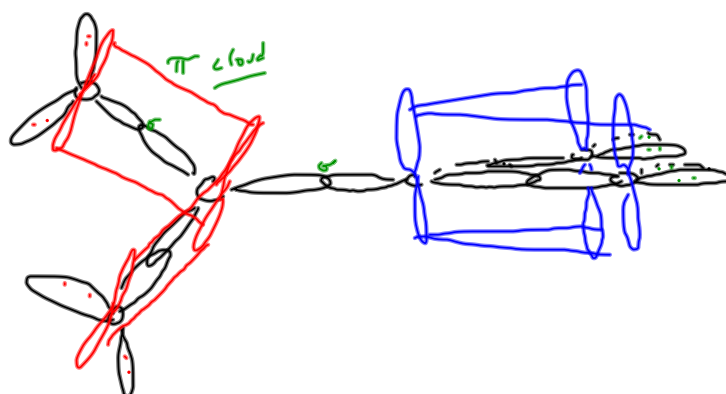
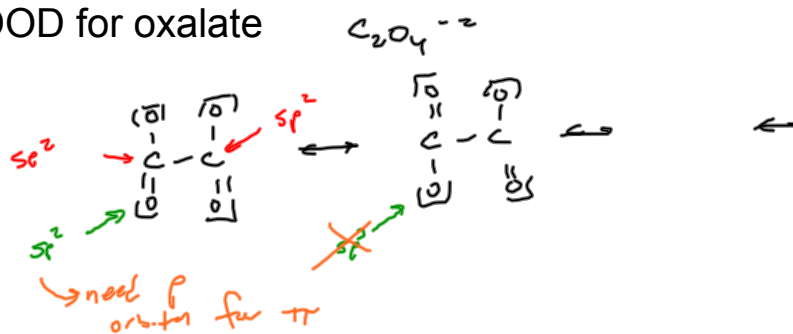
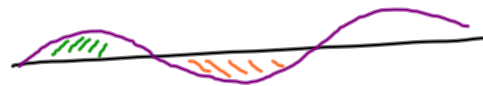
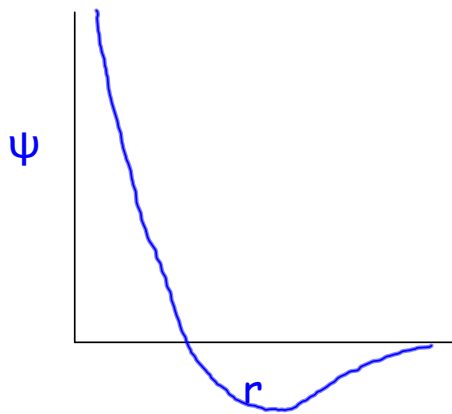


Draw the VBOOD for oxalate

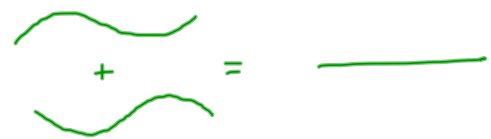


Molecular Orbital Theory

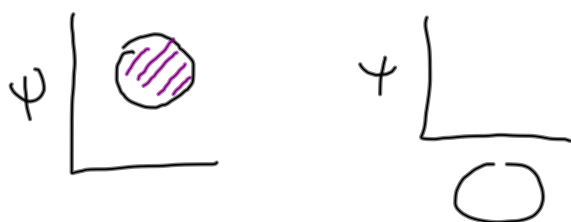
remember this...?



Wave Interference



Interference of "s" atomic orbitals



d.iff phase



in phase
interfere constructively
(add)



σ



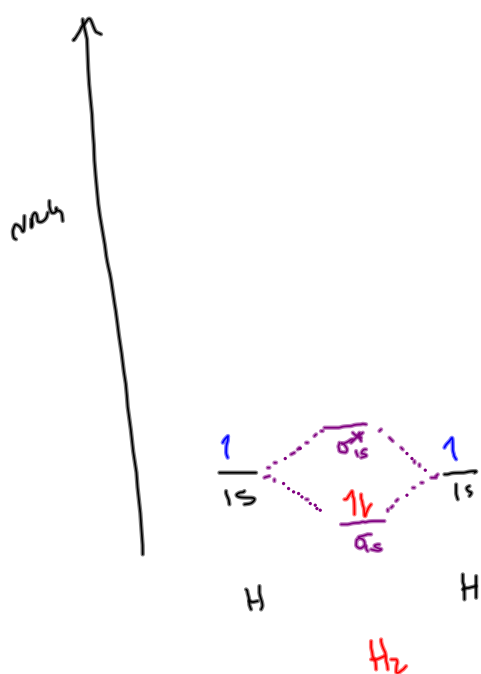
out of phase
interfere destructively
(subtract)



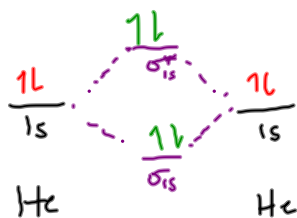
σ^*

sigma antibond

M.O. Diagram of H₂



He₂



= tendency to
stick and
fall apart

Bond Order

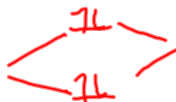
$$\text{B.O.} = \frac{\text{bonding } e^- - \text{antibonding } e^-}{2}$$

H₂



$$\frac{2 - 0}{2} = 1$$

He₂



$$\frac{2 - 2}{2} = 0$$

He₂⁺¹



$$B.O. = \frac{2 - 1}{2} = \frac{1}{2}$$