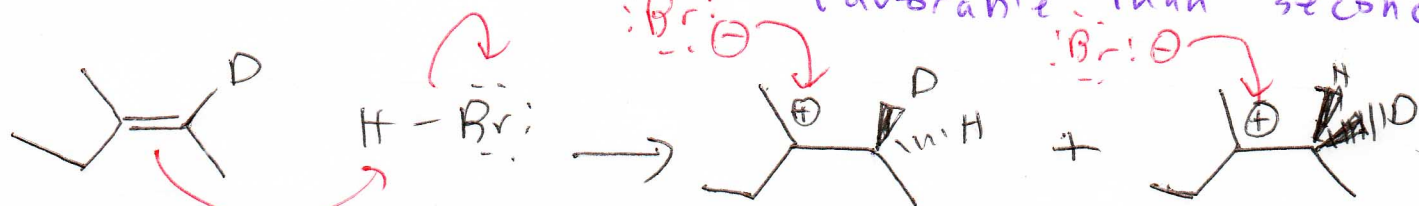
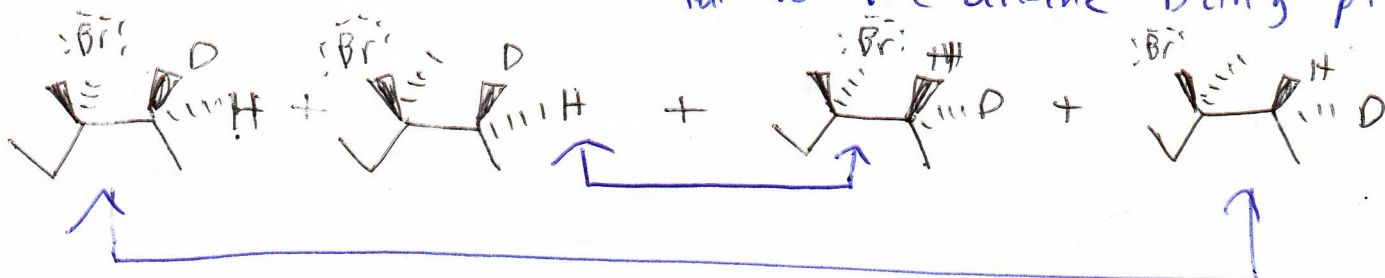


$3^\circ$  carbocation more

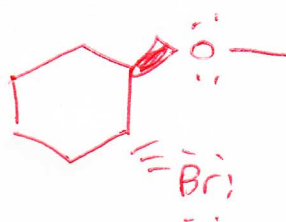
favorable than secondary.



two intermediates form due to the alkene being planar

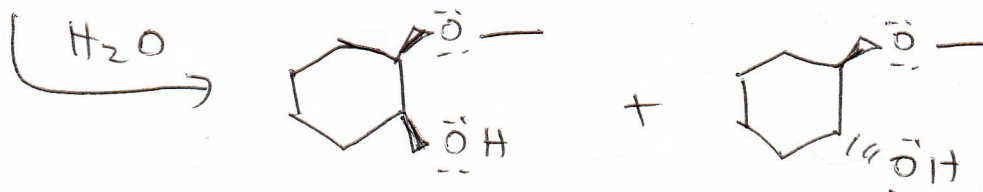


enantiomers



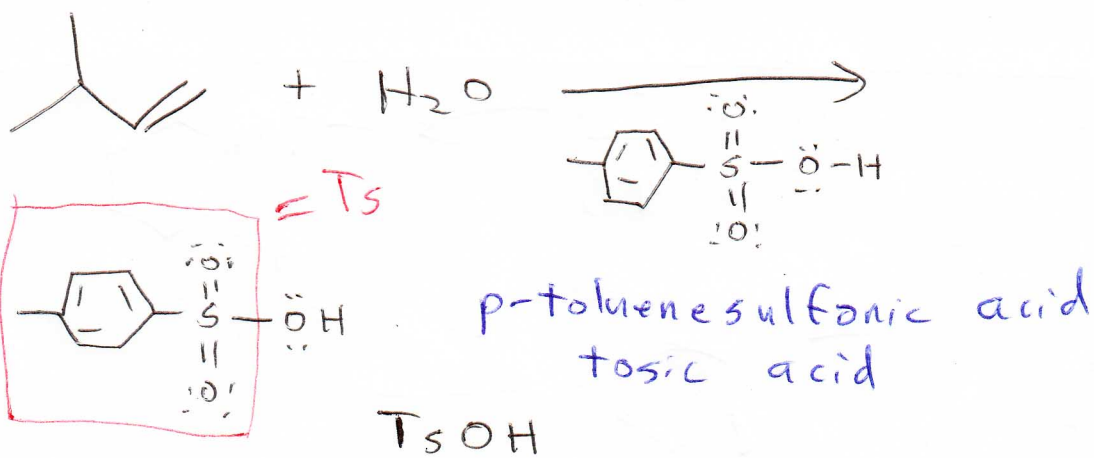
not a leaving group

( $\text{MeO}^-$  methoxide is a strong base)

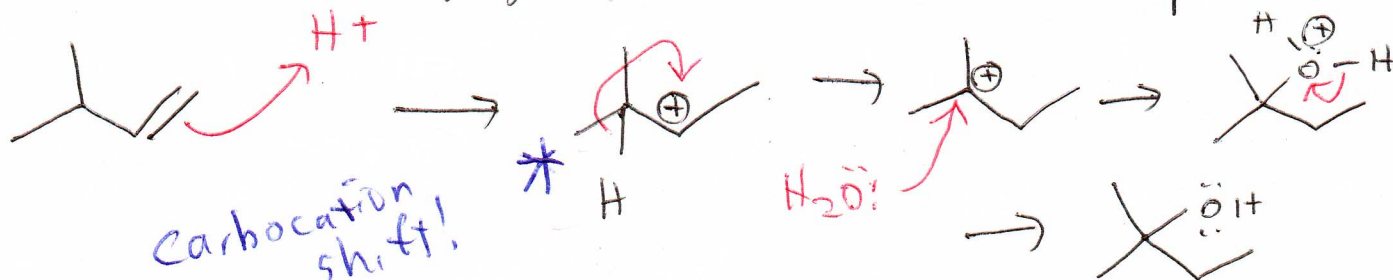


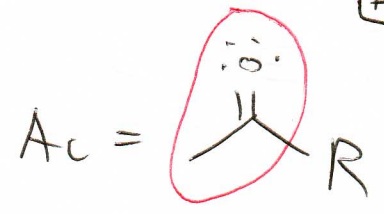
Even if these two products form in equal quantities, the mixture will still be optically active since it is a mixture of diastereomers, not enantiomers (one stereocenter still not cancelled out).

- #2
- 1) utility - alkene  $\rightarrow$  alkyl halide  
alcohol  
ether
  - 2) reagents - strong acid or  
weak nucleophile w/ strong acid catalyst
  - 3) conditions - no light
  - 5) stereochemistry - ~~no~~ no configuration  
(mixture of 4 diastereomers)  
neither syn nor anti
  - 6) regiochemistry - Markovnikov<sup>o</sup> addition -  
substitution will occur @ the most substituted  
carbon.
- \* Carbocation rearrangement is possible,
- 4) mechanism - cation + stepwise

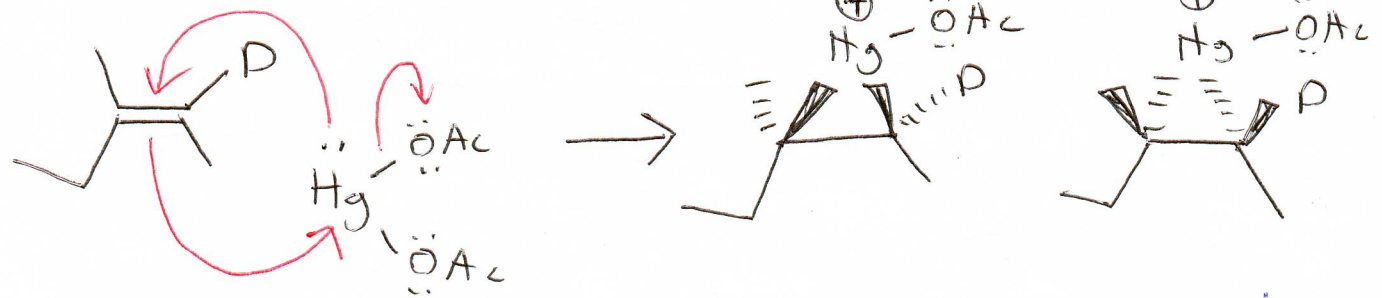


Tosic acid is an inexpensive, easily handled organic-soluble solid that is a very strong acid which has a conjugate that is non-nucleophilic.





Oxymercuration - Demercuration



This portion of the mechanism occurs as a syn addition (both new connections to where the alkene was ~~point~~ located are pointed the same way).

