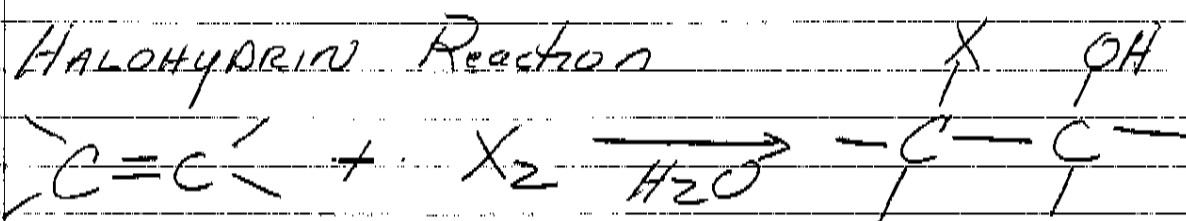


# Notes

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NOVEMBER 22, 2010

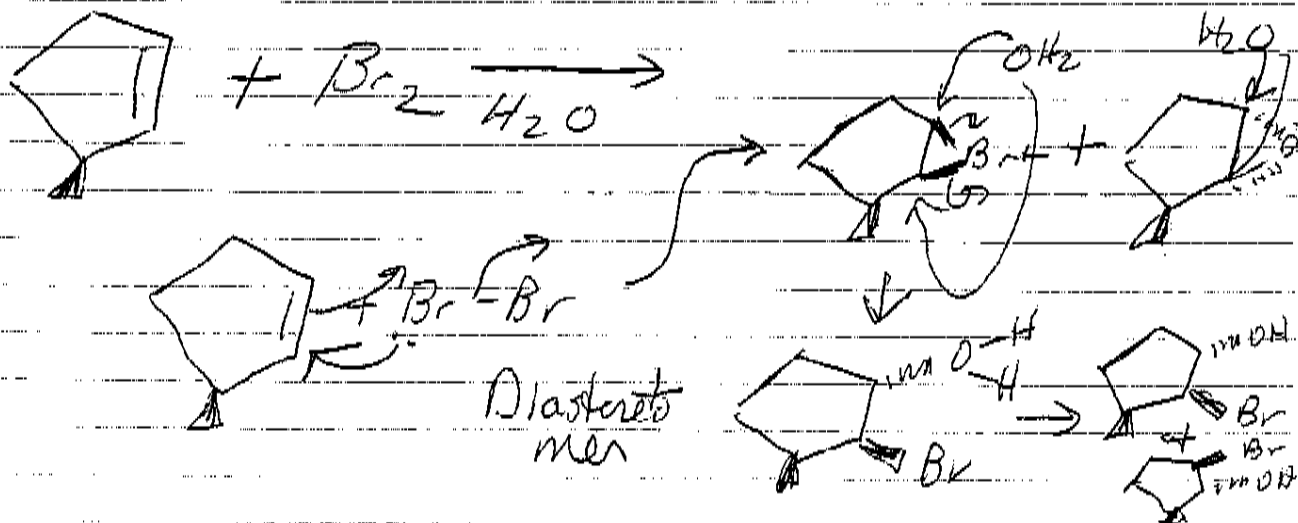
Rxn 4



## Summary

- ① Regioselectivity = Regioselective  
Markovnikov X is electrophile  
H<sub>2</sub>O is nucleophile
- ② Not accompanied by rearrangement
- ③ Stereochemistry  
Stereospecific ANTI Addition

## Mechanism & example



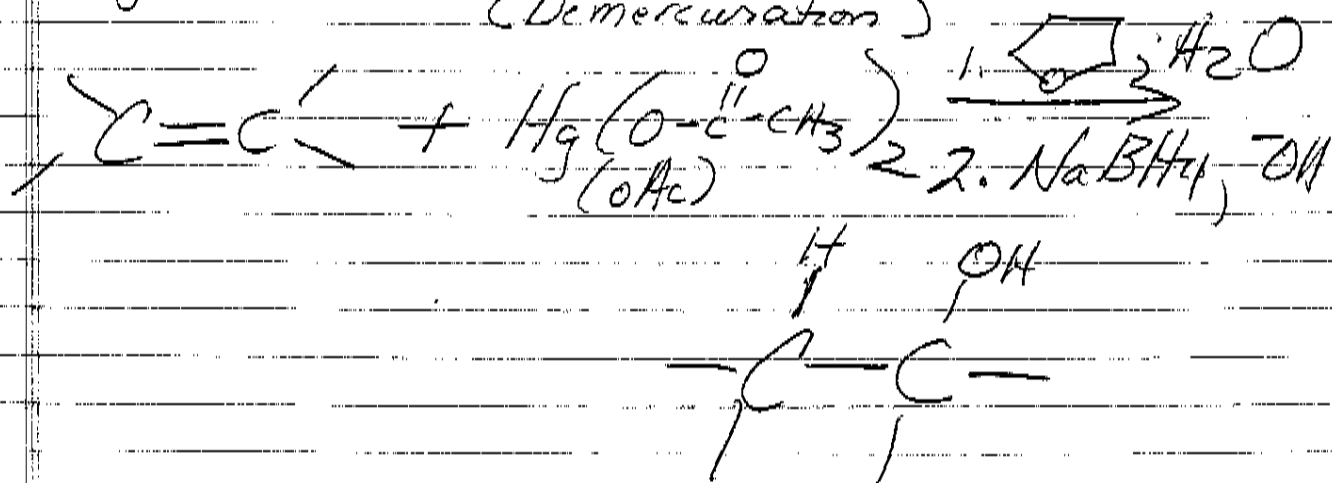
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&lt; Rxn 5 &gt;

Solvents

Oxymercuration - Reduction  
(Demercuration)

THF

Rxn Summary

① Regioselectivity

Regioselective Markovnikov

Hg<sup>+</sup> electrophile  
OH<sup>-</sup> Nucleophile② Not accompanied by rearrangement  
YAY!

③ Stereoselectivity

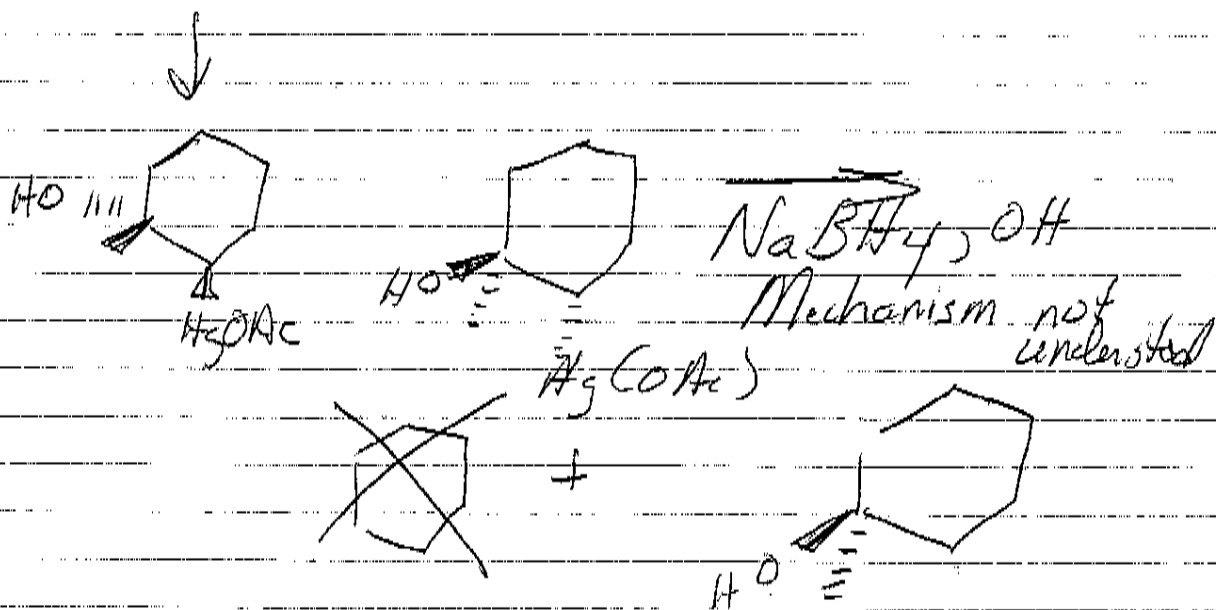
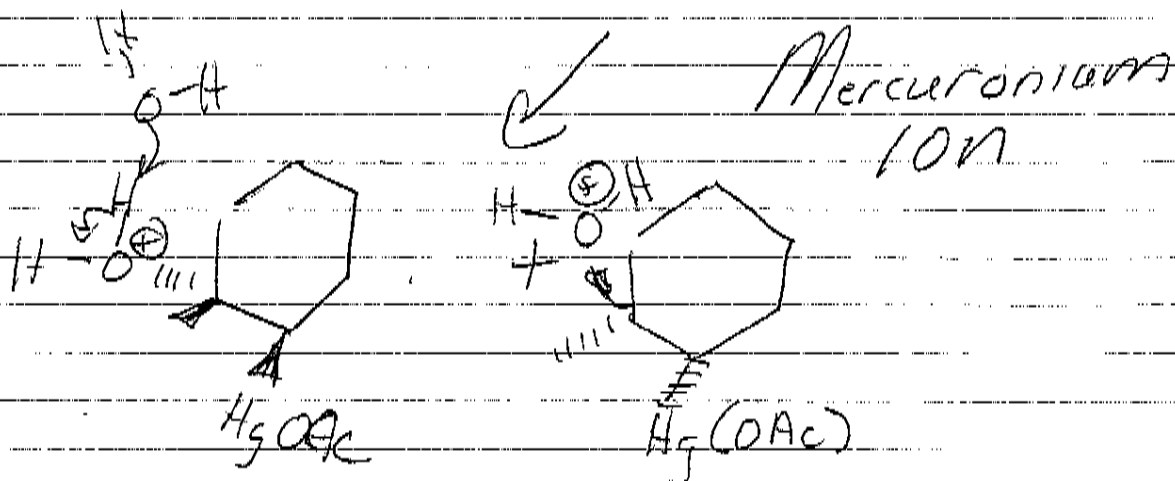
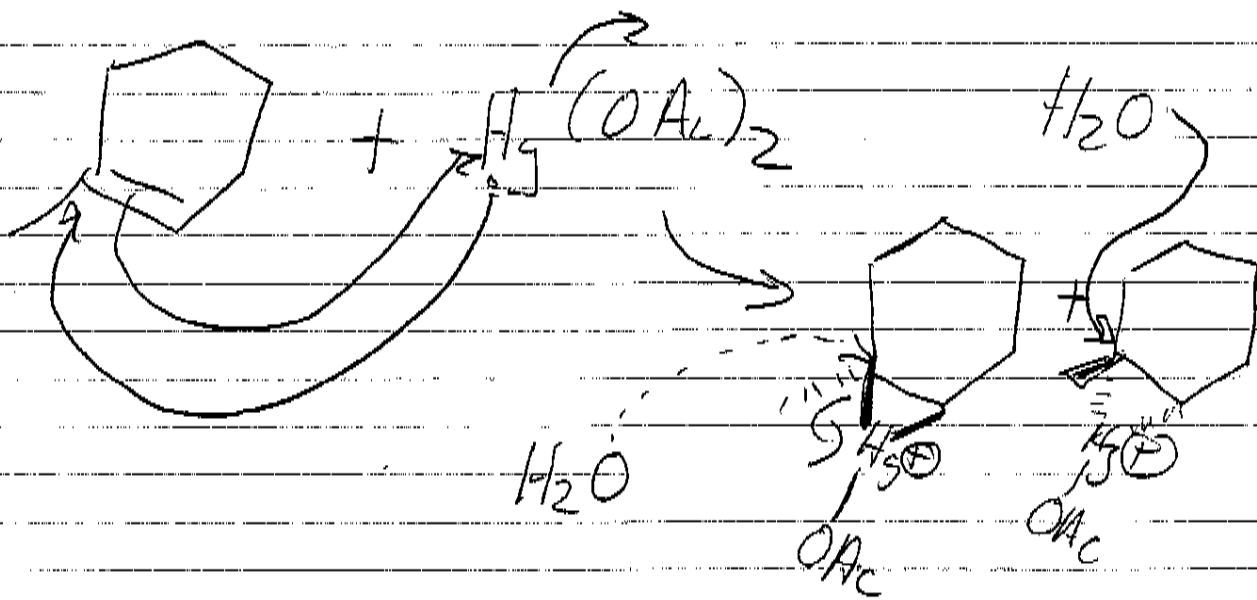
Stereospecific on 1<sup>st</sup> step, but lost on  
second step  
Not stereospecific overall

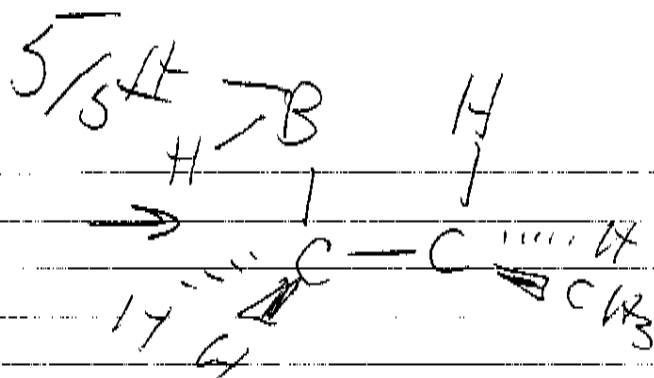
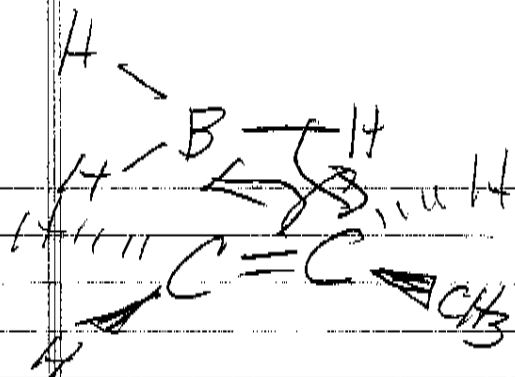
Mechanism and example



$$\begin{array}{l}
 1. \text{Hg}(\text{OAc})_2 / \text{H}_2\text{O}, \text{THF} \\
 2. \text{NaBH}_4, \text{OH}^-
 \end{array}$$

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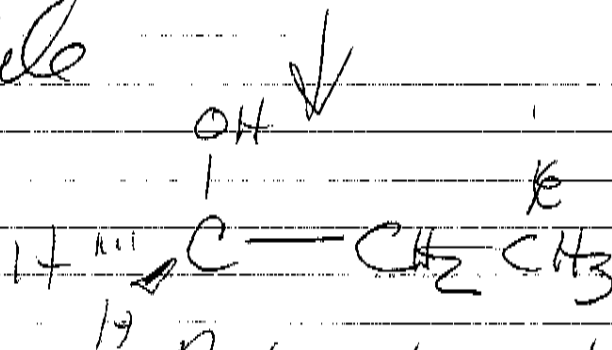




B is bigger

H is

Electrophile

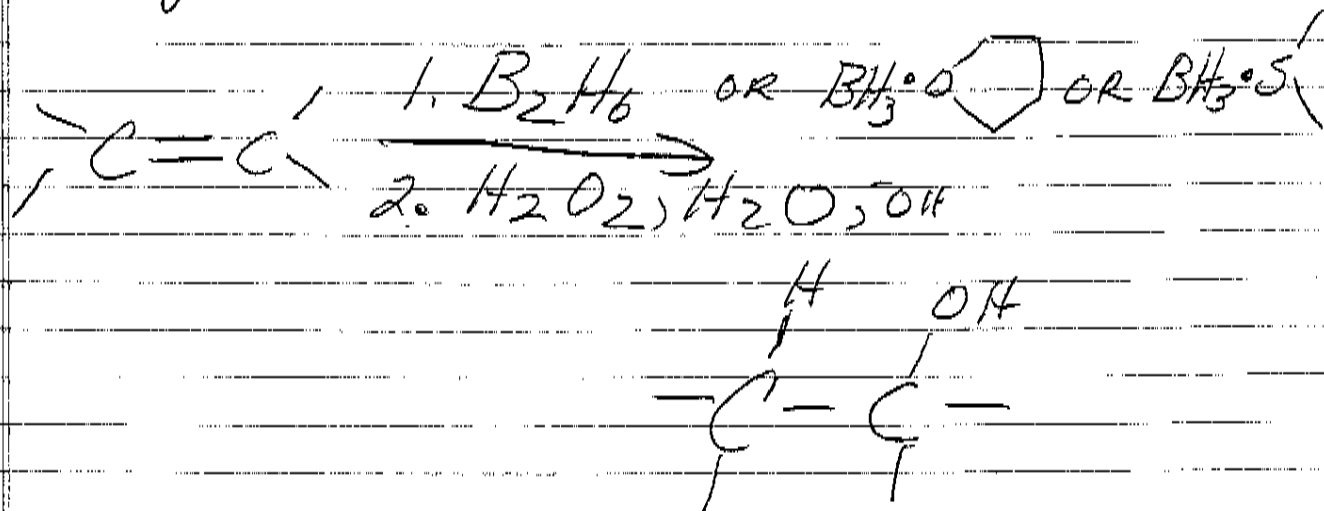


Anti Markovnikov

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Rxn 6

## Hydroboration/Oxidation



## Reaction Summary

- ① Regiochemistry -  
Regio selective  
Looks ANTI-MARKOVNIKOV
- ② NOT accompanied by rearrangement
- ③ Stereoselectivity -  
1<sup>st</sup> step is stereoselective, but lost  
on second step

Mechanism - You will not be held responsible for mechanism

