

## CHAPTER OVERVIEW

### Valence Bond Theory

Valence bond theory is one of two basic theories, along with molecular orbital theory, that were developed to use the methods of quantum mechanics to explain chemical bonding. It focuses on how the atomic orbitals of the dissociated atoms combine to give individual chemical bonds when a molecule is formed. In contrast, molecular orbital theory has orbitals that cover the whole molecule.

#### Topic hierarchy

[3-D Structures of Molecules](#)

[Dipole Moments](#)

[Electronegativity](#)

[Formal Charges in Lewis Structures](#)

[Hybrid Orbitals](#)

[Multiple Bonds](#)

[Overview of Pauling and Valence Bond Theory](#)

[Resonance](#)

[Strengths of Covalent Bonds](#)

### Contributors and Attributions

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