

Organic Chemistry

Large number of compounds due to: - 4 valence pairs - single / double / triple bonds - cyclic (ring) structures

Properties of hydrocarbons

- *Saturated* - all C-C bonds are single
- Insoluble in water
- Almost non-polar (similar electronegativities)
- Only dispersion forces (valence e-)
- Dispersion forces increase with length
- Branched molecules have lower density

Linear (aliphatic)

Alkanes: $C_n H_{2n+2}$

Alkenes: $C_n H_{2n}$

Alkynes: $C_n H_{2n-2}$

Naming hydrocarbons

- Branches end with -yl
- Indicate number of branches with di-, tri- etc.

Functional groups

Alcohols	-OH
Aldehydes	-CHO
Ketones	-CO-
Carboxylic acids	-COOH
Amines	-NH ₂
Amides	-CONH ₂