

## CHAPTER OVERVIEW

### 7: Rotational States

Molecules rotate as well as vibrate. Transitions between rotational energy levels in molecules generally are found in the far infrared and microwave regions of the electromagnetic spectrum.

- [7.1: Introduction to Rotation](#)
- [7.2: The Hamiltonian Operator for Rotational Motion](#)
- [7.3: Solving the Rigid Rotor Schrödinger Equation](#)
- [7.4: Angular Momentum Operators and Eigenvalues](#)
- [7.5: Quantum Mechanical Properties of Rotating Diatomic Molecules](#)
- [7.6: Rotational Spectroscopy of Diatomic Molecules](#)
- [7.7: Overview of the Rigid Rotor](#)
- [7.E: Rotational States \(Exercises\)](#)

---

This page titled [7: Rotational States](#) is shared under a [CC BY-NC-SA 4.0](#) license and was authored, remixed, and/or curated by [David M. Hanson](#), [Erica Harvey](#), [Robert Sweeney](#), [Theresa Julia Zielinski](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.