

Chem 453: Structure, Reactivity and Bonding

Course description: Descriptions of chemical bonding and reactivity using qualitative molecular orbital theory.

Course Goals

Develop an understanding of the different theoretical frameworks for bonding and structure

Develop the ability to apply models of bonding interactions to molecules and materials

Develop the ability to apply molecular orbital theory to various chemical reactions

Develop an understanding of the concepts of symmetry as applied to chemistry

Develop an understanding of the conceptual differences between photochemical and thermal reactions.

Program Goals

Develop an understanding of the use of models, their premises, advantages and limitations.

Develop competence in problem solving.

Develop the ability to use the chemical literature in a critical manner.