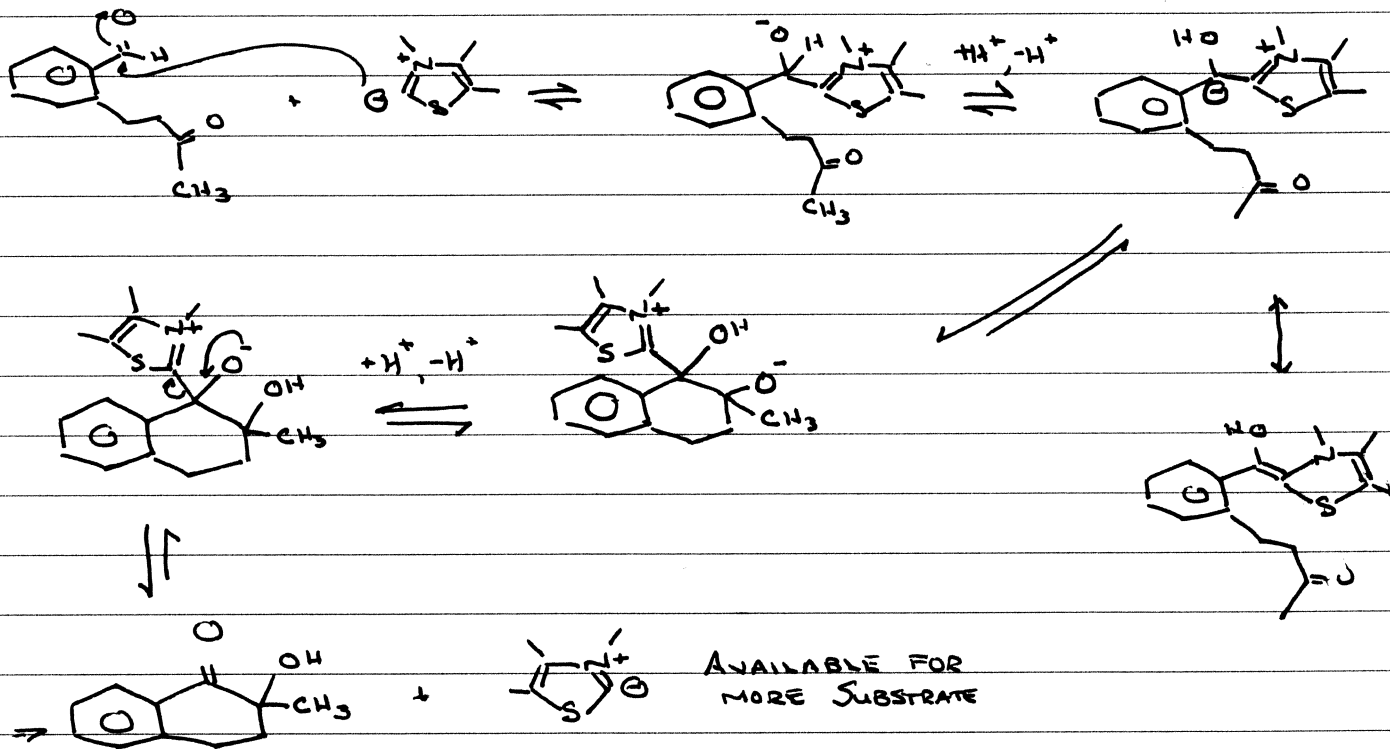
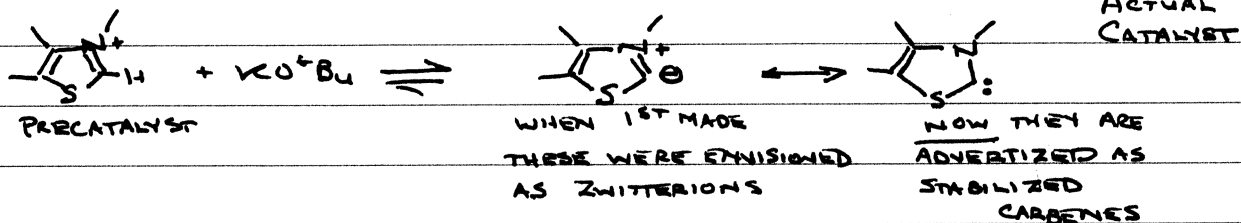


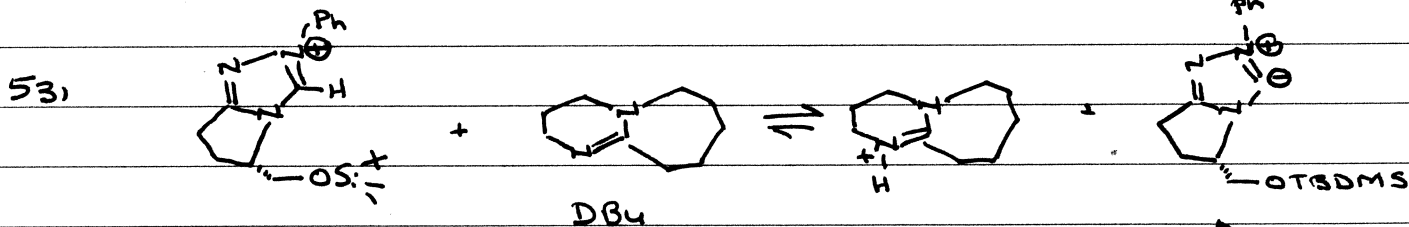
431/531 ASSIGNMENT #1
SUGGESTED SOLUTIONS

F' 2013

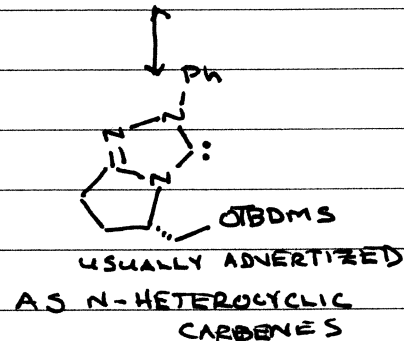
1. 431



THESE HAVE LARGELY REPLACE CN IN BENZOIN CONDENSATIONS

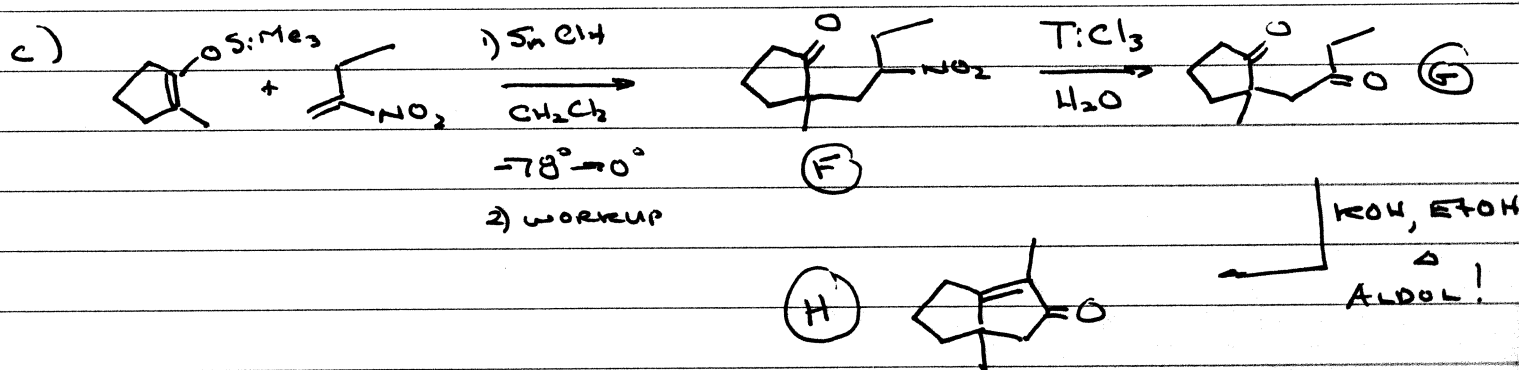
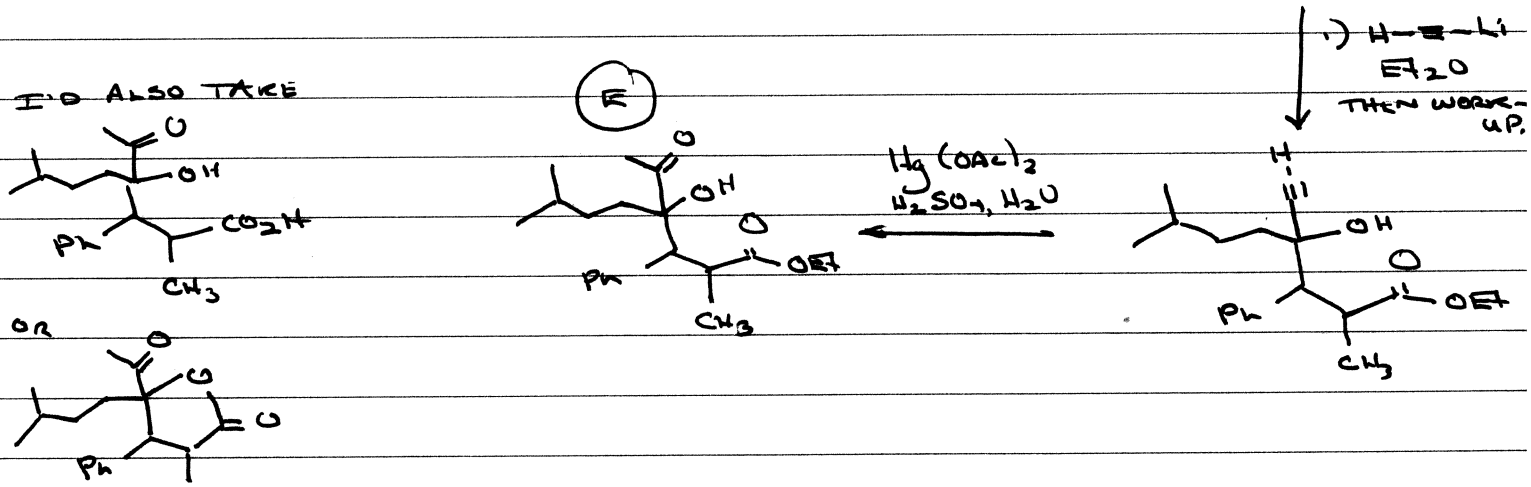
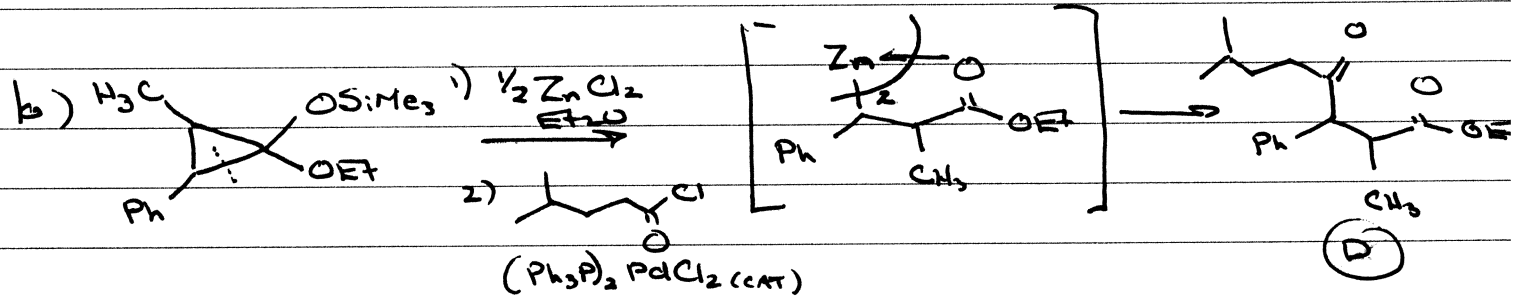
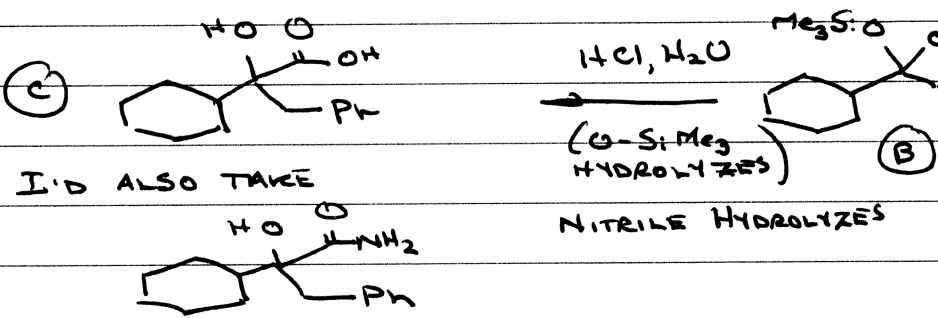
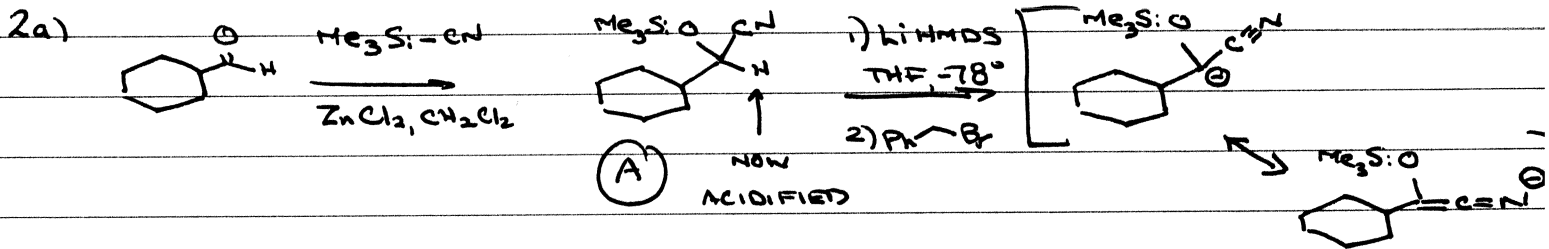


- NOW EVERYTHING IS EXACTLY ANALOGOUS TO THE THIAZOLIUM (PRE) CATALYST CHEMISTRY ABOVE, EXCEPT THAT THESE CARBENES / ZWITTERIONS HAVE A CHIRAL CENTRE, SO THAT ENANTIOMERICALLY ENRICHED HYDROXY TETRALONES ARE POSSIBLE

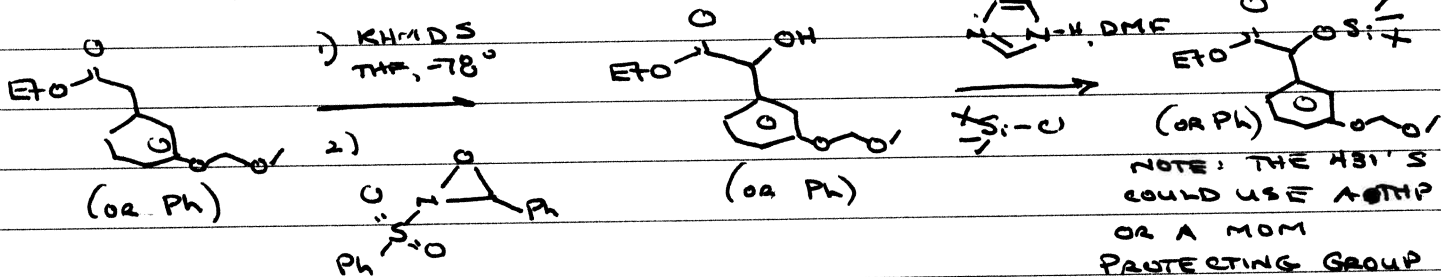


SEE ENDERS, D.; NIEMEIER, O.; BALENSIEFER, T.

ANGEW. CHEM. INT. ED. 2006, 45, 1463.



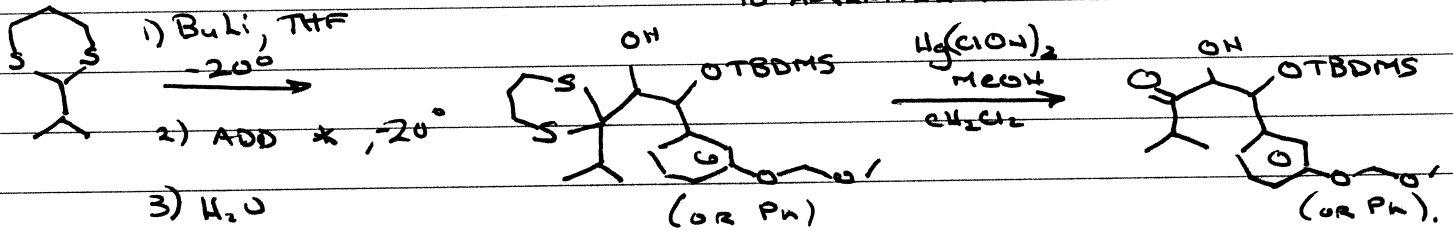
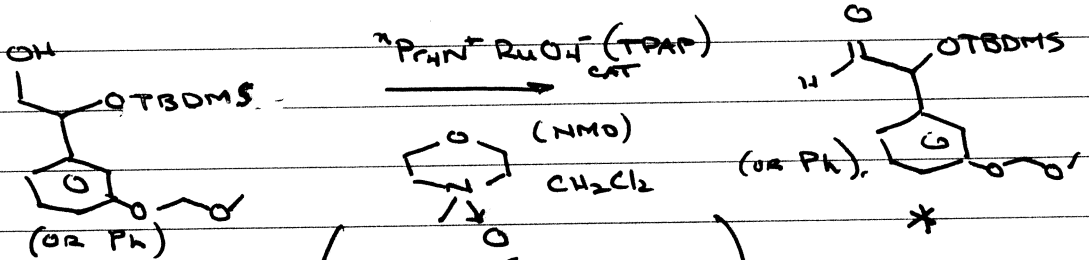
Q) THE DIFFERENCE BETWEEN THE 431 AND 531 VERSIONS IS THAT THE LATTER HAS A PROTECTING GROUP THAT NEEDS TO AVOID ACIDIC CONDITION: AVOID ACID SO WE WILL FOR BOTH.



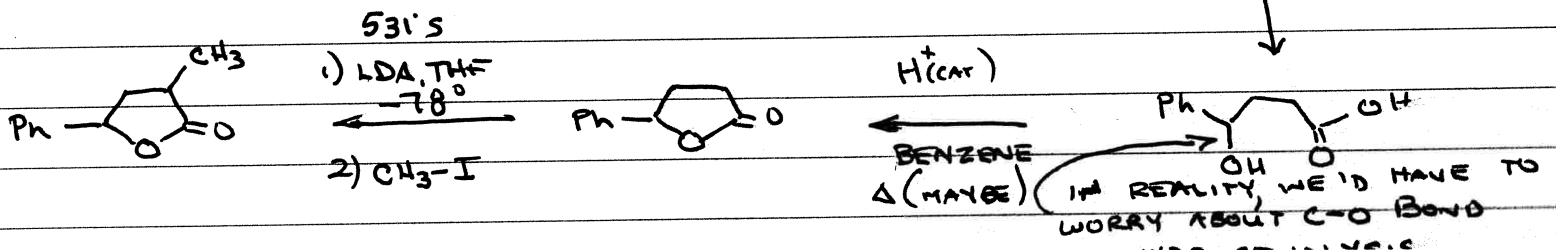
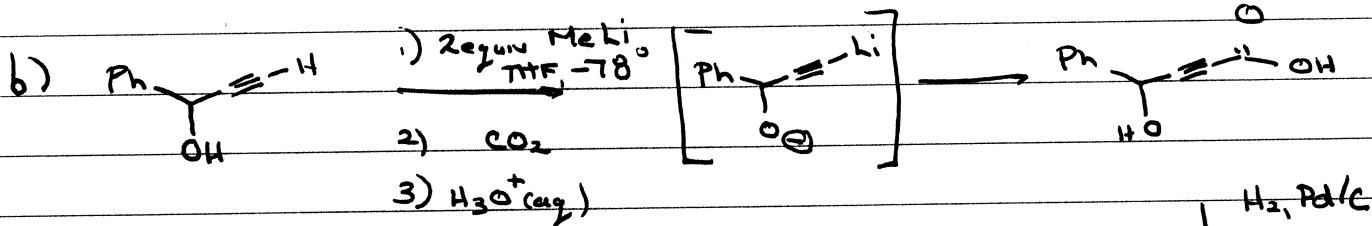
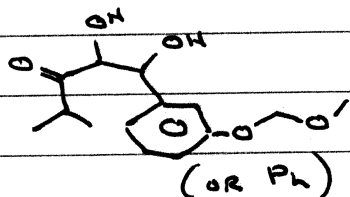
MAYBE DIBAL-H LOW T, WILL WORK IN ONE STEPS, BUT WE'LL DO

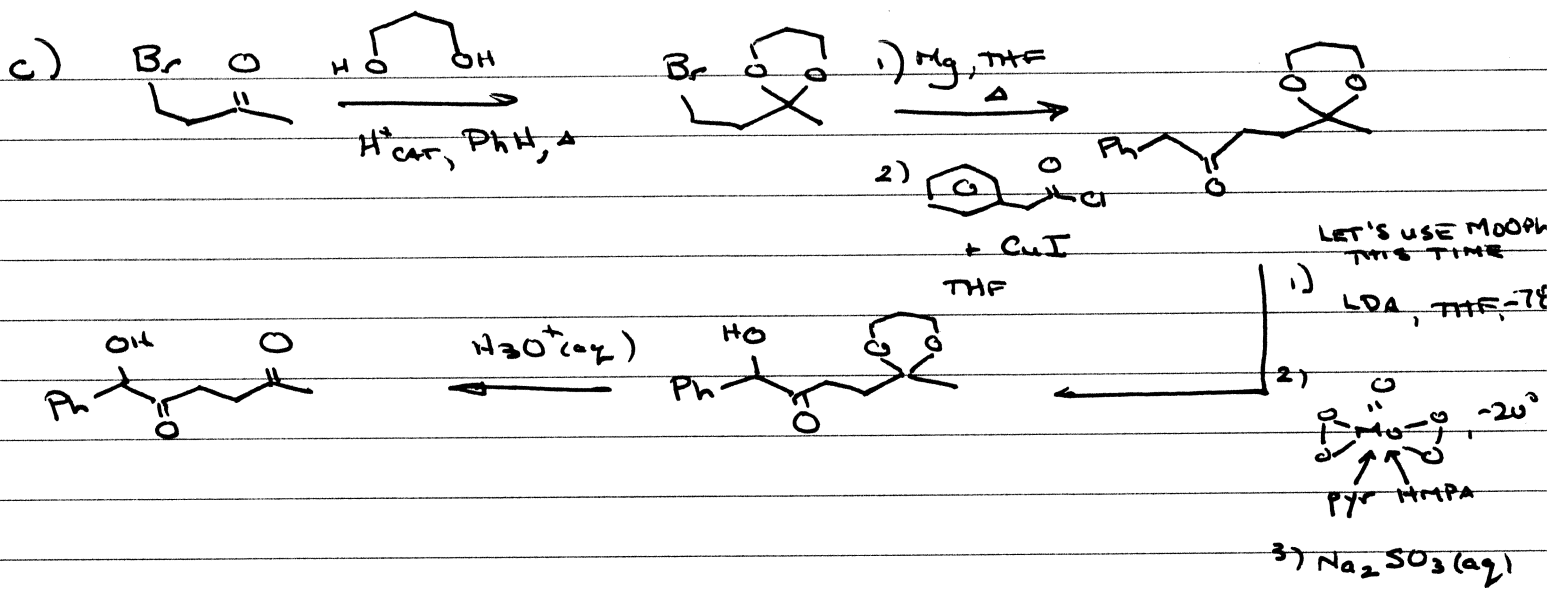
1) LiAlH4, THF
2) H2O

3) H2O



Bu_4NF (TBAF)
THF - H2O





4. THE FOLLOWING IS A VENERABLE REACTION CALLED A FAVORSKII REARRANGEMENT, WHICH IS CLEARLY THE BASIS FOR THE SILOXYCYCLOPROPANE CHEMISTRY OF KUWAJIMA / NAKAMURA DISCUSSED IN CLASS. A SHORT-LIVED HOMOENOLATE IS INVOLVED.

