Chapter 1
States of Matter

Binding Forces Between Molecules

For molecules to exist as aggregates in gases, liquids, and solids, intermolecular forces must exist,

A- Intermolecular forces, B- Intramolecular forces

Intramolecular force

An intramolecular force is any force that holds together the atoms making up a molecule or compound. They contain all types of chemical bond. They are stronger than intermolecular forces, which are present between atoms or molecules that are not actually bonded.

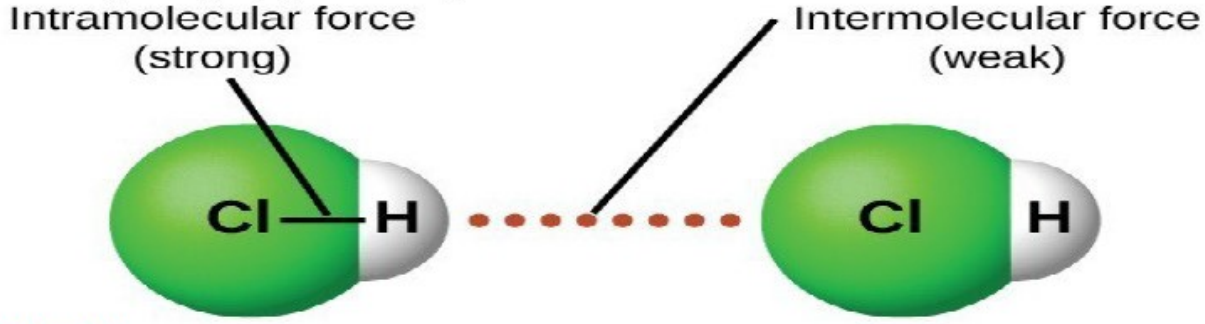
Types of intramolecular force

There are three main types of intramolecular force, distinguished by the types of constituency atoms and the behavior of electrons:

Types of intramolecular force:

1- Ionic intramolecular forces
2- Covalent interaction
3- Metallic interaction

Intermolecular forces are forces of attraction or repulsion which act between neighboring particles (atoms, molecules or ions). They are weak compared to the intramolecular forces, the forces which keep a molecule together. Intermolecular bonding is largely governed by electron orbital interactions



Cohesions

Cohesion, or the attraction of like molecules, and adhesion, or the attraction of unlike molecules