

Ethan Bober

ebober@seas.upenn.edu | 3901 Locust Walk | Philadelphia, PA | (954) 982-1449

EDUCATION

University of Pennsylvania

Philadelphia, PA

School of Engineering and Applied Science

May 2027

- Candidate for Bachelor of Science in Material Science
- Cumulative GPA: 3.87/4.0

SKILLS

- **Laboratory:** Polymer Synthesis, Thermomechanical Characterization, Scanning Electron Microscopy (SEM), Hydrogel Casting and Molding, Environmental Chamber Testing, Water Transport Mechanism Analysis
- **Computer:** Microsoft Office (Word, Excel, PowerPoint); knowledgeable in JavaScript, C++, and Python; High-Performance Computing; Data Analysis

RESEARCH EXPERIENCE

Research Assistant, Philadelphia, PA

Department of Material Science and Engineering, University of Pennsylvania

August 2024 – Present

- Synthesized hydroscopic hydrogel desiccants for improved food drying efficiency
- Conducted structural analysis of hydrogel through SEM and analysis under a gradient of relative humidity and airflow patterns

Laboratory Assistant, Philadelphia, PA

Department of Chemistry, University of Pennsylvania

September 2023 – August 2024

- Researched and synthesized photo-catalytic water-splitting molecule MDESA
- Analyzed MDESA for comparative studies, evaluating its catalytic performance against alternative photo-catalytic materials

Computational Researcher, RISE Program, Boston, MA

Department of Chemistry, Boston University

June – August 2022

- Examined structure-function relationships present in room-temperature ionic liquids (RTILs)
- Computed and compiled large sets of trajectory files for ionic liquids using the Shared Computer Cluster (SCC)
- Analyzed and graphed thermoelectrical features of RTILs

OTHER EXPERIENCE

Assistant Judge, Philadelphia, PA

Science Olympiad at the University of Pennsylvania

February 2024 – February 2024

- Constructed and implemented tower testing mechanism to evaluate load-bearing ability, structural integrity, and weight efficiency
- Judged tower designs based on material optimization and load distribution

Residential Assistant

June 2024 – August 2024

Rodin College House, University of Pennsylvania

- Assisted with housing logistics, including room assignment, electronic key distribution, and maintenance requests
- Assisted in onboarding summer program participants for over 100 students