Organic chemistry is chemistry of carbon-containing compounds

Organic compounds: contains C
Inorganic compounds: does not contain C (usually)

separate from

Natural compounds: made in nature
Synthetic compounds: made in laboratory

Hydrocarbons contain only hydrogen and carbon, and can be drawn several different ways:

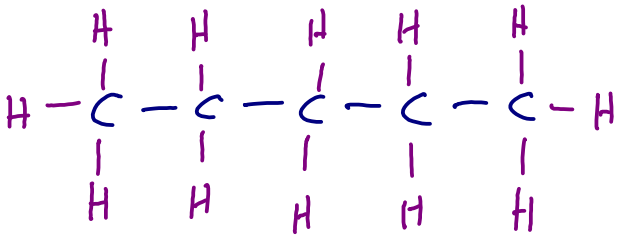
1. Carbon backbone / carbon skeleton

☆ C makes 4 bonds

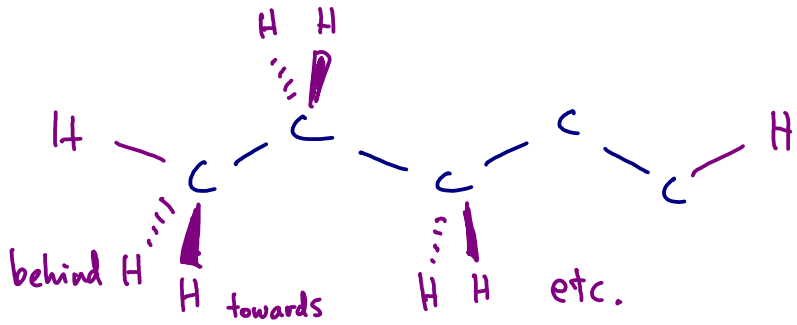
C – C – C – C – C

not a finished structure

2. Structural formula (flat Lewis structure)

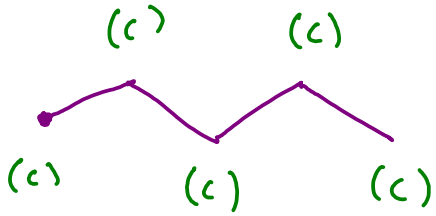


3. 3-dimensional structure



4. Line structure

C at ends & joints of lines
C's are implied
H's are implied

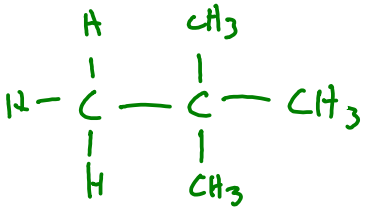


5. Condensed formula (symbols and subscripts, but shows some structure)

repeating groups in chain

$CH_3CH_2CH_2CH_2CH_3 = CH_3(CH_2)_3CH_3$

$CH_3C(CH_3)_2CH_3$



6. Molecular formula (just a count of atoms - no structural information)

C_5H_{12}

One molecular formula may have multiple **isomers**