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## Simple bonding schemes

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The three principal bonding types are covalent, ionic, and metallic.

**Covalent bond** A region of electron density positioned between atomic nuclei that arises through sharing of electrons.

**Ionic bond** Bonding between atoms with very different electronegativities, consisting of an electrostatic attraction experienced between the electric charges of a cation and an anion.

**Gilbert Lewis** 1875–1946. He developed a theory of bonding based upon the interaction of outermost (valence) electrons in one atom with those of a second atom.

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