

WIU CENTENNIAL HONORS COLLEGE
Thomas E. Helm Undergraduate Research Day 2023

Abstract

Poster

Major: Chemistry

Faculty Mentor(s): Brian Bellott

Synthesis of Copper and Sulfur using High Temperature Methods and Slow Cooling

Ty OJanovac

Solid state chemistry is the synthesis of materials in the solid state. This is often achieved by heating the samples at high temperatures for extended periods of time. Although many useful materials are produced using solid state chemistry, few undergraduate courses have a lab to have students experience solid state chemistry. The goal of my project is to develop a solid state chemistry reaction that can be completed during two lab periods one week apart. The reaction should be high yielding and produce large crystals. This poster will examine the research we have currently completed on the project and discuss the challenges we have met thus far. Data analysis includes optical microscopy, scanning electron microscopy, and energy dispersive X-ray spectroscopy.