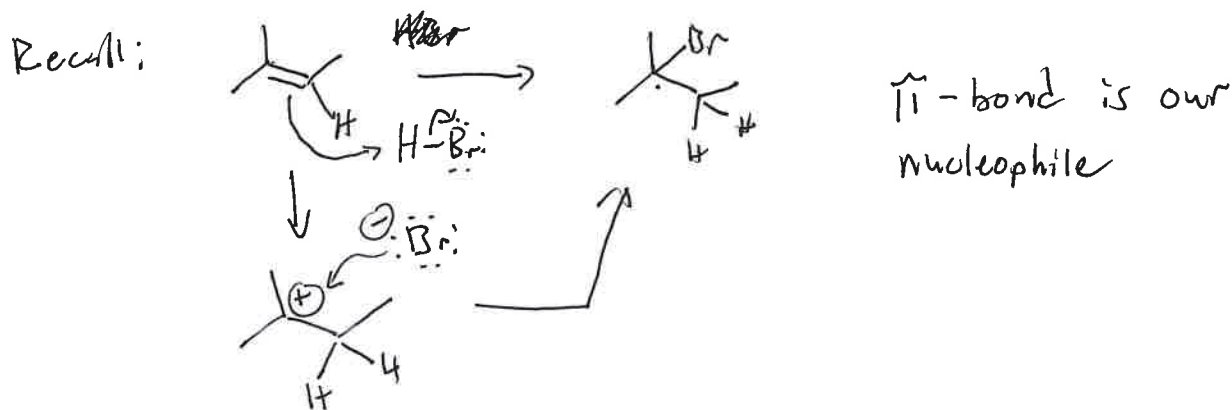


Submit a *Single-sided Copy* to the Undergraduate Office
NO NOT STAPLE - ONLY WRITE NOTES INSIDE THE SQUARE BELOW

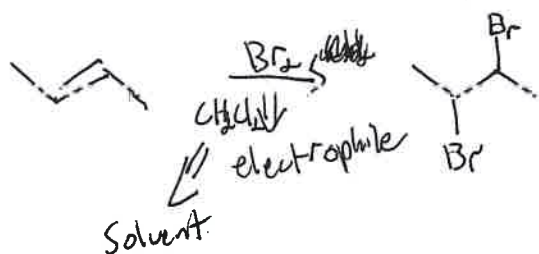
Ch. 5. Addition reactions of Alkenes



Common theme:

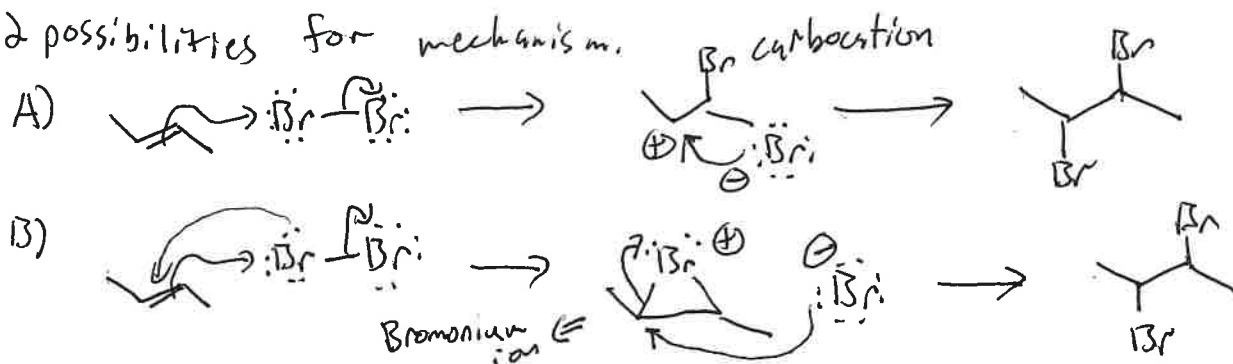
- A) π -bond is nucleophile
- B) new reagents as electrophiles
- C) Alkene $sp^2 \rightarrow$ Alkane sp^3

1) Addition of X_2 (Cl_2, Br_2)



Solvent for reaction is CH_2Cl_2 . Reagents lie Br_2 go above arrow, solvent below the arrow.

2 possibilities for mechanism.

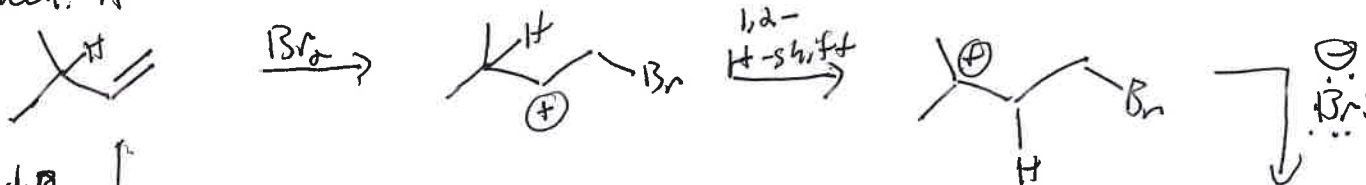


Submit a *Single-sided Copy* to the Undergraduate Office
NO NOT STAPLE - ONLY WRITE NOTES INSIDE THE SQUARE BELOW

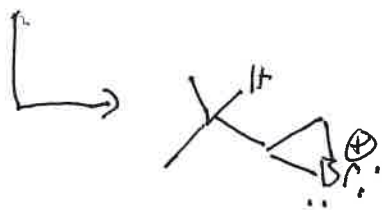
How do you distinguish between two mechanisms?

- You cannot prove a mechanism.
- Use scientific method to create hypotheses and devise experiments ~~and~~ to eliminate or disprove alternatives.

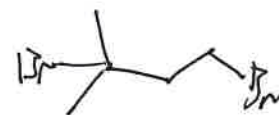
Mech. A



Mech. B

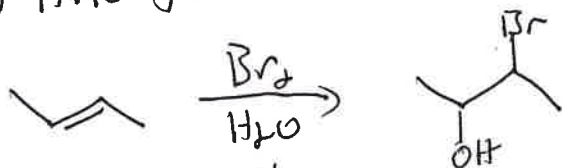


Bromonium ion - all outlets are filled.



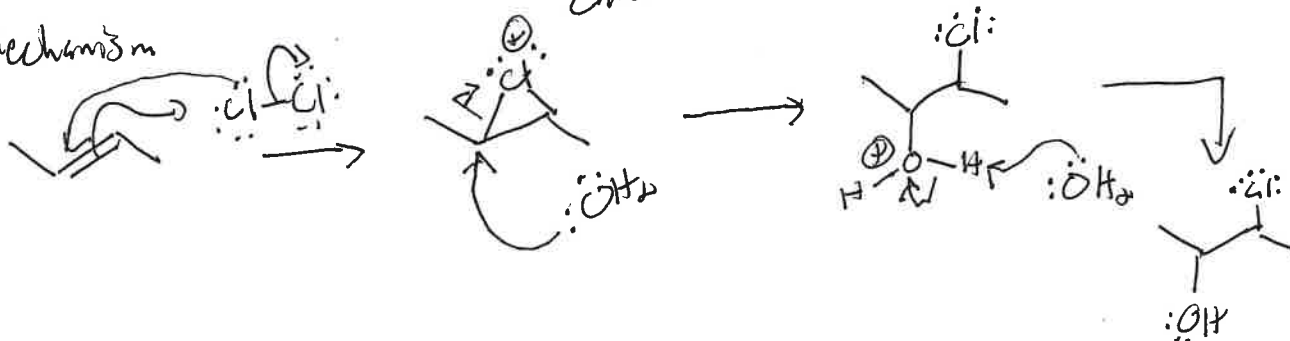
Not observed,
disproves
mechanism A.

2) Halohydrin formation



different solvent, also a nucleophile
chloronium ion

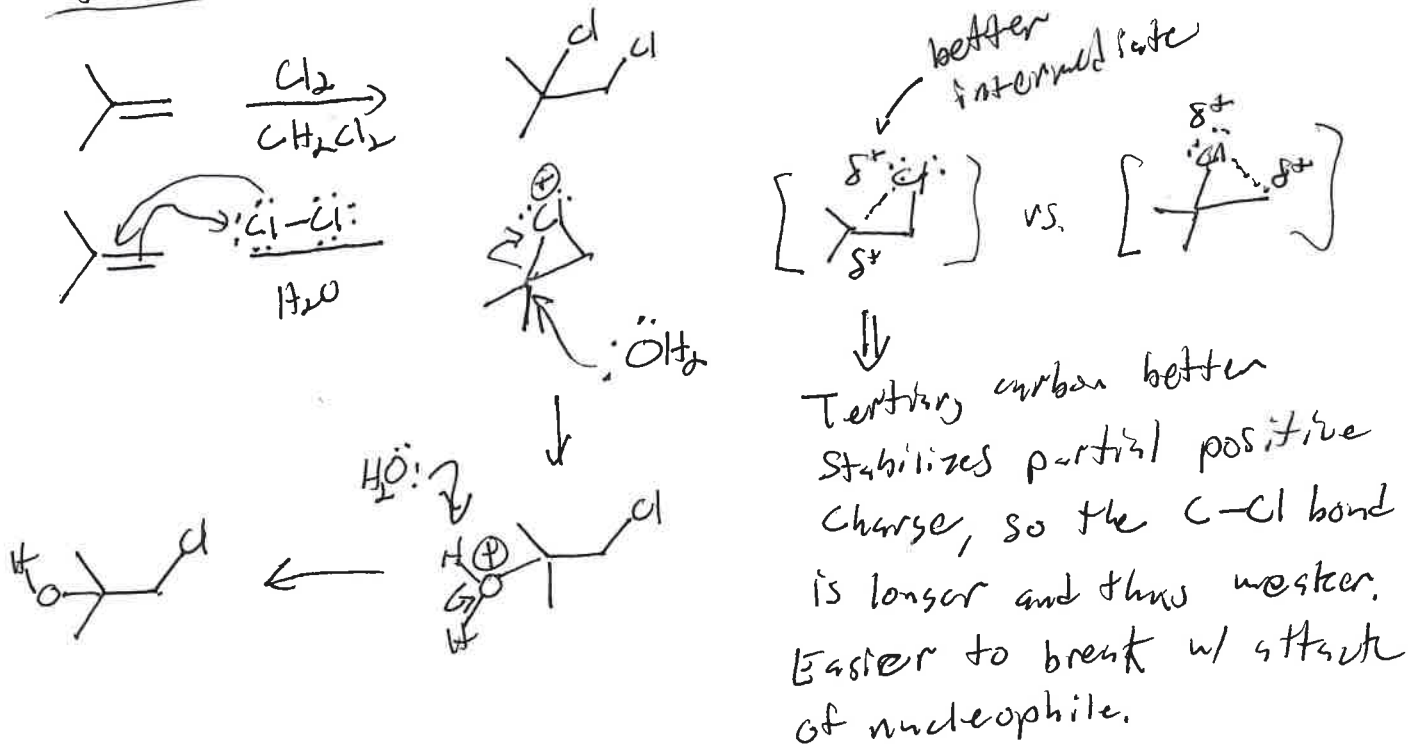
Mechanism



Course 343Lecturer Sam GellmanDay MondayDate 10-3-16Notes Taken By Nels GerstnerTotal # of Pages 4

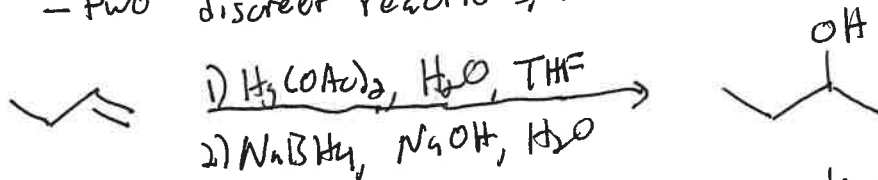
Submit a *Single-sided Copy* to the Undergraduate Office
NO NOT STAPLE - ONLY WRITE NOTES INSIDE THE SQUARE BELOW

Note: key difference between dihalide and halohydrine...
regiochemistry

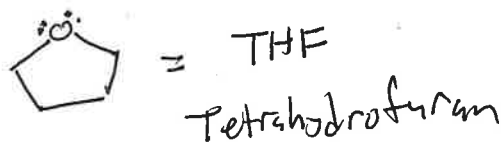
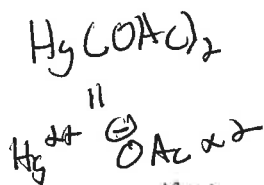


3) Oxymercuration rxn

- two discreet reactions, two steps

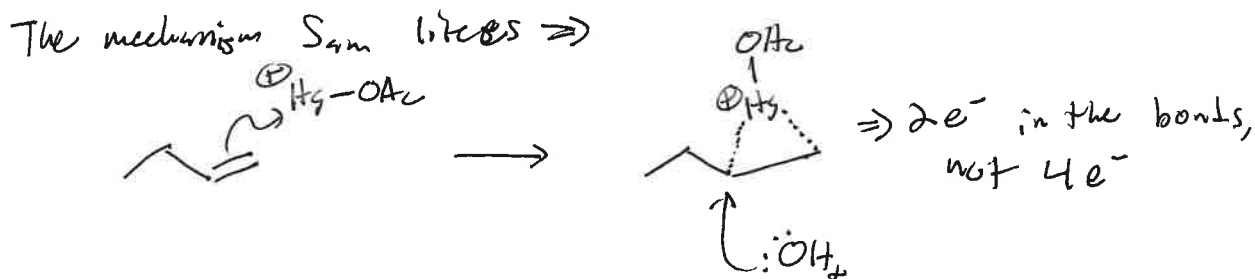
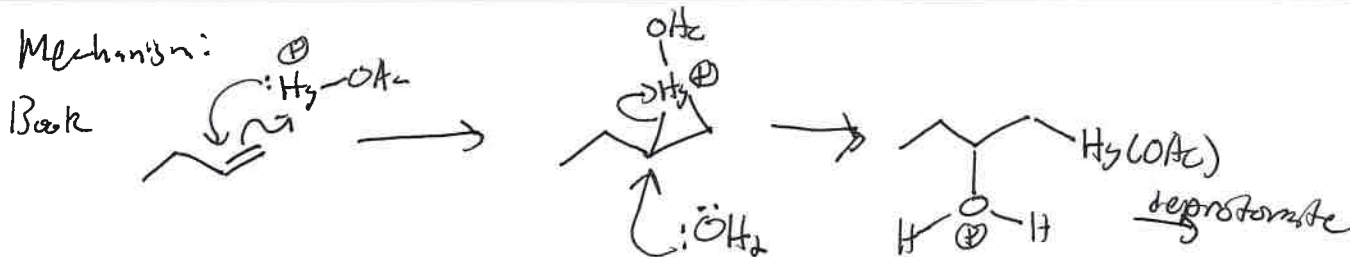


read text on pg. 188-189 for notes on condensed style



Course 343 Lecturer A Sam Collins
 Day Monday Date 10-8-16
 Notes Taken By Nils Gerstner Total # of Pages 4

Submit a *Single-sided Copy* to the Undergraduate Office
NO NOT STAPLE - ONLY WRITE NOTES INSIDE THE SQUARE BELOW



Don't worry about mechanism for second step.