

# Aromaticity

A compound having a planar ring of atoms linked by alternating single and double bonds. Tend to undergo nucleophilic aromatic substitution on the ring, usually of the hydrogen. Due to the stability of the alternating double/single bonds, addition reactions only occur at special and extreme circumstances.

The electrons taking part in the pi-bonds delocalize and spread over the ring, such that all bonds are equal—somewhere between a single and double bond. The bond lengths and bond energy on the carbons can be viewed as intermediate. There is also no isomer if there is only one substituent. If the bonds were not all equal, there would be isomers.

All aromatic compounds obey the Hückel Rule: The number of pi electrons should be equal to  $4n+2$ , where  $n$  is any integer.

Compounds which do not follow this rule or are not planar, but have alternating double/single bonds, are called pseudoaromatics.

Generally, aromatics are benzene derivatives.

## Aromatic Compounds

