

Conducting Rigorous Undergraduate Student Research at a Small, Liberal Arts University: Recent Progress in the Investigation of the Bonding and Electronic Structure of Metal Chalcogenide Complexes

A brief survey showcasing the diverse research projects being conducted by faculty and students at Transylvania University, conducted in our senior capstone course (CHEM 4412 and CHEM 4422: Senior Research Seminar I & II), will be presented. In addition, recent developments for one particular project will be highlighted. The highlighted project aims to prepare a suite of closely related transition metal complexes coordinated to the softer chalcogenides (i.e. S, Se, Te) in order to conduct systematic analysis regarding trends and differences in bonding and electronic structure. Several new compounds will be reported, as well as, preliminary spectroscopic analysis and future directions of the project.