of barbituric acid dihydrate. 19(8):4745–4753.