(6) Today

Sections 11.7 - 11.11: Elimination Reactions

Section 17.6: Alcohols and Elimination Reactions

Next Class (7)

Sections 11.7 - 11.11: Elimination Reactions

Section 17.6: Alcohols and Elimination Reactions

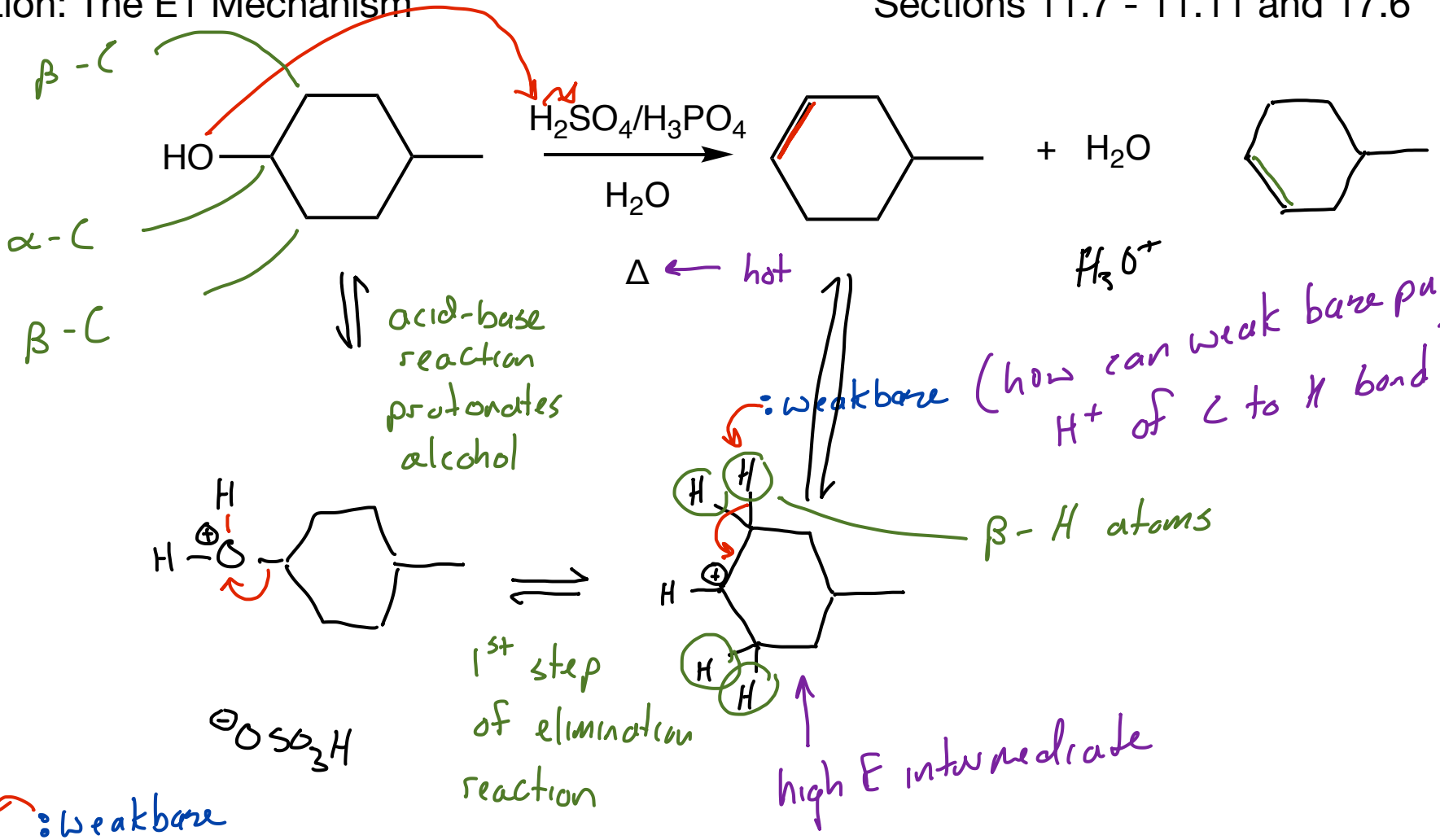
Chap 12: Mass Spectrometry and Infrared Spectroscopy

(8) Second Class from Today

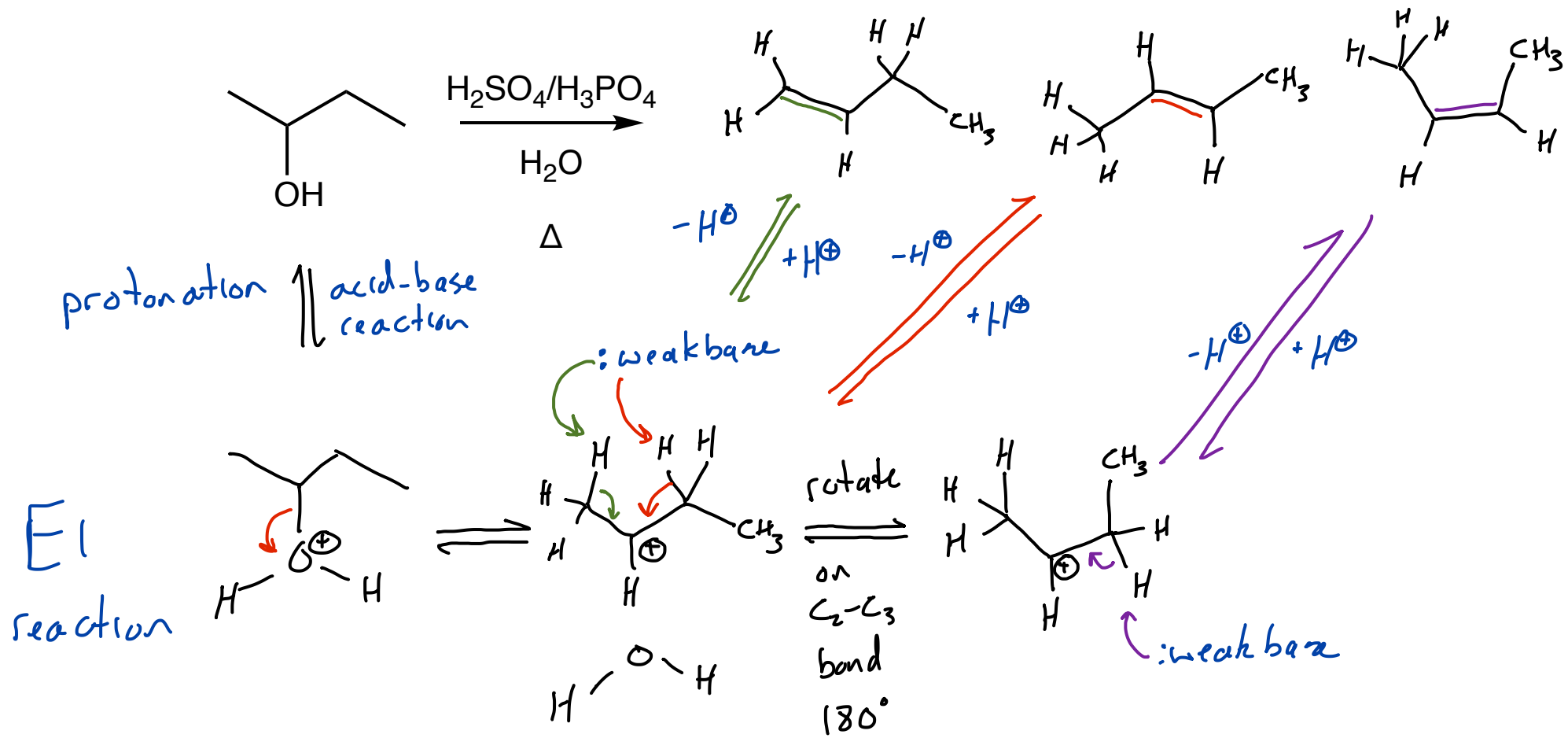
Chap 12: Mass Spectrometry and Infrared Spectroscopy

Third Class from Today (9)

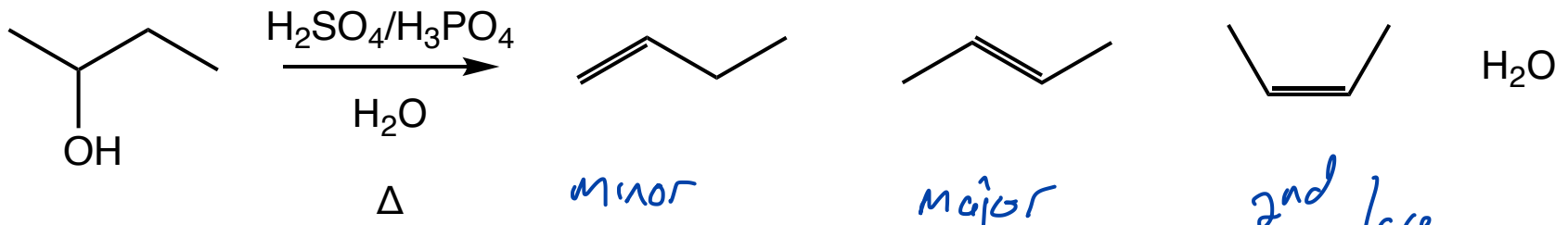
Chap 13 : Nuclear Magnetic Resonance Spectroscopy



1. Leaving group leaves the α-C 2a. a weak base abstracts β-H
2b. The e^-'s that were between the β-C + β-H make a π bond from α-C to β-C



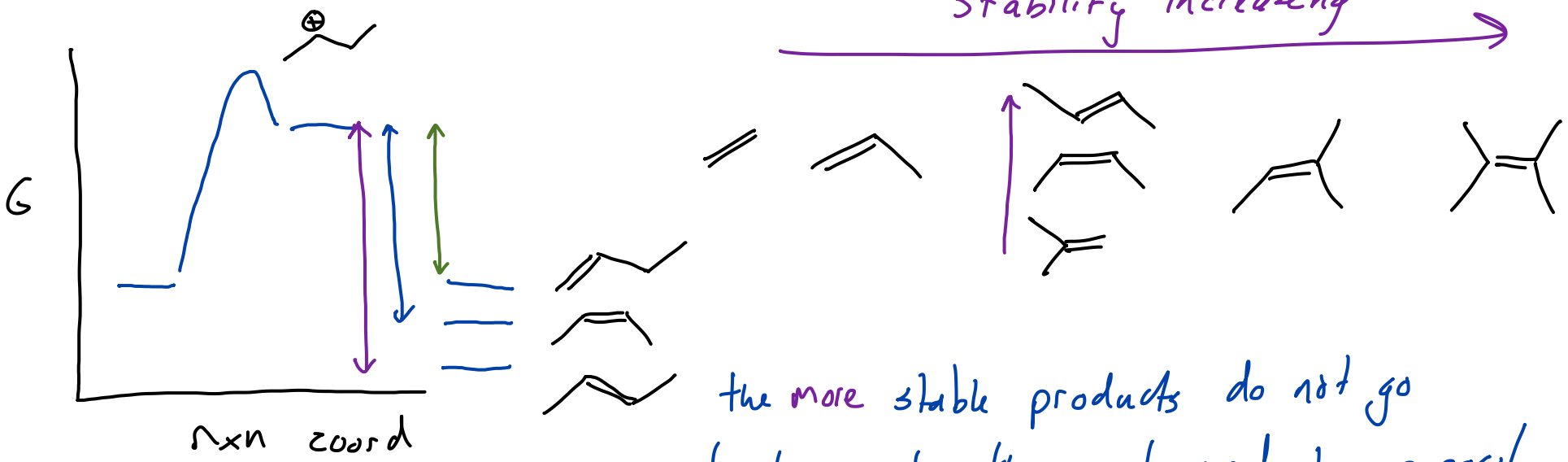
all possible products form during elimination reactions



minor major 2nd place

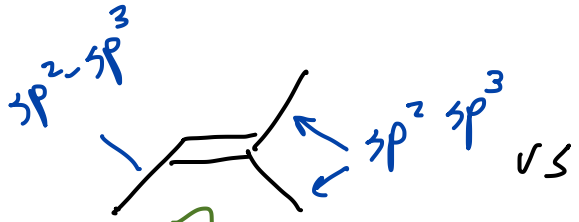
equilibrium reactions are controled by thermodynamics

most stable prod is major prod

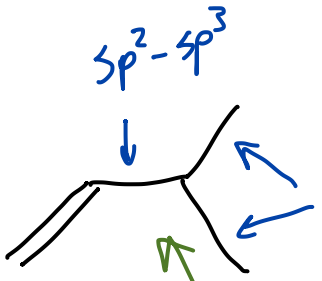


the more stable products do not go back up to the intermediate as easily so their concentration increases until equilibrium is established

Section 7.6: Stability of Alkenes



vs



sp^3 to sp^3 C-C bonds

trisubstituted

monosubstituted

this molecule has more sp^2 to sp^3 bonds as compared to this one

sp^2 33% s 67% p

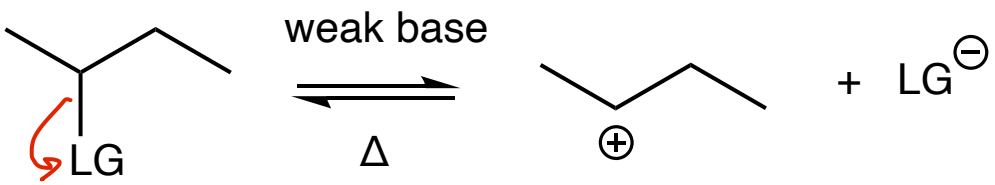
sp^3 25% s 75% p

more s character
e^- get closer to nucleus

so sp^2 to sp^3 C-C bonds are stronger than sp^3 to sp^3 C-C bonds

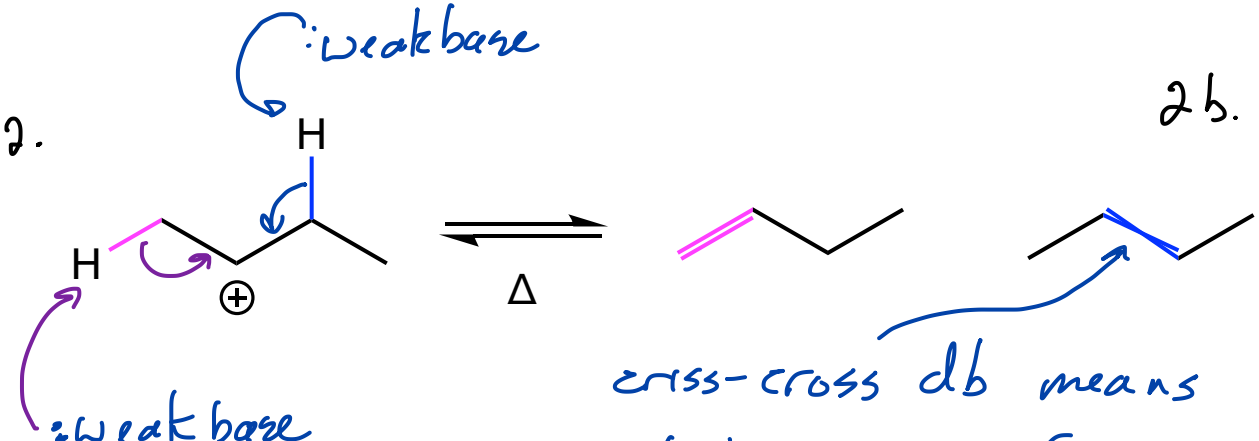
trisubstituted has more sp^2-sp^3 bonds than the monosubstituted

1.



1. LG leaves α-C

2.



criss-cross db means both Z + E form

2a. a weak base abstracts a β-H

2b. simultaneously with the β-H abstraction the e⁻ in the β-C to β-H σ-bond form a π bond to the α-C

yields are determined by stability of the alkene ... more substituted the db is the more stable the alkene