

AP CHEM

INTERMOLECULAR FORCES

REVIEW



Intermolecular forces : attraction **BETWEEN** molecules

→ determines physical properties
(eg. boiling & melting points)

→ generally, stronger IMFs = ↑ melting
& boiling points

LONDON DISPERSION FORCES

(LDFs)

→ weakest IMF

Present in **ALL** molecules

→ caused by temporary shifts in electron distribution

eg.



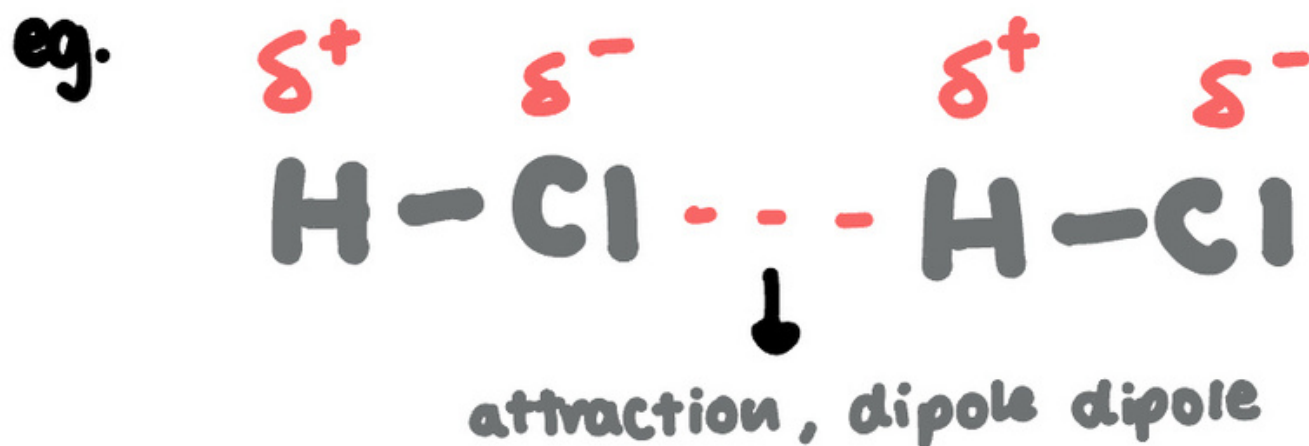
→ strength increases w/ more electrons

→ **ONLY** IMF in nonpolar molecules

DIPOLE DIPOLE FORCES

Present in **POLAR** molecules

→ partial positive end of molecule attracts partial negative end of another



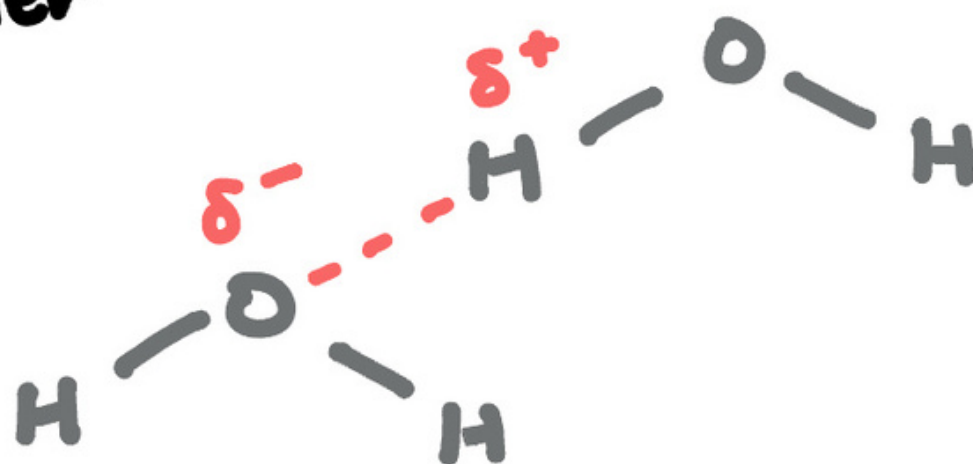
→ stronger than LDFs

HYDROGEN BONDING

Requires **H** directly bonded to **N, O, or F**

→ specific type of dipole-dipole force

eg. water



→ very strong, hydrogen bonding > dipole
- dipole > LDFs

**follow for
more!**



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