

School of Chemistry

Aims and Objectives: Session 2023-2024, Semester 2

Module CH1402: Inorganic and Physical Chemistry 1

Course Title: Bonding in Simple Molecules

Duration: 6 hours

Lecturer: Professor R. E. Morris

Aims: To obtain insight into the nature of chemical bonding and molecular structure.

Objectives:

1. To know and understand the use of Lewis structures to describe molecular structure.
2. To understand the concept of electrons as waves and how they interact together.
3. To use the linear combination of atomic orbitals for making molecular orbitals.
4. To draw molecular orbital diagrams for first row diatomic molecules.
5. To understand the concept of sp-mixing.
6. To draw the molecular orbital diagram for unsymmetrical diatomic molecules.
7. To draw the bonding orbitals for CO₂.
8. To be able to apply the concepts developed in the course to unseen problems.