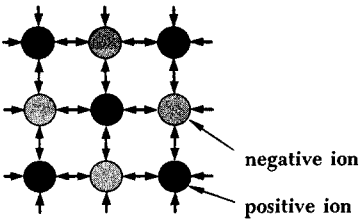
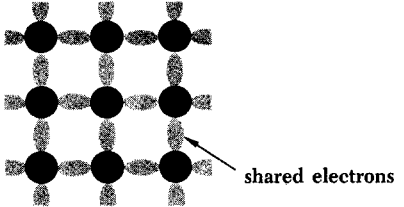
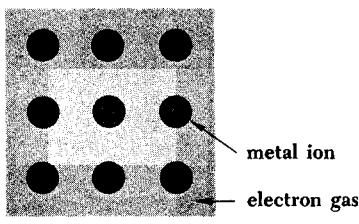
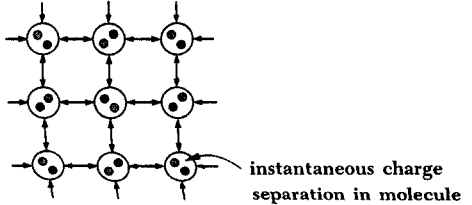


**TABLE 10.1** CRYSTAL TYPES

TYPE		BOND	EXAMPLE	PROPERTIES
Ionic		Electric attraction	Sodium chloride NaCl $E_{\text{cohesive}} = 3.28 \text{ eV/atom}$	Hard; high melting points; may be soluble in polar liquids such as water
Covalent		Shared electrons	Diamond C $E_{\text{cohesive}} = 7.4 \text{ eV/atom}$	Very hard; high melting points; insoluble in nearly all solvents
Metallic		Electron gas	Sodium Na $E_{\text{cohesive}} = 1.1 \text{ eV/atom}$	Ductile; metallic luster; high electrical and thermal conductivity
Molecular		Van der Waals forces	Methane CH <sub>4</sub> $E_{\text{cohesive}} = 0.1 \text{ eV/atom}$	Soft; low melting and boiling points; soluble in covalent liquids