

## CHAPTER OVERVIEW

### 13: Molecular Rotation and Vibration

Treating the full internal nuclear-motion dynamics of a polyatomic molecule is complicated. It is conventional to examine the rotational movement of a hypothetical "rigid" molecule as well as the vibrational motion of a non-rotating molecule, and to then treat the rotation-vibration couplings using perturbation theory.

[13.1: Rotational Motions of Rigid Molecules](#)

[13.2: Vibrational Motion Within the Harmonic Approximation](#)

[13.3: Anharmonicity](#)

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