

# Chapter 9: Bonding & Molecular Structure Fundamentals

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- Lewis dot symbols for atoms
- ionic bonds
- covalent bonds - polar vs nonpolar  
 $\Delta EN$
- Lewis dot formulae for molecules + ions
- Octet rule + VSEPR theory + resonance
- Exceptions to octet rule
- formal charges (not for testing)
- bond properties - bond order, length  
strength
- calculation of  $\Delta H_{rxn}$  using bond dissociation energies, D.