

## CHAPTER OVERVIEW

### 3: Nuclear Motion

The Application of the Schrödinger Equation to the Motions of Electrons and Nuclei in a Molecule Lead to the Chemists' Picture of Electronic Energy Surfaces on Which Vibration and Rotation Occurs and Among Which Transitions Take Place.

[3.1: The Born-Oppenheimer Separation of Electronic and Nuclear Motions](#)

[3.2: Time Scale Separation](#)

[3.3: Vibration/Rotation States for Each Electronic Surface](#)

[3.4: Rotation and Vibration of Diatomic Molecules](#)

[3.5: Separation of Vibration and Rotation](#)

[3.6: The Rigid Rotor and Harmonic Oscillator](#)

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[3.8: Rotation of Polyatomic Molecules](#)

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