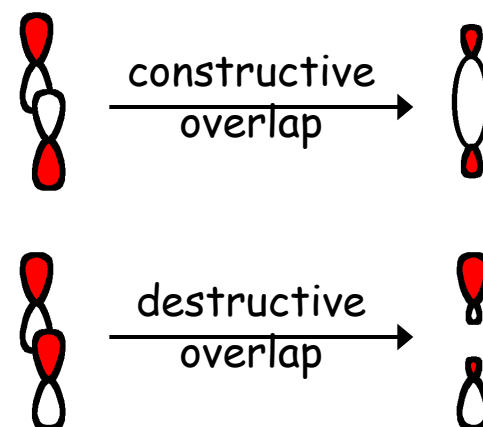


Pictorial Representations of LCAO

Possible outcomes of LCAO orbital interactions

- Sigma bonding
- Sigma antibonding
- Pi bonding
- Pi antibonding
- No interaction

red = wavefunction is positive
white = wavefunction is negative



Orbitals that combine in such a way as to result in no net overlap produce a “no interaction” situation. That is, a volume of constructive overlap is exactly canceled by an equal volume of destructive overlap, as shown at the right. This “no interaction” situation is said to be “symmetry forbidden”.

