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ORGANIC CHEMISTRY → 4 valence e<sup>-</sup> ⇒ 4 bonds

HYDROCARBONS - C<sub>n</sub>H<sub>m</sub> → 1 bond

best at forming  
covalent bonds → chains  
rings

ALKANES → only C-C single bonds

Formula C<sub>n</sub>H<sub>2n+2</sub>

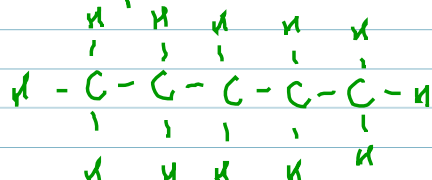
C<sub>1</sub>H<sub>4</sub> methane      C<sub>6</sub>H<sub>14</sub> hexane

C<sub>2</sub>H<sub>6</sub> ethane      C<sub>7</sub>H<sub>16</sub> heptane

C<sub>3</sub>H<sub>8</sub> propane      C<sub>8</sub>H<sub>18</sub> octane

C<sub>4</sub>H<sub>10</sub> butane      C<sub>9</sub>H<sub>20</sub> nonane

C<sub>5</sub>H<sub>12</sub> pentane      C<sub>10</sub>H<sub>22</sub> decane



Condensed Structure Formula



line structure



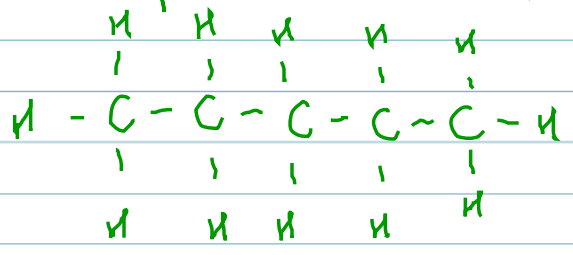
ORGANIC CHEMISTRY → 4 Valence e<sup>-</sup> ⇒ 4 bonds

HYDROCARBONS - C<sub>n</sub>H<sub>m</sub> → 1 bond  
best at forming covalent bonds → chains rings

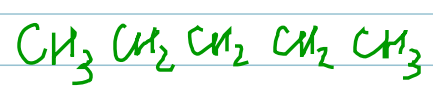
ALKANES → only C-C single bonds

Formula C<sub>n</sub>H<sub>2n+2</sub>

- |                                        |                                        |
|----------------------------------------|----------------------------------------|
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Condensed Structure Formula

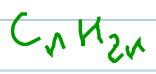


line structure

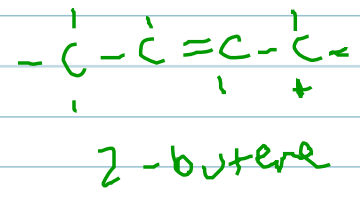
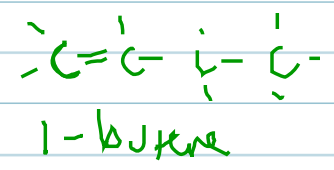
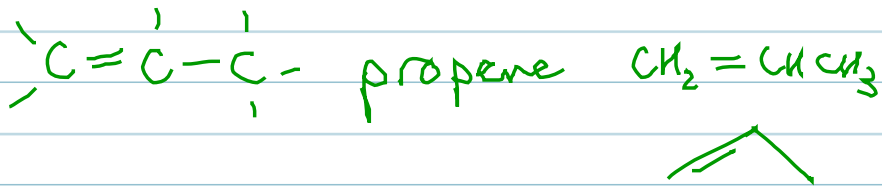
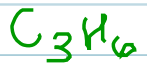


ALKENES  $C=C$

"unsaturated"

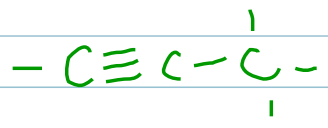
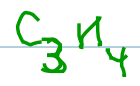
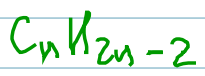


↳ don't have the max # of H's



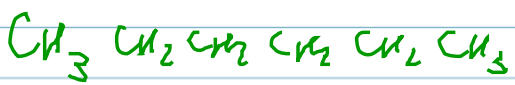
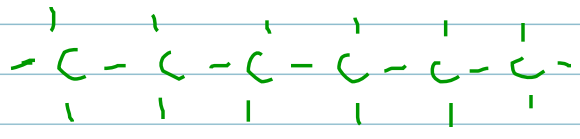
ALKYNES  $C\equiv C$

very reactive

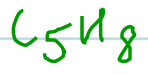
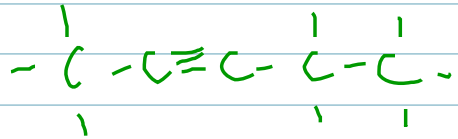


propyne

Hexane  $C_6H_{14}$

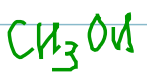
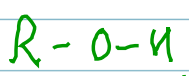


2-pentyne



FUNCTIONAL GROUPS

alcohol



methanol

hydroxyl

Carboxylic acid

