

# taxonomy of hydrocarbons

***alkanes***

**$sp^3 -$**

  $\sigma$

sat<sup>d</sup>

$C_nH_{2n+2}$

$C_2H_6$

ethane

$-C_2H_5$

ethyl

***alkenes***

**$sp^2 =$**

  $\sigma, \pi$

unsat<sup>d</sup>

$C_nH_{2n}$

$C_2H_4$

ethene

$-C_2H_3$

vinyl

***alkynes***

**$sp \equiv$**

  $\sigma, \pi$

unsat<sup>d</sup>

$C_nH_{2n-2}$

$C_2H_2$

ethyne