

Four Principles of Molecular Orbital Theory

- Principle #1:* The total number of molecular orbitals produced is always equal to the total number of atomic orbitals contributed by the atoms that have combined.
- Principle #2:* The bonding molecular orbital is lower in energy than the parent orbital, and the antibonding orbital is higher in energy than the parent orbital.
- Principle #3:* Electrons of the molecule are assigned to orbitals of successively higher energy.
- Principle #4:* Atomic orbitals combine to form molecular orbitals most effectively when the atomic orbitals are of similar energy.