

CHAPTER OVERVIEW

2: Electronic Spectroscopy

Electron spectroscopy is an analytical technique to study the electronic structure and its dynamics in atoms and molecules. In general an excitation source such as x-rays, electrons or synchrotron radiation will eject an electron from an inner-shell orbital of an atom.

- 2.1: Transition Integrals
- 2.2: Vibronic Transitions
- 2.3: Broadening Mechanisms
- 2.4: The Fate of Electronic Transitions
- 2.5: Electronic State and Transitions
- 2.6: Introduction to Symmetry
- 2.7: The Carbonyl Group
- 2.8: Symmetry and Formaldehyde
- 2.9: Configuration Interaction
- 2.10: Measures of Transition Amplitudes
- 2.11: Term Symbols
- 2.12: Absorption Spectrum of Formaldehyde
- 2.13: Assignment of Bands Based on Solvent Effects
- 2.14: Solvent Effect of Fluorescence
- 2.15: Breaking Symmetries
- 2.16: Charge Transfer Bands
- 2.17: Conjugation Length

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