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COVALENT BONDING

Vocabulary Review

Select the term from the following list that best matches each description.

polyatomic ion

coordinate covalent bond

hybridization

hydrogen bond

VSEPR theory

sigma bond

molecule

bonding molecular orbital

van der Waals forces

bond dissociation energy

1. a bond in which one atom contributes both bonding electrons to a covalent bond

2. the total energy required to break the bond between two covalently bonded atoms

3. a molecular orbital whose energy is lower than that of the atomic orbitals from which it is formed

4. molecular orbital that lies along the axis connecting two atomic nuclei

5. states that because electron pairs repel, molecules adjust their shapes so that valence-electron pairs are as far apart as possible

6. a process in which several atomic orbitals mix to form the same number of equivalent hybrid orbitals

7. a tightly bound group of atoms that behaves as a unit and carries a charge

8. a term that collectively refers to dispersion forces and dipole interactions

9. a relatively strong intermolecular attraction in which a hydrogen that is covalently bonded to a very electronegative atom is also weakly bonded to an unshared pair of electrons of another electronegative atom

10. a tightly connected group of two or more atoms of nonmetallic elements that behave as an electrically neutral unit
