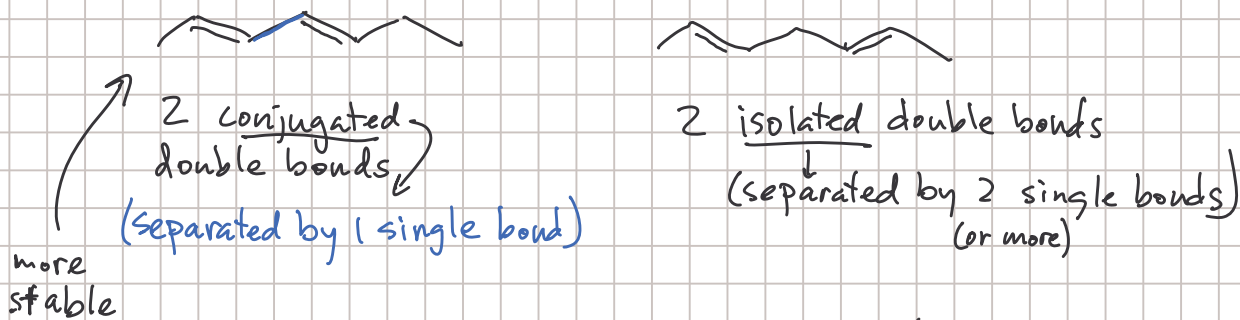


Ch 15 Conjugated systems / Orbital Symmetry

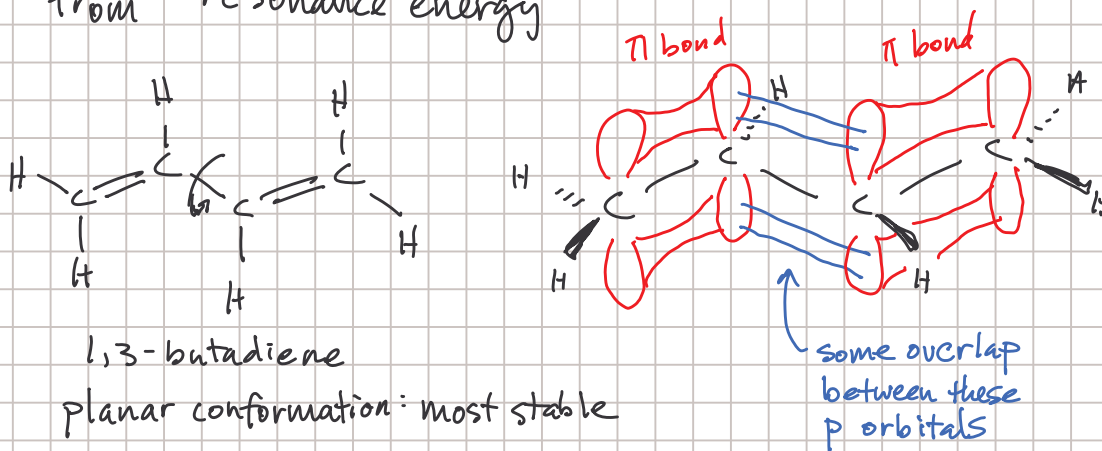
Note Title

1/25/2006

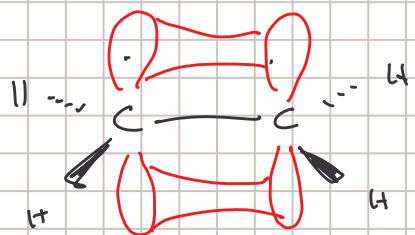


Conjugation gives extra ~ 4 kcal/mol stability

from "resonance energy"

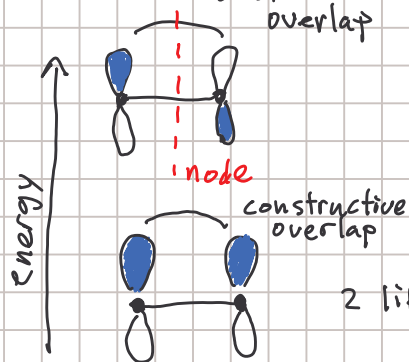


Molecular orbitals of ethylene



2 molecular orbitals in ethylene

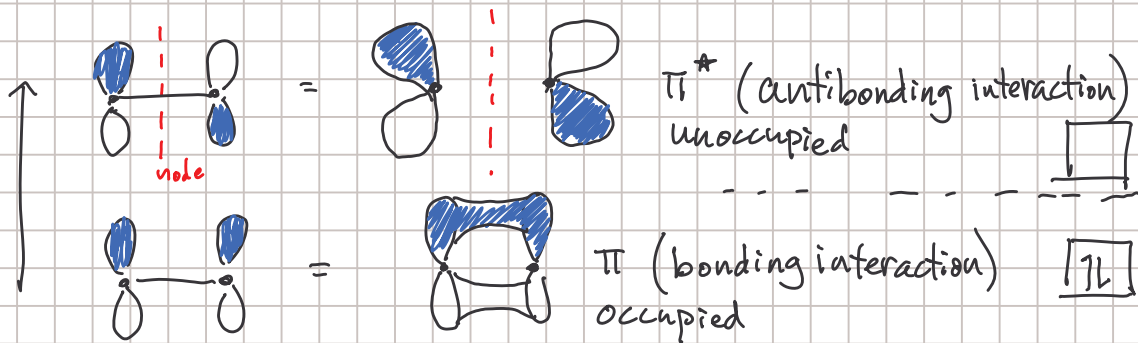
MO diagram



each lobe of a p orbital has opposite phase
+ or - sign of wavefunction

Shaded or unshaded

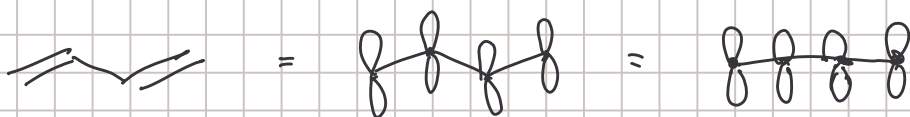
2 like phases overlap



2 p orbitals = 2 molecular orbitals.

occupied MO: "contains" electrons when molecule is in ground state

ethylene π bond: 2 electrons



consecutive
 4 p orbitals = 4 molecular orbitals

