

M.O Theory



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M.O Theory develops is a theory of chemical bonding given by F. Hund and R.S Mulliken to describe the structure and properties of molecules. In this theory atomic orbitals describe the geometry of a molecule. According to this theory:

- 1) Atomic orbital of proper symmetry and proper energy overlap to form molecular orbital
- 2) The NO. of molecular orbital is equal to atomic orbital.
- 3) Three type of molecular orbitals are formed. (a) bonding molecular orbital, b) antibonding molecular orbital, c) non bonding molecular orbital. Bonding molecular orbitals have lower energy than atomic orbitals.

antibonding molecular orbitals are higher energy than its atomic orbitals and Non bonding molecular orbitals are zero energy.

7) Electrons in molecular orbitals are filled according to increasing their energies.

eg:- H_2 $H(1s)$ node.

