

Hydrogen Bonding

The dipole - dipole interactions experienced when H is bonded to N, O, or F.
* These interactions are unusually strong

Hydrogen bonding arises because of the high electronegativity of nitrogen, oxygen, and fluorine. When this happens the nucleus of the Hydrogen is exposed

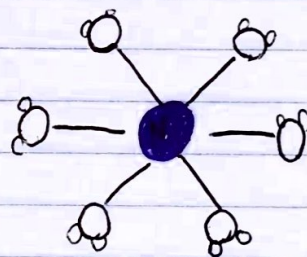
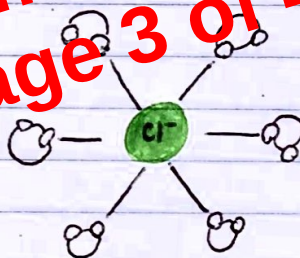
Ion - Dipole Interactions

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A fourth type of Force. The strength of these forces is what makes it possible for ionic substances to dissolve in polar solvents

* Cations - positive Anions - negative

● = Na^+



Positive ends of polar molecules are oriented toward negatively charged anion

Negative ends of polar molecules are oriented toward positively charged cation

* go to Summarizing intermolecular forces

Intermolecular Forces

Intermolecular Forces Affect Many Physical Properties
The strength of the attractions between particles can greatly affect the properties of a substance or a solution

* Viscosity - the resistance of a liquid to flow
increases w/ stronger intermolecular forces
decreases w/ higher temps.