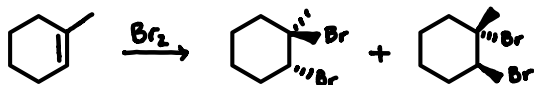


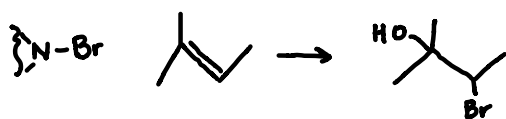
CHEM 201: Reactions of Alkenes

Bromination/Chlorination



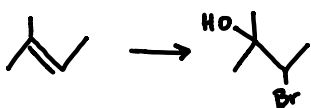
Stereospecific > Anti addition: attack from opposite sides of the plane

NBS



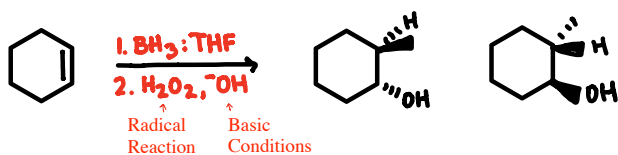
Radical Substitution, electrophilic addition, electrophilic substitution

Hydration



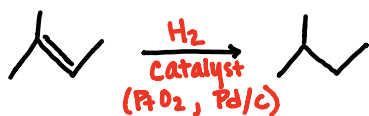
Markovnikov: OH goes to more substituted carbon

Hydroboration

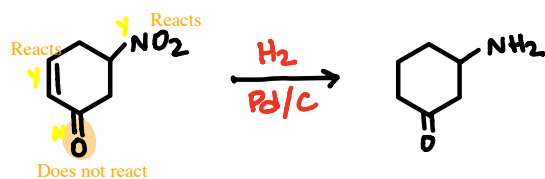


Syn Addition: attack from same side
Anti-Markovnikov: OH goes to less substituted carbon

Hydrogenation



Reduction H-H
Catalyst used
Syn Addition



Oxidations (O,N,Cl) (or removing H)

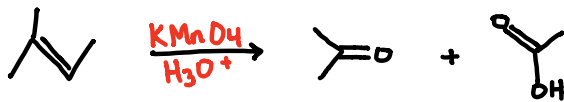


Syn Addition
Diols: alcohol with two hydroxyl groups

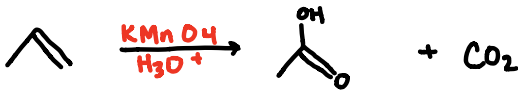


Anti Addition
Trans Diols: alcohol with two trans hydroxyl groups

Stronger Oxidation



Double Bond Cleavage

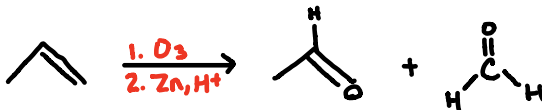


Ozone



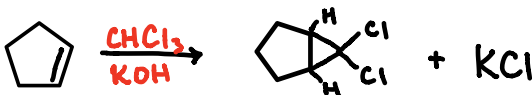
KMnO₄:
Ketones
Carboxylic Acids
CO₂

Ozonolysis:
Ketones
Aldehydes
Formaldehyde

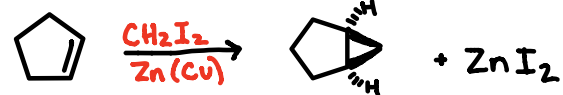


Formaldehyde from CH_2

Carbenes



Simmons-Smith Reaction



Simmons-Smith Reaction



H₂O₂ = Anti Markovnikov

