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Forces of Attraction between particles

Intramolecular Forces - Between atoms

- ionic bonds
- covalent bonds } very strong

Intermolecular Forces - Between molecules

- only for molecular compounds
- weaker than intramolecular forces
- used to explain the physical properties of molecular compounds

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Types of Intermolecular Forces

① London Dispersion force

- found in all molecules
- considered to be the weakest force
- caused by the attraction between electrons of one molecule being attracted to the nuclei of the other molecule

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- due to the strength of the force is directly related to the number of electrons in the molecules

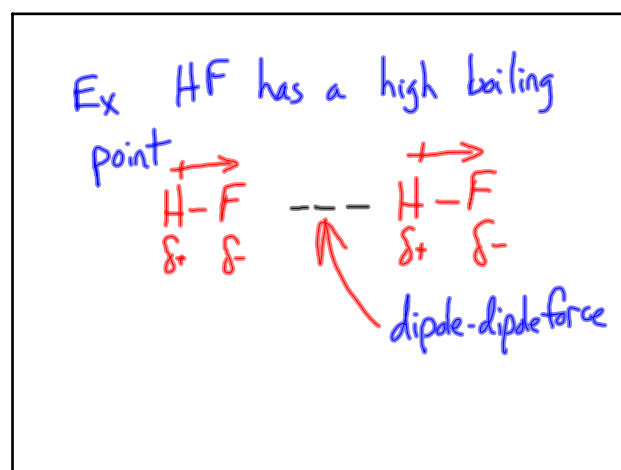
For example: The states of the halogens  $\text{F}_2(g) \rightarrow \text{I}_2(s)$

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② Dipole - Dipole

- force of attraction between
- \* polar molecules
- stronger than the London dispersion force

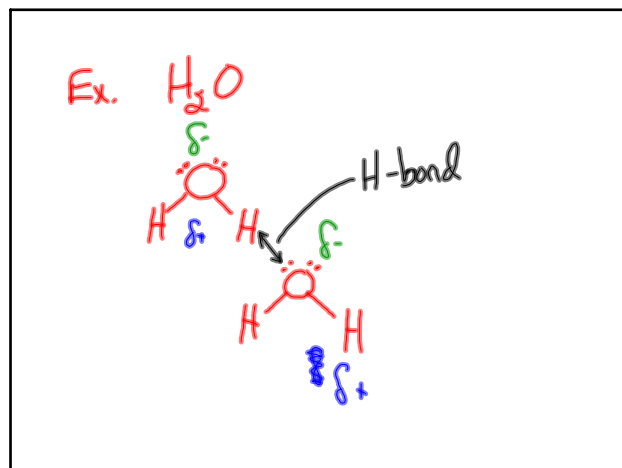
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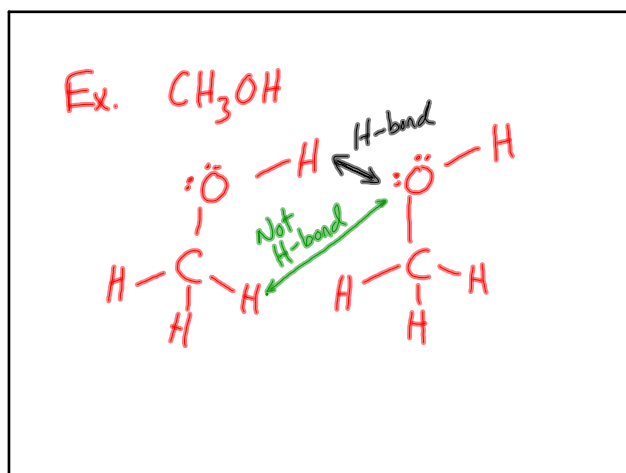
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- ③ Hydrogen Bonding
- strongest Intermolecular force
  - force of attraction between "H" and very electronegative atoms  
O, N

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