

# Chapter 3-Major Issues

- Symmetry elements and operations
- Point groups and classifying “molecules”
- Character tables-irreducible representations
- What is a reducible representation
- Understand transformation matrices
- Generate and reduce reducible representations
- Applications of symmetry analysis
  - Optical activity
  - Vibration Analysis
  - Hybridization and bonding
- Useful problems from text: 3.1 thru 3.5, 3.9, 3.10, 3.16, 3.17, 3.24, 3.28, 3.29