*CHEM 242 – Lecture 12 03/02/2014*

Overheads: - Outline

Recap Friday: Reactions of Alcohols

1) As Nu-



2) As LG



Elimination Reactions of Alcohols

For Dehydration: 3° ROH > 2° ROH >> 1° ROH

\*\*\* Also need to consider possible rearrangements!

Other ways to turn OH into LG:

⇨ HCl *etc*. only good for simple ROH ⇨ rearrangements, side reactions)



Common Sulfonate Esters



Stereochemistry: R\*‑O‑H 🡪 R\*‑LG

⇨if “R” is chiral center, stereochem. of product depends on how LG is added!

H-Cl (C+) ⇨ racemic

SOCl2 ⇨ inverts (or PCl3 etc)

TsCl ⇨ retains

Then if we do SN2 to replace LG, get double inversion (SOCl2) or inversion (TsCl)

⮱ S 🡪 R 🡪 S ⮱ S 🡪 S 🡪 R

Last Reaction of Alcohols: Oxidation

Oxidation: increase in # of C‑O bonds

Reduction: increase in # of C‑H bonds











How does the Oxidation work?

