

Ch 8 HW: Sec Asses 34,35,38 Rev Con 59,61,82
Sec 8.4A

obj: Name and describe the weak attractive forces that hold groups of molecules together.

Molecular forces

- Forces that attract molecules to each other.
- Determine if the compound is a solid, liquid or gas @ Rm Temp.
- These forces are weaker than the forces btw ions in ionic compounds.

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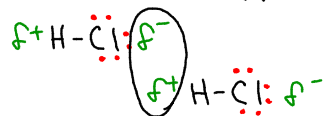
- 3 Types of Molecular Forces

1) Dispersion Forces

- Forces btw molecules that is caused by the number of electrons in the molecule.
- The larger the number of electrons the stronger the force.

2) Dipole Interactions

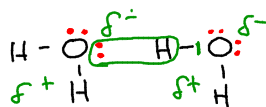
- Force of attraction btw polar molecules. (weak static forces)



- Only polar molecules show dipole interaction.
- Both Dispersion forces + Dipole Interaction are known as vander Waals Forces.

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3) Hydrogen Bonding
 - A force of attraction of a Hydrogen, which is part of a very polar molecule, for an unshared pair of electrons on a nearby molecule.



* Hydrogen bonding is the strongest intermolecular force.

* Collectively, Dispersion Forces and Dipole interaction are called vander Waals forces

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Properties of Molecular Compounds

1) Exist as a solid, liquid, or gas

2) Low melting pt.

* Except for Network Solids
 - all atoms in the solid are covalently bonded to each other.

3) Poor Conductors of heat & electricity
 * Good Insulators

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