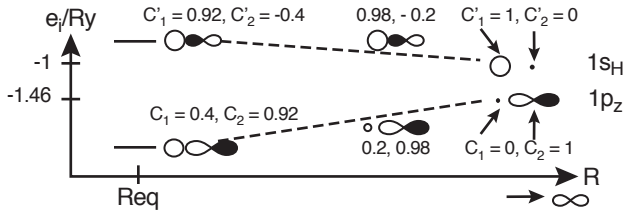
The Woodward-Hoffman rules

Simple theorem:

"The coefficients $c_i(R_n)$ are continuous functions of R_n"

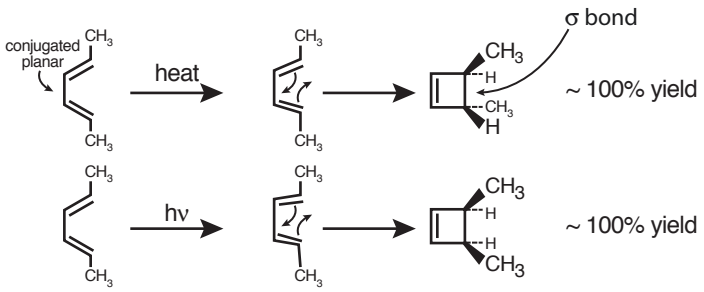
ex: O-H or H-F (R)
bonding

$|\sigma> = c_1|1s> + c_2|2p_z>$



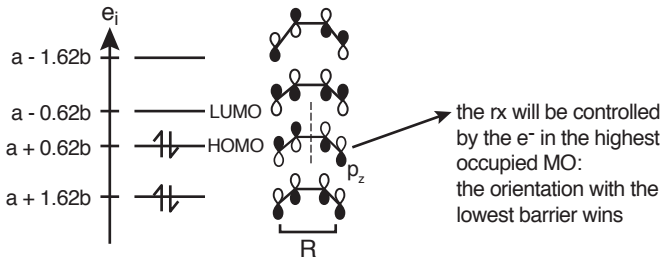
"MOs transform continuously during a chemical rx, and the highest occupied MO controls the barrier"

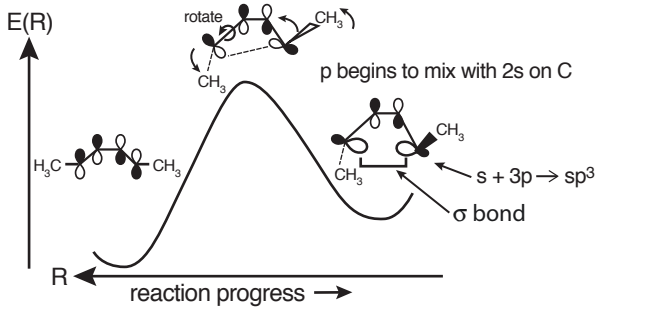
A more interesting reaction:



4n π electrons (n=1)

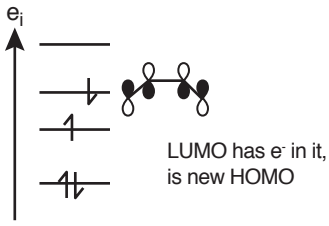
With heat:

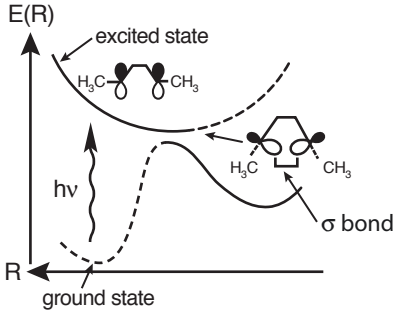




con-rotatory to make σ bond

With light:





dis-rotatory rot. to make σ bond