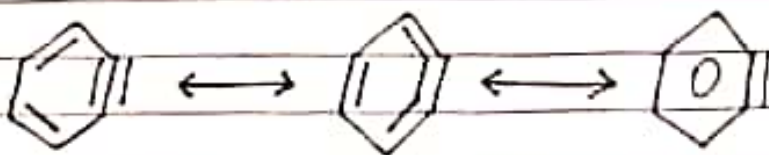


ARYNES (BENZYNE)

The term 'aromatic' compounds was first used by Kekule (1865) to classify benzene and its derivatives, many of which possessed fragrant odour or 'aroma'.

An aryne is uncharged reactive intermediate derived from an aromatic system by removal of two ortho substituents leaving two orbitals with two electrons distributed between them.

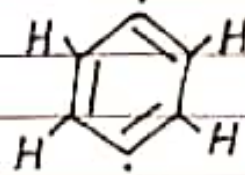
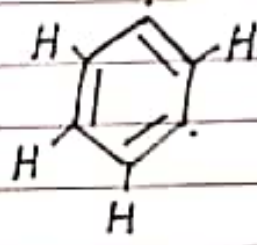
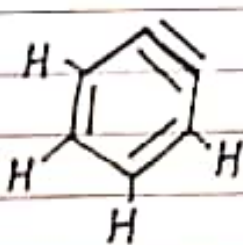
Resonating structure of Benzyne (Aryne)



The simplest aryne, C_6H_4 , is sometime called benzyne. However, this name is open for criticism because it implies a triple bond which would be a special case of triple bonds. So a better name is didehydrobenzene.

Benzyne is an extremely reactive species due to the nature of its triple bonds.

There are three possible diradical didehydrobenzenes. Their energies in Silico are respectively 106, 122 and 138 Kcal/mole.



1,2-Didehydrobenzene

1,3-D.A.B

1,2-D.A.B

Arynes are often prepared from aryl halides in presence of a strong base.