Organic Chemistry Reaction Flashcards

A study resource from **Master Organic Chemistry**

(MasterOrganicChemistry.com)

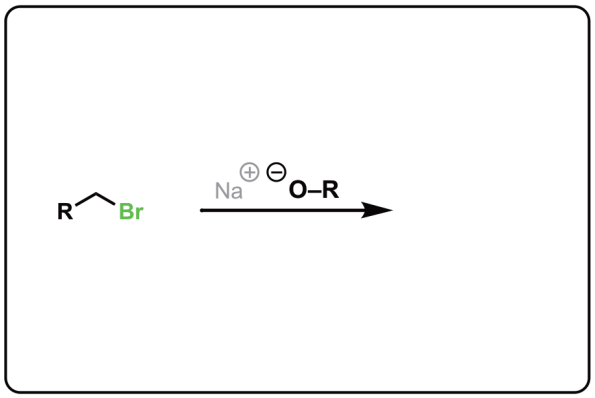
The following pages contain over 200 **full-color**, **printable** flashcards for reactions in organic chemistry, organized by functional group.

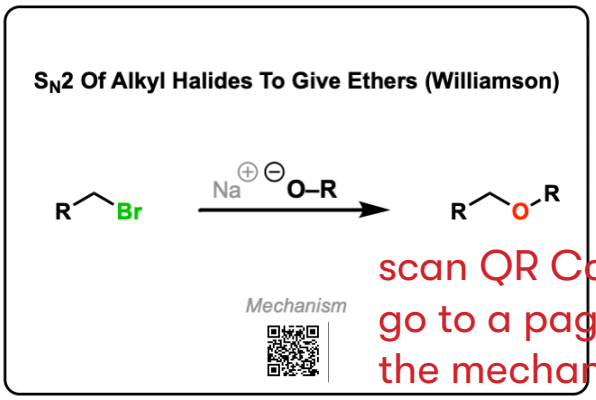
These include all the reactions that are commonly tested on the **ACS standardized exams** (Org 1 & Org 2)

Print them out, cut them up, even fold them over on to an index card!

Full index here: LINK TO SPREADSHEET

Here's an example of the front and back of a flashcard.





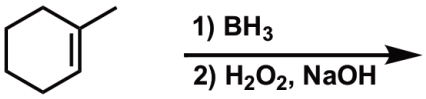
The QR code takes you to its Reaction Guide page, which has the full mechanism (where known), along with further examples.

A Reaction Guide subscription also gives you access to over 1000 (and growing) Organic Chemistry Practice Quizzes covering many key topics in organic chemistry courses (LINK)

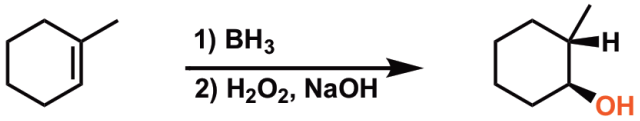
Sign up for the Reaction Guide Here

Sincerely hope you find this useful. Please direct any feedback to support@masterorganicchemistry.com

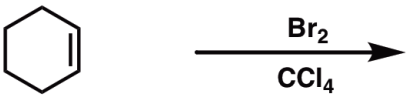
Happy studying!



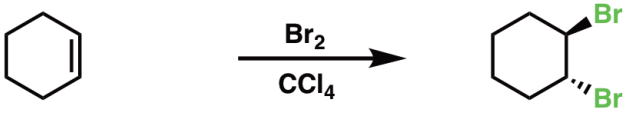
Hydroboration of Alkenes



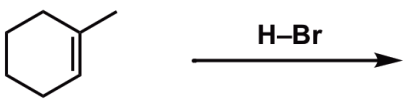
Mechanism



Bromination of Alkenes



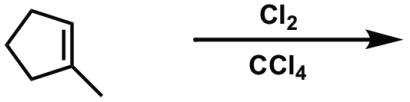
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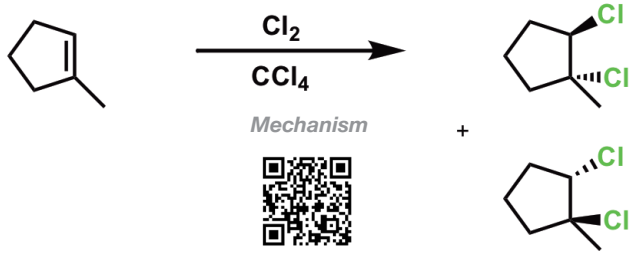
Addition of HBr To Alkenes



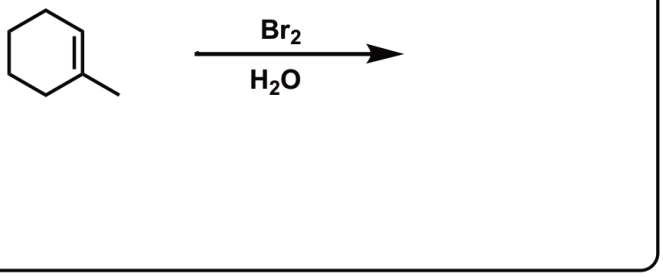
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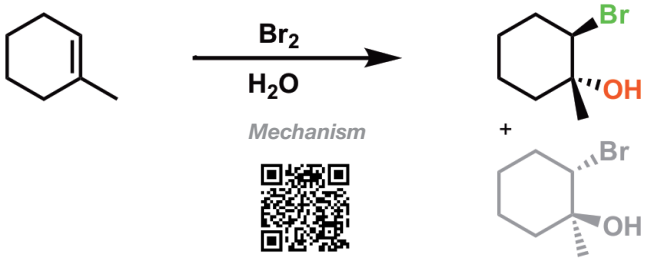
Chlorination of Alkenes



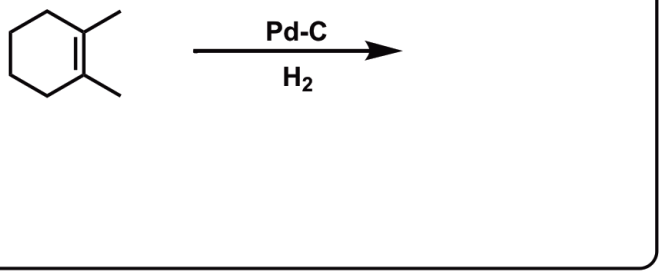
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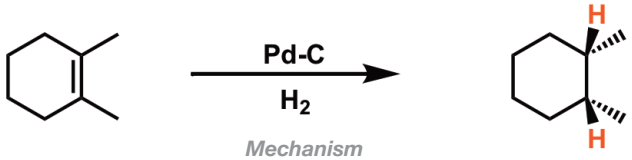
Formation of Bromohydrins From Alkenes



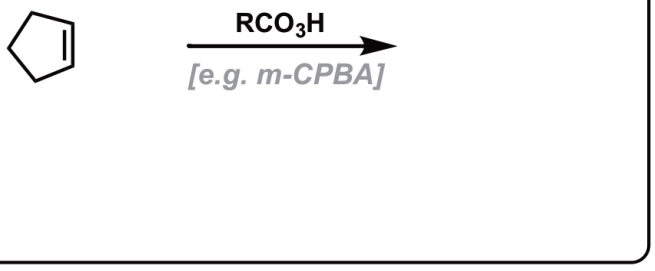
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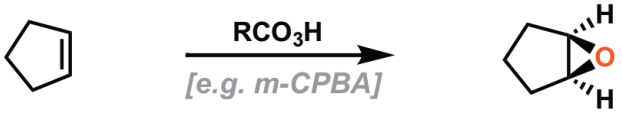
Hydrogenation of Alkenes



Mechanism



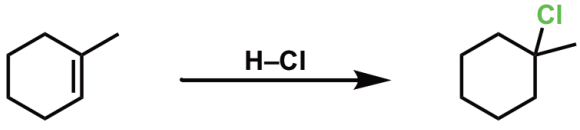
Epoxidation of Alkenes With Peroxyacids



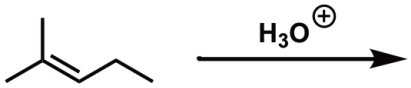
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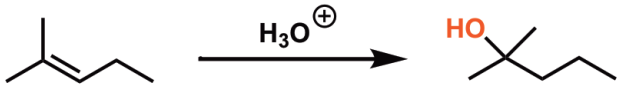
Addition of HCl To Alkenes



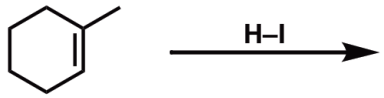
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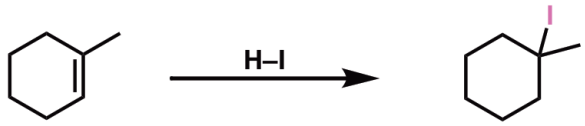
Addition of H_3O^+ To Alkenes



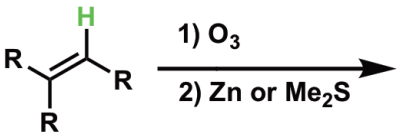
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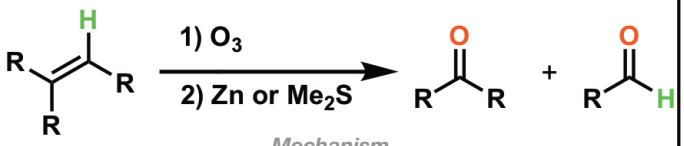
Addition of HI To Alkenes



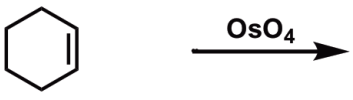
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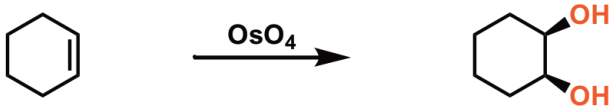
Ozonolysis of Alkenes (Reductive Workup)



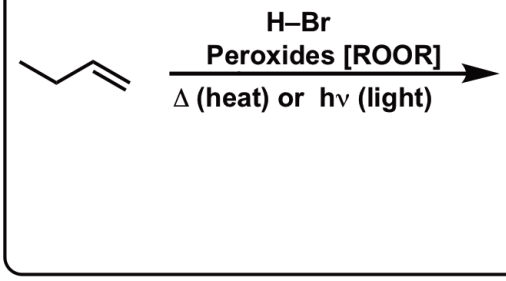
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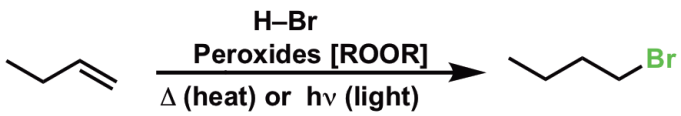
Dihydroxylation of Alkenes



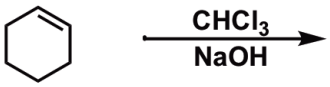
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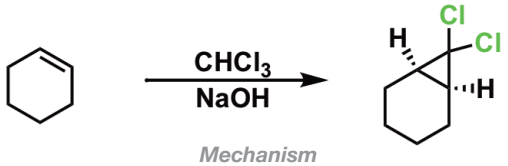
Radical Addition of HBr To Alkenes



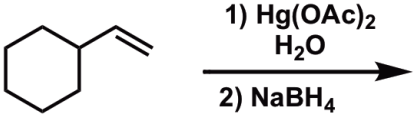
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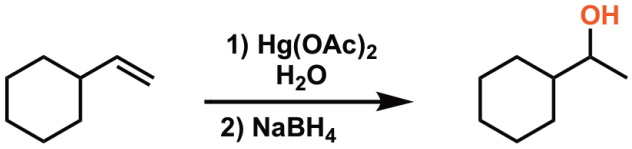
Dichlorocyclopropanation of Alkenes



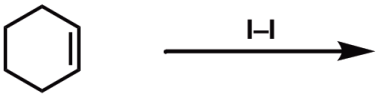
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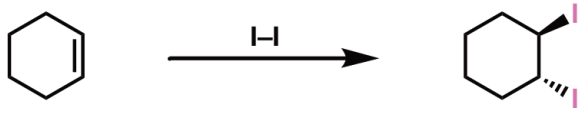
Oxymercuration of Alkenes



Mechanism



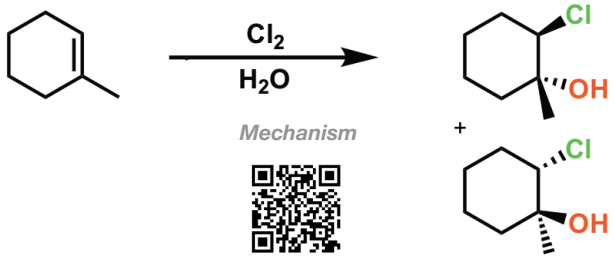
Iodination of Alkenes



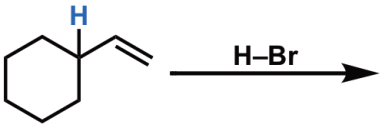
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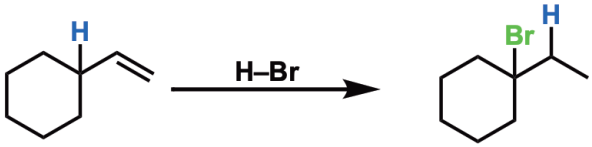
Formation of Chlorohydrins From Alkenes



Mechanism

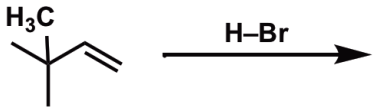


Addition To Alkenes With Hydride Shift

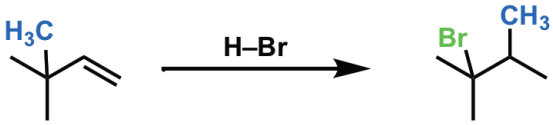


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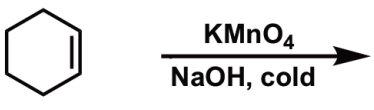


Addition of HBr To Alkenes With Alkyl Shift

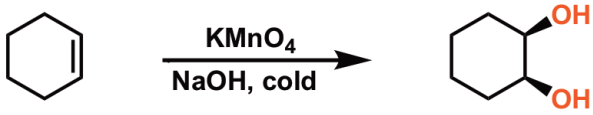


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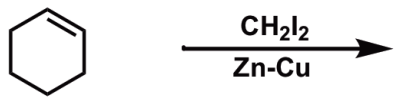


Dihydroxylation of Alkenes With $KMnO_4$

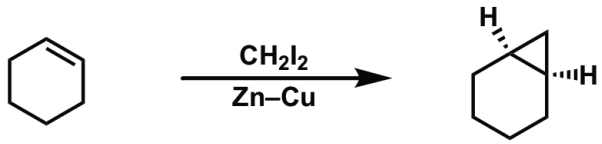


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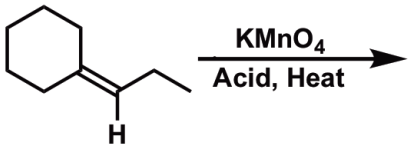




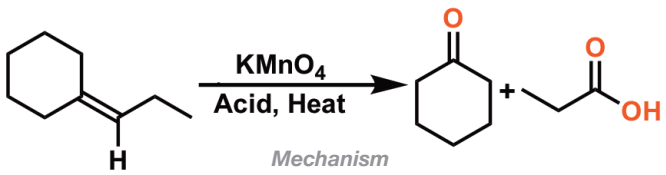
Cyclopropanation of Alkenes ("Simmons-Smith")



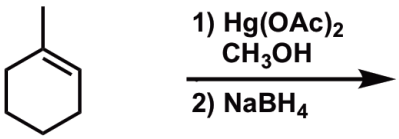
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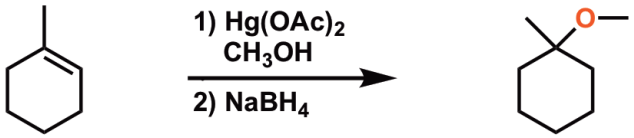
Oxidative Cleavage of Alkenes With $KMnO_4$



Mechanism



Alkoxymercuration of Alkenes

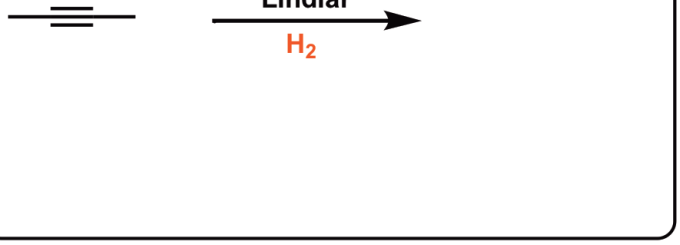


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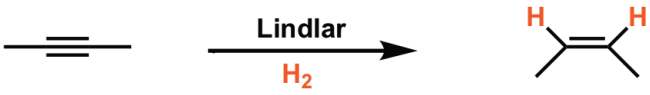
Deprotonation of Alkynes To Give Acetylides



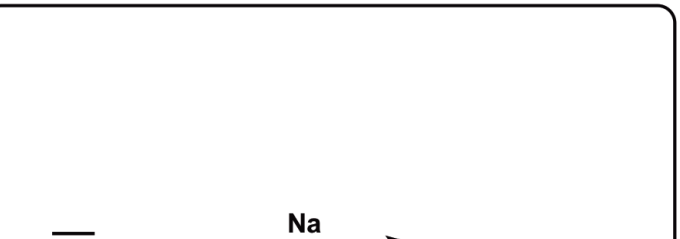
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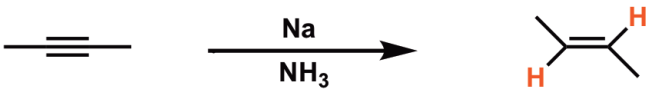
Partial Reduction of Alkenes



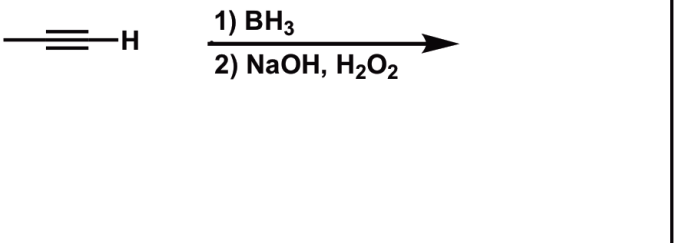
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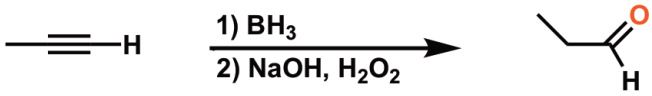
Partial Reduction of Alkynes



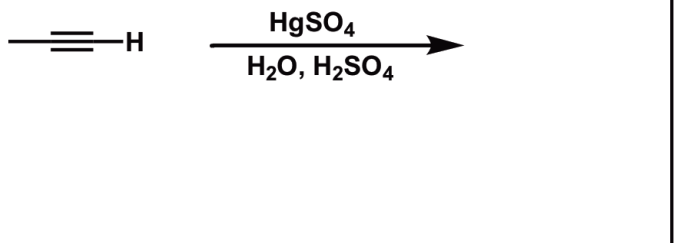
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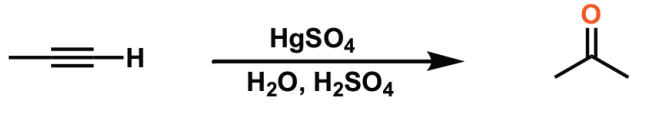
Hydroboration of Alkynes



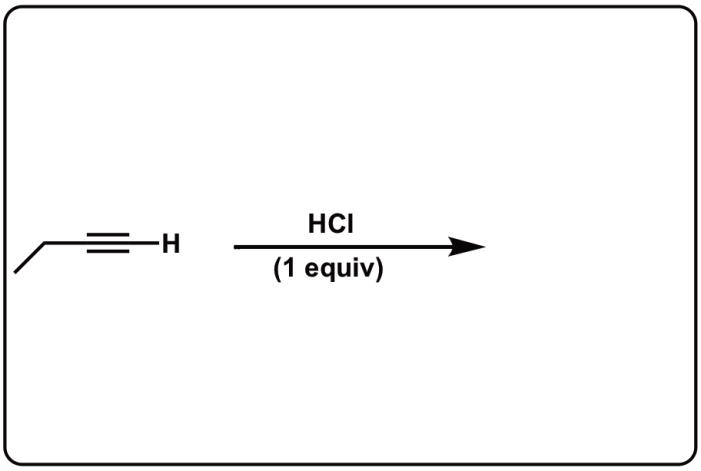
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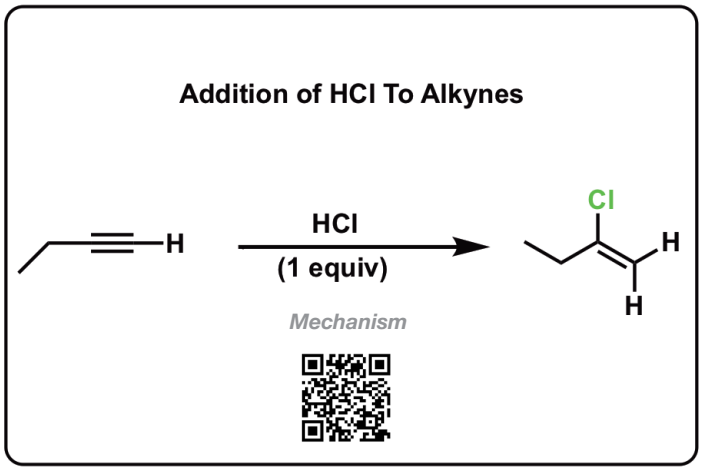


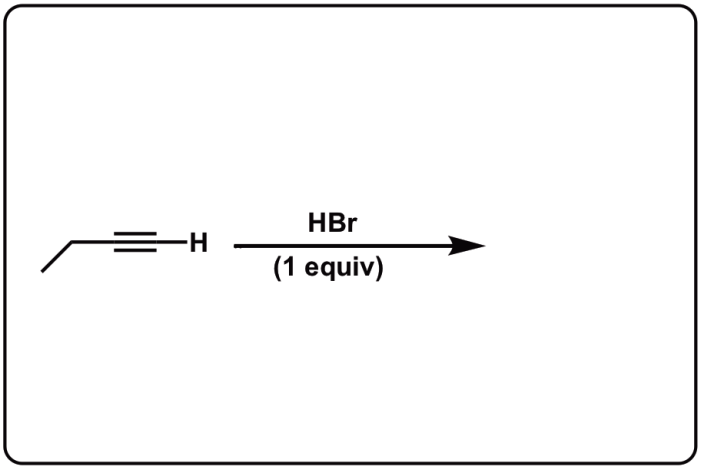
Oxymercuration of Alkynes

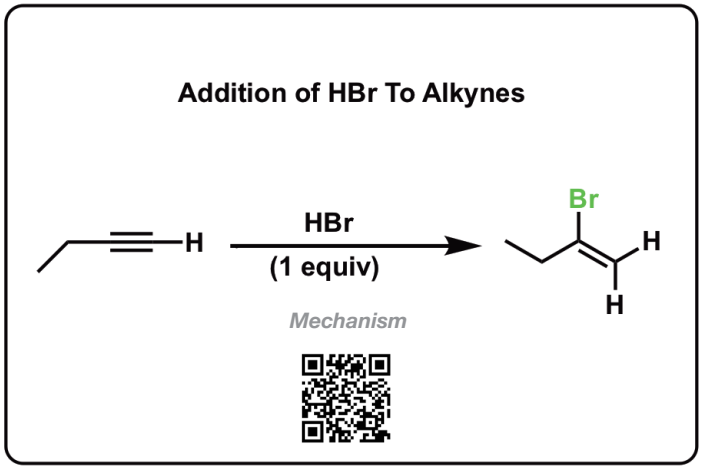


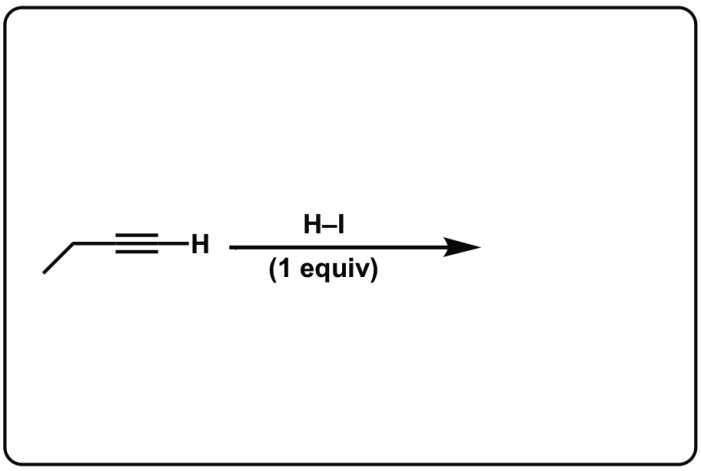
Mechanism

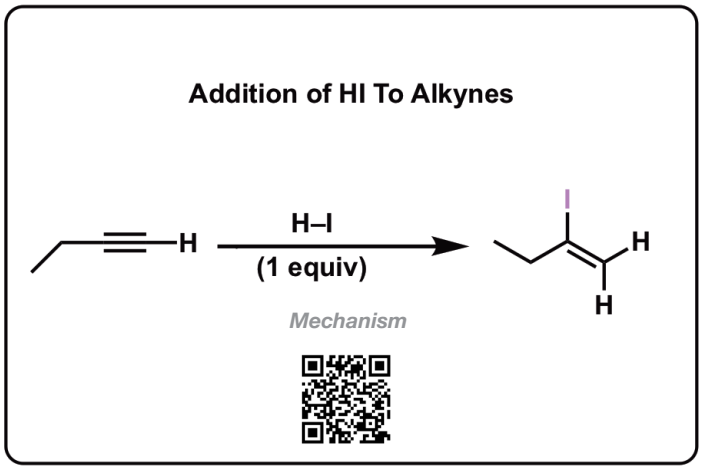

H
HCl
(1 equiv)

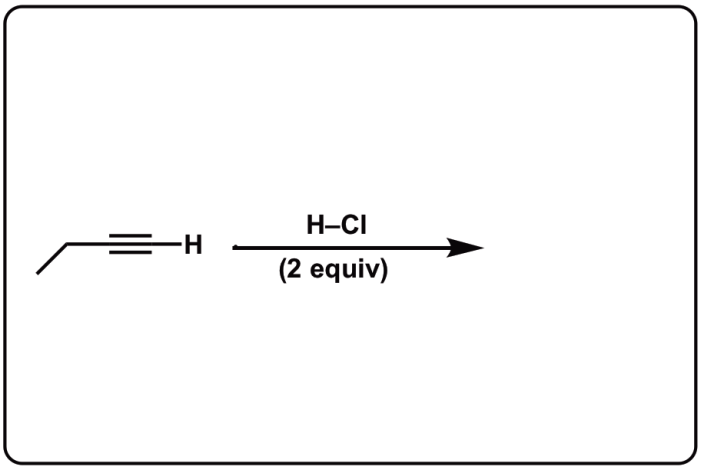

Addition of HCl To Alkynes
H
HCl
(1 equiv)
Cl
H
H
Mechanism

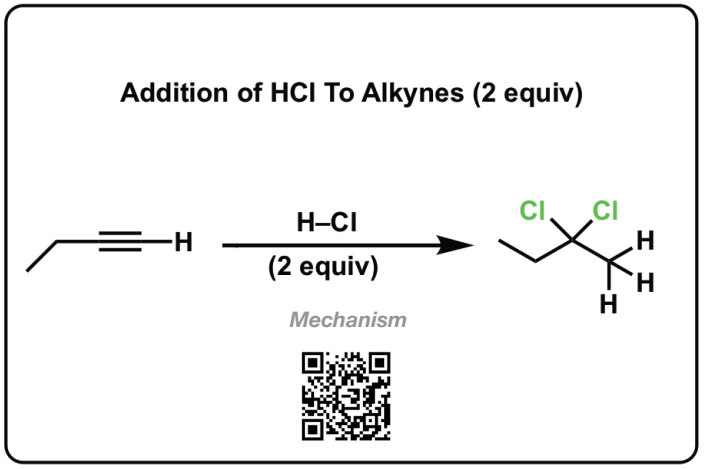

H
HBr
(1 equiv)

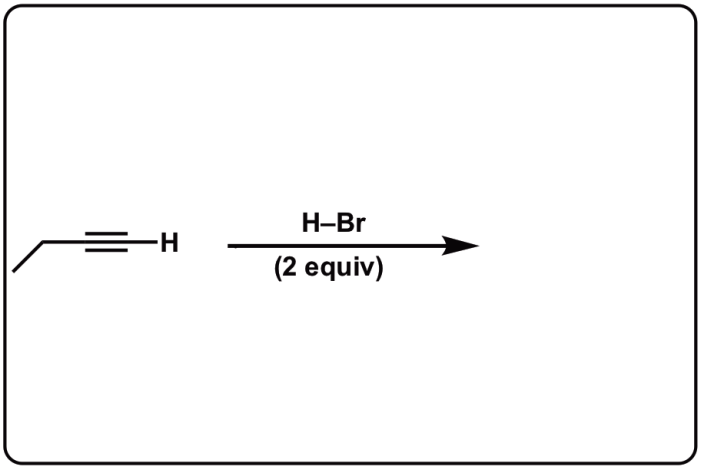

Addition of HBr To Alkynes
H
HBr
(1 equiv)
Br
H
H
Mechanism


H
H–I
(1 equiv)

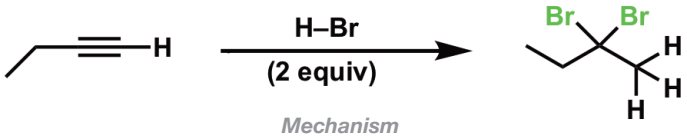

Addition of HI To Alkynes
H
H–I
(1 equiv)
I
H
H
Mechanism


H
H–Cl
(2 equiv)

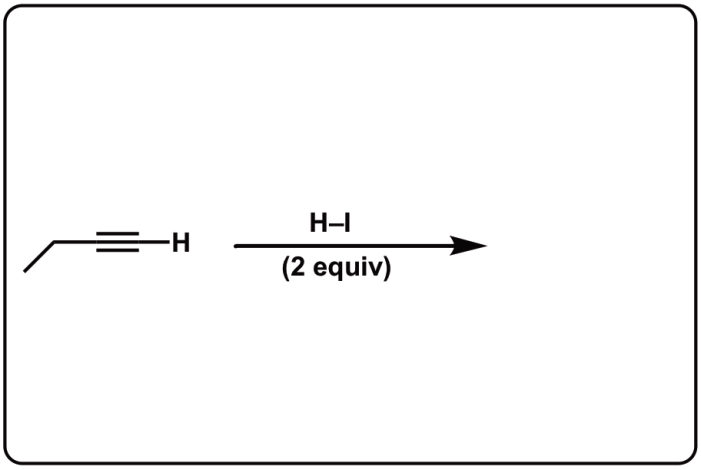

Addition of HCl To Alkynes (2 equiv)
H
H–Cl
(2 equiv)
Cl
Cl
H
H
H
Mechanism



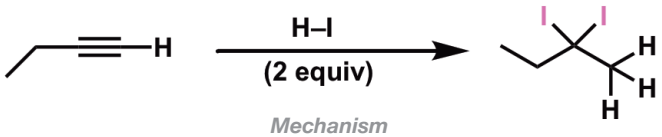
Addition of HBr To Alkynes (2 Equiv)



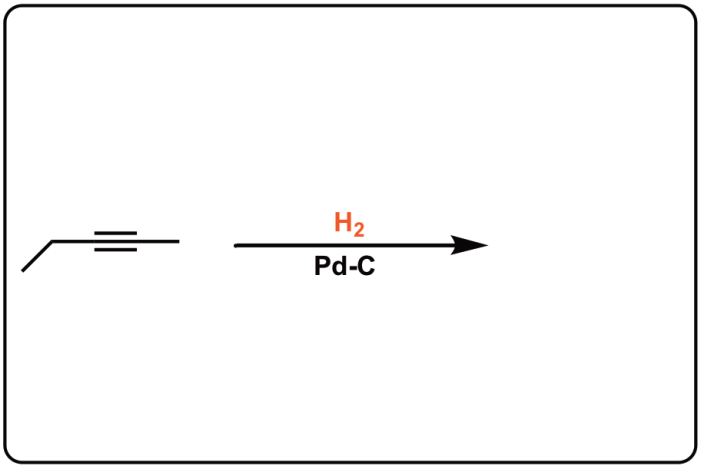
Mechanism



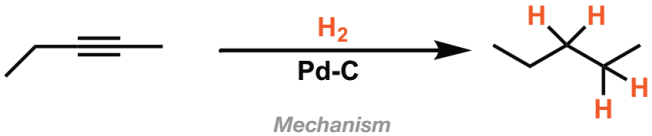
Addition of HI To Alkyne (Twice)



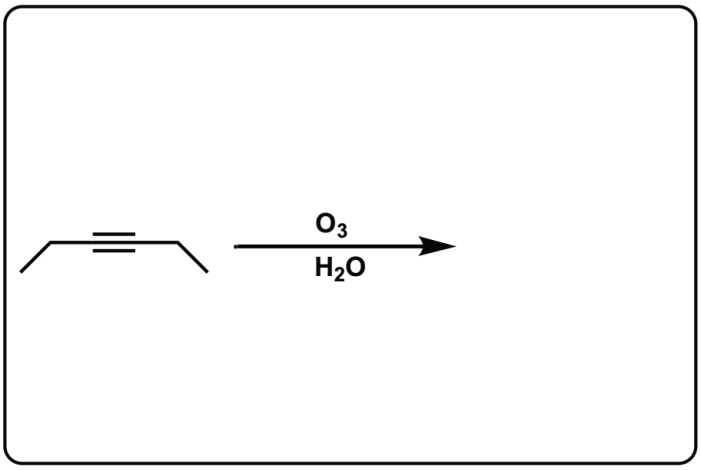
Mechanism



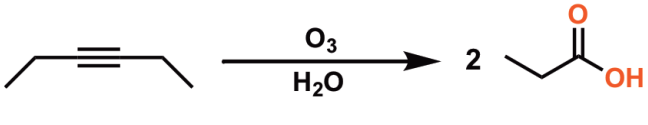
Hydrogenation of Alkynes



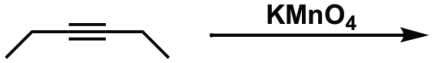
Mechanism



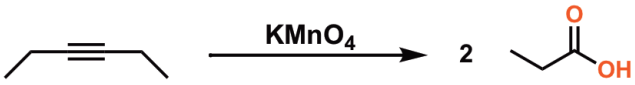
Ozonolysis of Alkynes



Mechanism



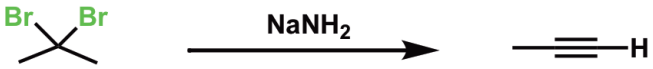
Oxidative Cleavage of Alkynes With $KMnO_4$



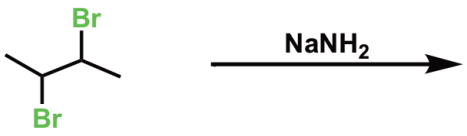
Mechanism



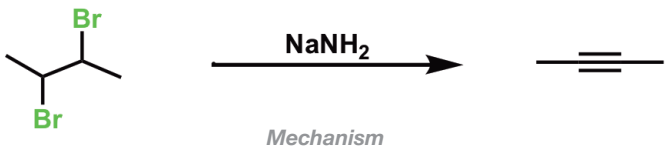
Double Elimination To Give Alkynes



Mechanism



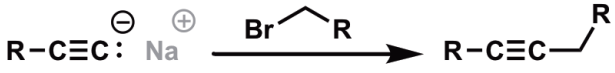
Double Elimination To Give Alkynes



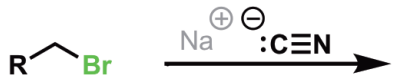
Mechanism



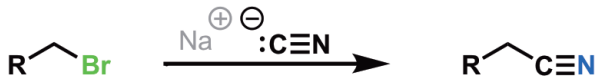
S_N2 Of Acetylides With Alkyl Halides



Mechanism

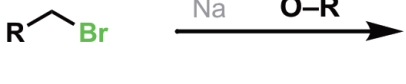


S_N2 Of Alkyl Halides To Give Nitriles

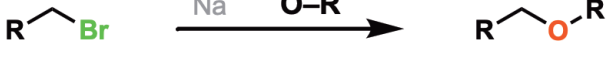


Mechanism



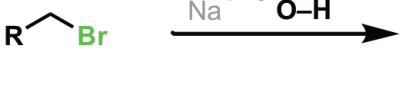


S_N2 Of Alkyl Halides To Give Ethers (Williamson)

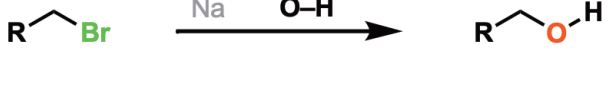


Mechanism



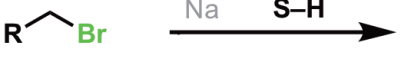


S_N2 Reaction Of Alkyl Halides Giving Alcohols

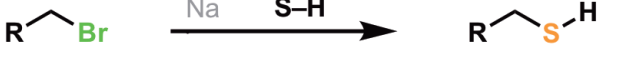


Mechanism



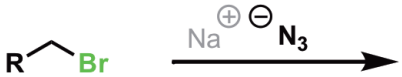


S_N2 Reaction With Alkyl Halides Giving Thiols

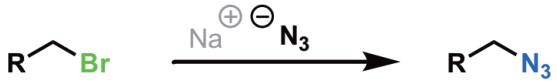


Mechanism



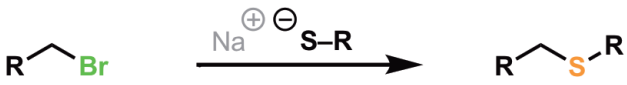


S_N2 Of Alkyl Halides To Give Azides



Mechanism

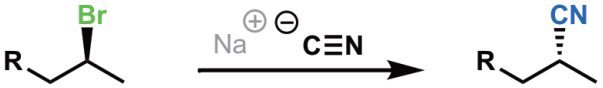
S_N2 Of Alkyl Halides To Give Thioethers



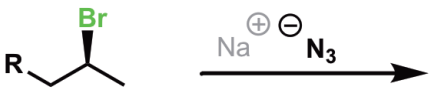
Mechanism



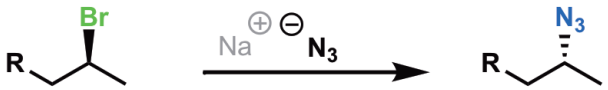
S_N2 Of 2° Alkyl Halides Giving Nitriles



Mechanism



S_N2 Of 2° Alkyl Halides To Give Azides



Mechanism



S_N2 Of 2° Alkyl Halides To Give Thiols

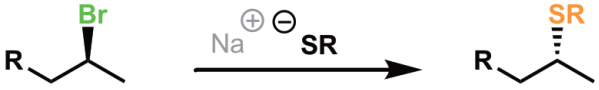


Mechanism



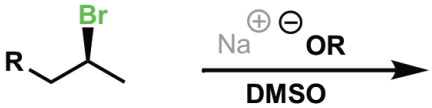


S_N2 Of 2° Alkyl Halides To Give Thioethers



Mechanism



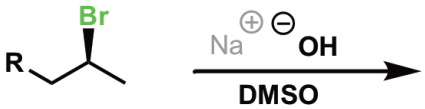


S_N2 Of Alkyl Halides To Give Ethers

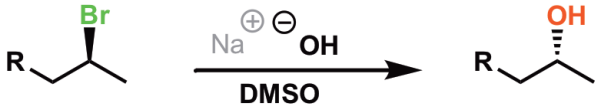


Mechanism



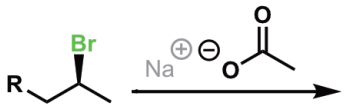


S_N2 Of 2° Alkyl Halides Giving Alcohols

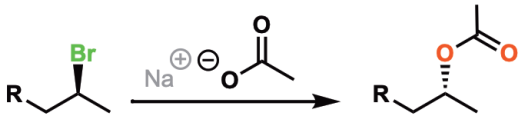


Mechanism

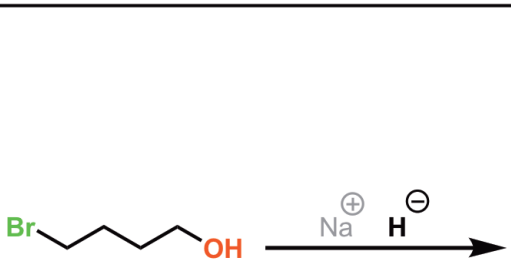




S_N2 Reaction of Alkyl Halides With Carboxylates



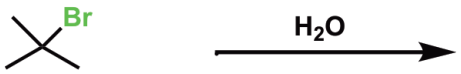
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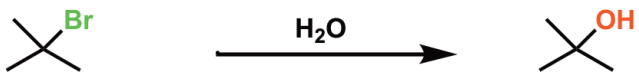
Intramolecular S_N2 Reaction (Williamson)



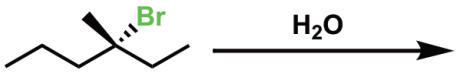
Mechanism



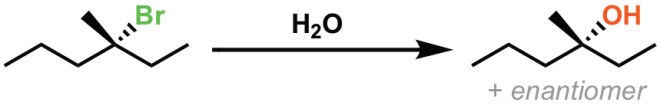
S_N1 Conversion Of 3° Alkyl Halides To Alcohols



Mechanism

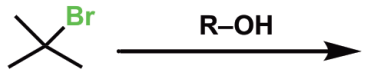


S_N1 Conversion of 3° Alkyl Halides To Alcohols

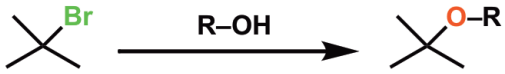


+ enantiomer

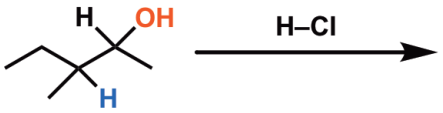
Mechanism



S_N1 Conversion of 3° Alkyl Halides To Ethers



Mechanism



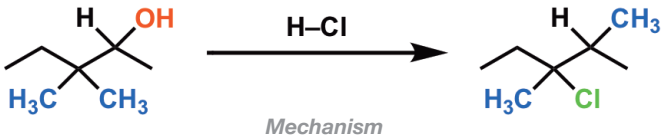
Alcohols To Alkyl Halides With Hydride Shift



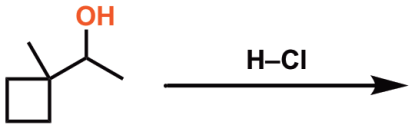
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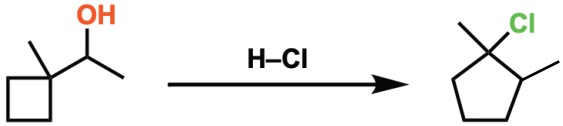
Alcohols To Alkyl Chlorides With Alkyl Shift



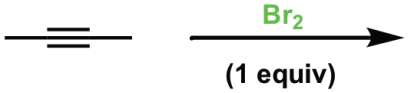
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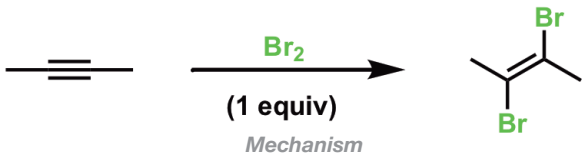
S_N1 Reaction With Ring Expansion



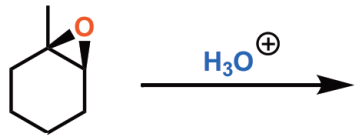
Mechanism



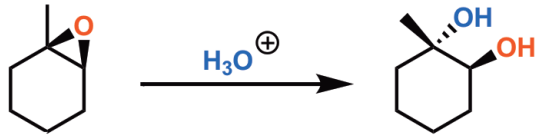
Bromination of Alkynes



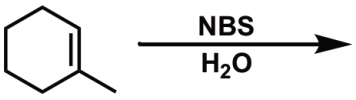
Mechanism



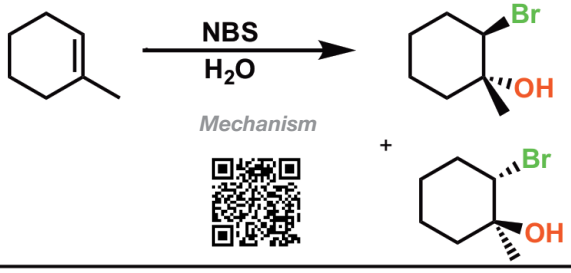
Opening Epoxides Under Acidic Conditions



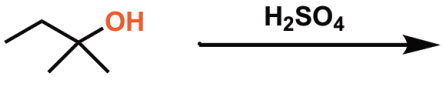
Mechanism



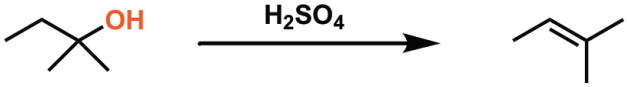
Formation of Bromohydrins From Alkenes



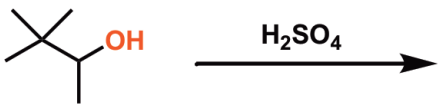
Mechanism



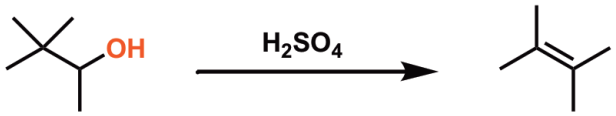
Elimination Of Alcohols (E1) Giving Alkenes



Mechanism

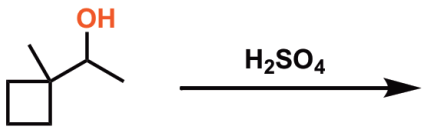


Elimination (E1) With Alkyl Shift

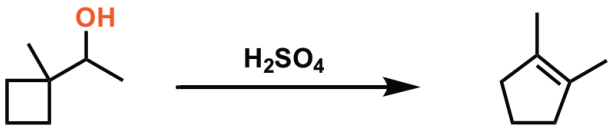


Mechanism



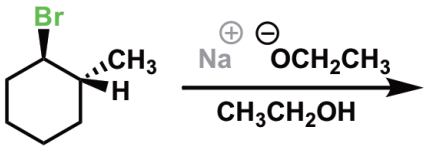


Elimination (E1) With Ring Expansion

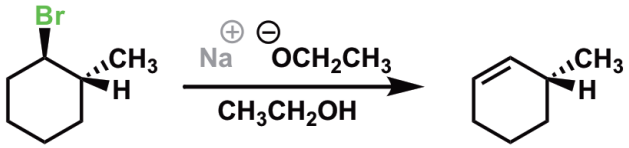


Mechanism



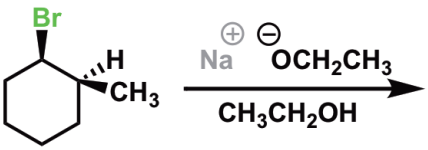


Elimination (E2)

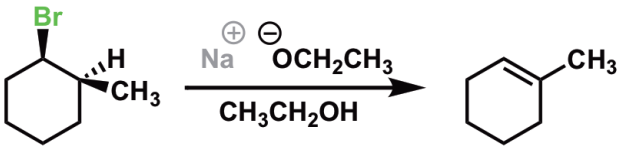


Mechanism



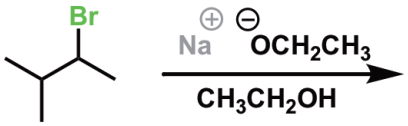


Elimination (E2)

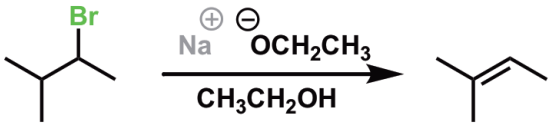


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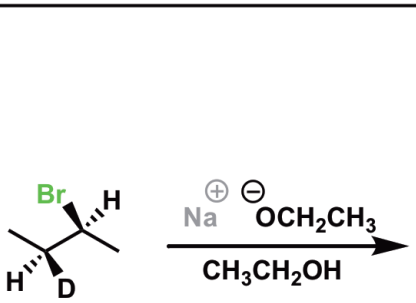




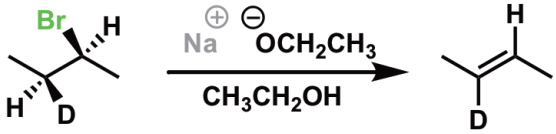
Elimination (E2)



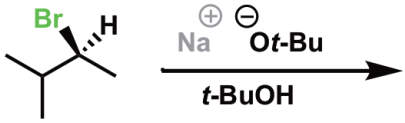
Mechanism



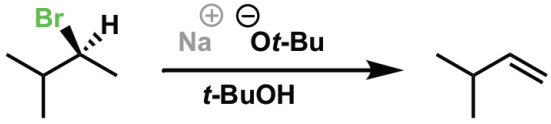
Elimination (E2)



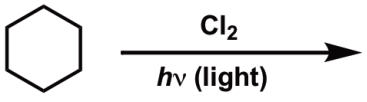
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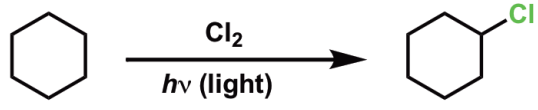
Elimination (E2) With Bulky Base



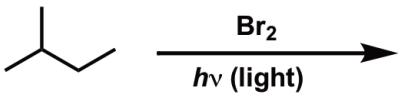
Mechanism



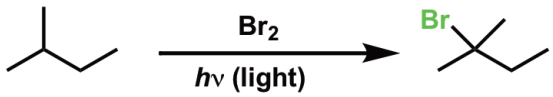
Free Radical Chlorination



Mechanism



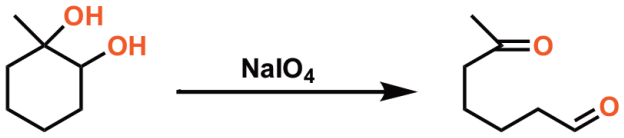
Free-Radical Bromination



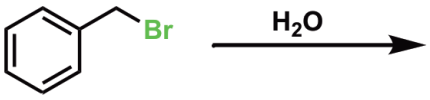
Mechanism



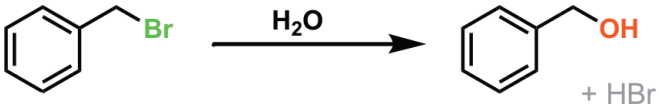
Oxidative Cleavage Of Vicinal Diols



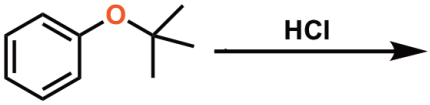
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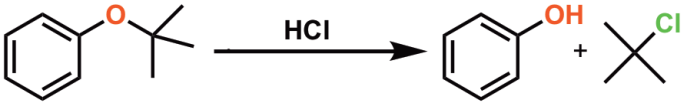
Substitution of Alkyl Halide With Water



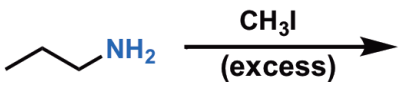
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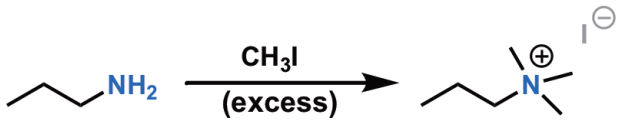
Acidic Cleavage Of Ethers



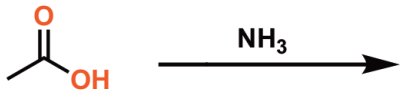
Mechanism



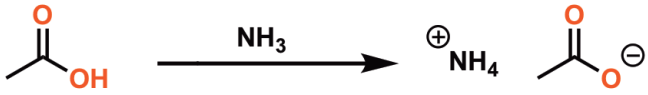
Formation of Quaternary Ammonium Salts



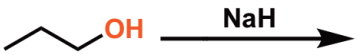
Mechanism



Acid-Base Reaction Of Carboxylic Acids



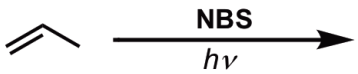
Mechanism



Deprotonation Of Alcohols



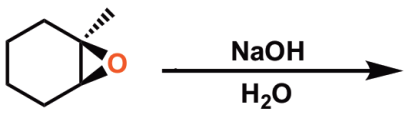
Mechanism



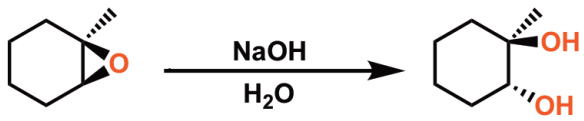
Allylic Bromination Using NBS



Mechanism

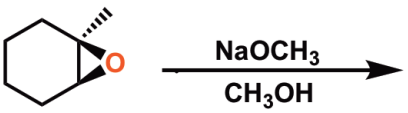


Epoxide Opening Under Basic Conditions

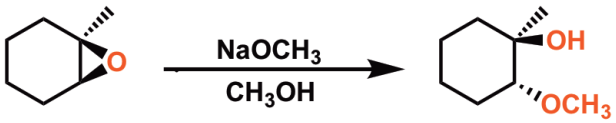


Mechanism



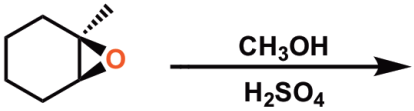


Epoxide Opening Under Basic Conditions

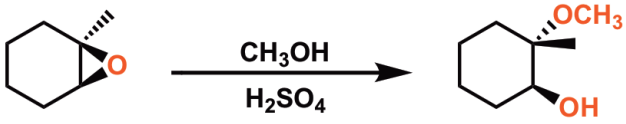


Mechanism



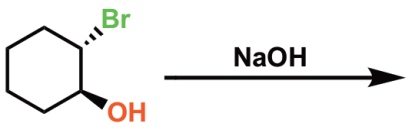


Epoxide Opening (Acidic Conditions)

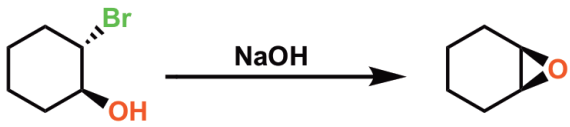


Mechanism



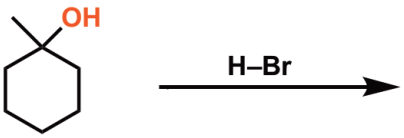


Epoxides From Halohydrins

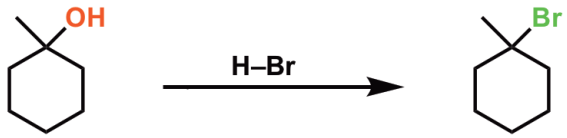


Mechanism

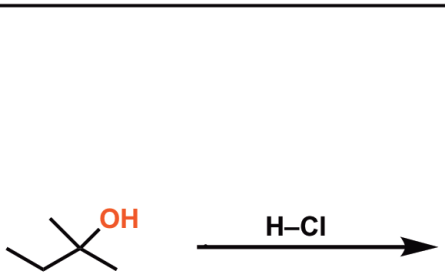




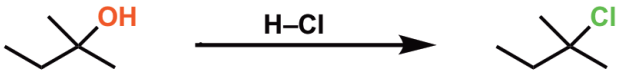
Acidic Substitution (S_N1) Of Tertiary Alcohols



Mechanism



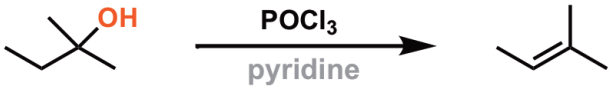
Substitution (S_N1) Of Tertiary Alcohols With Halides



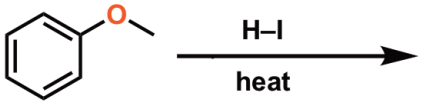
Mechanism



Elimination (E2) Of Alcohols With $POCl_3$



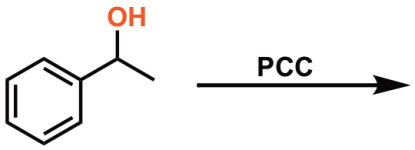
Mechanism



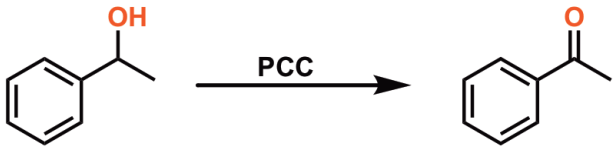
Cleavage of Ethers Under Acidic Conditions



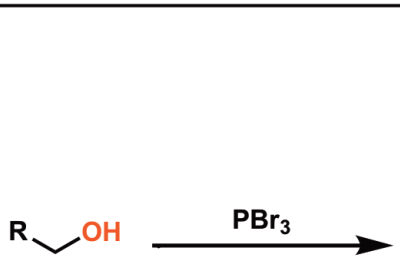
Mechanism



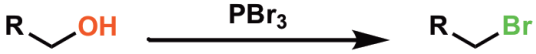
Oxidation Of 2° Alcohols To Ketones With PCC



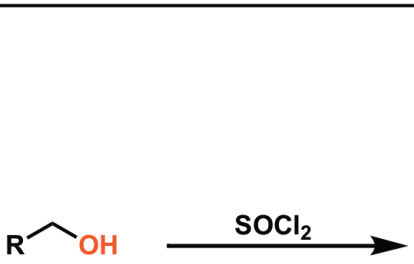
Mechanism



Substitution Of Alcohols With Br Using PBr_3



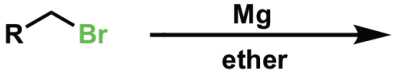
Mechanism



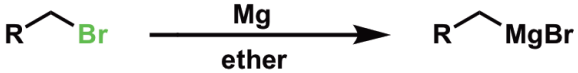
Substitution of Alcohols With Cl Using $SOCl_2$



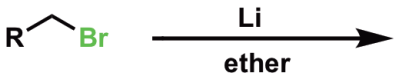
Mechanism



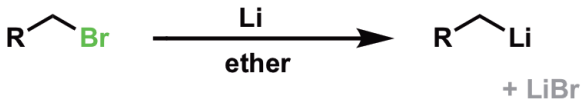
Formation of Alkyl Grignard Reagents



Mechanism

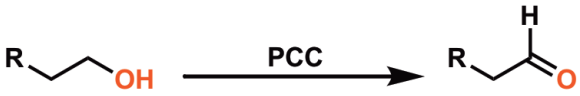


Formation of Organolithium Reagents

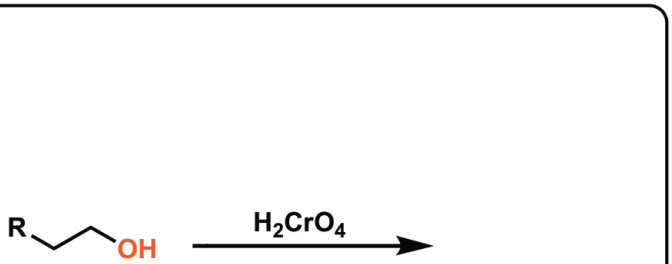


Mechanism

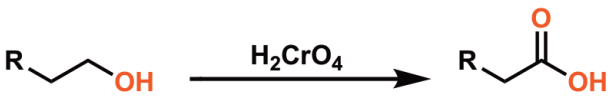
Oxidation of 1° Alcohols To Aldehydes With PCC



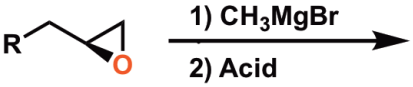
Mechanism



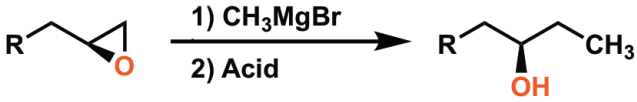
Oxidation of 1° Alcohols To Carboxylic Acids



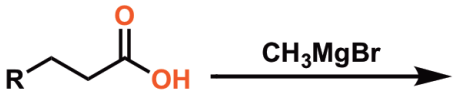
Mechanism



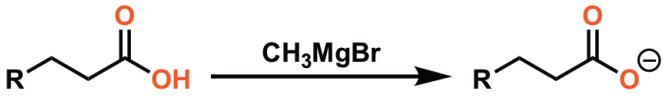
Opening Of Epoxides With Grignard Reagents



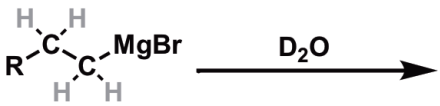
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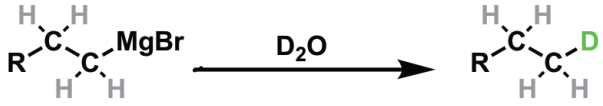
Reaction Of Grignard Reagents With Acid



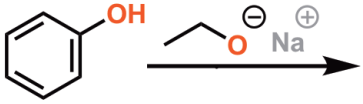
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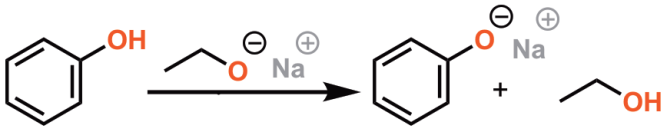
Acid-Base Reaction of Grignards With Deuterium



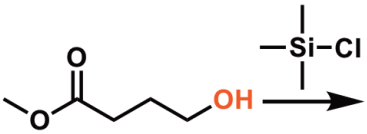
Mechanism



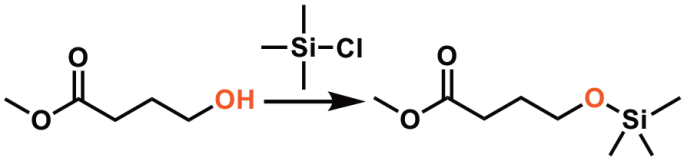
Acid-Base Reaction Of Alcohols



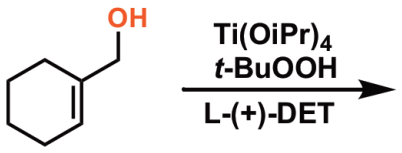
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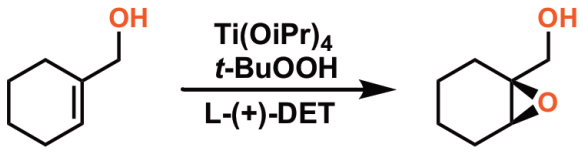
Formation of Silicon Protecting Group On Alcohol



Mechanism

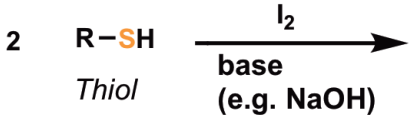


Sharpless Hydroxylation Of Allylic Alcohols

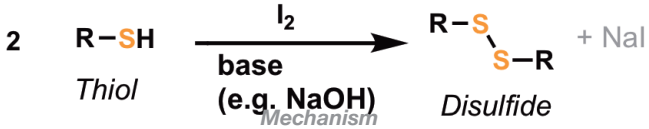


Mechanism



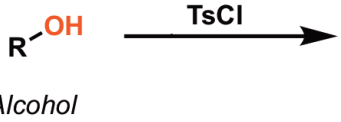


Formation of Disulfides From Thiols

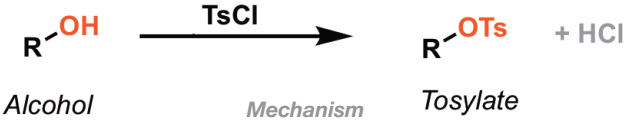


Mechanism



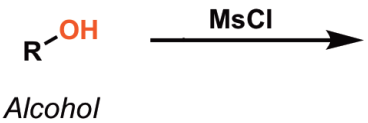


Conversion of Alcohols To Tosylates



Mechanism



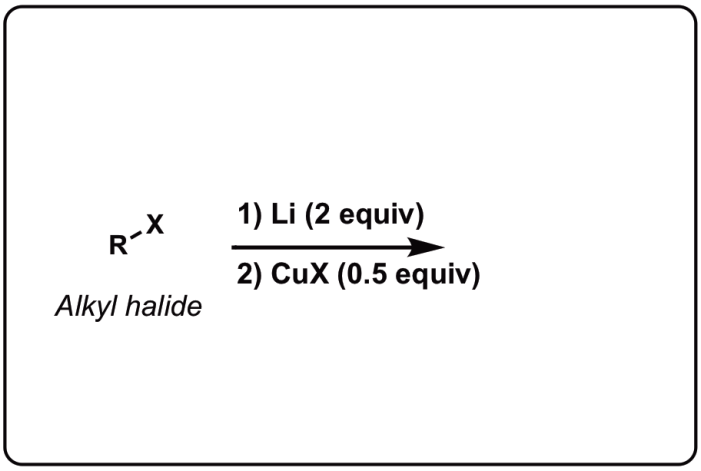


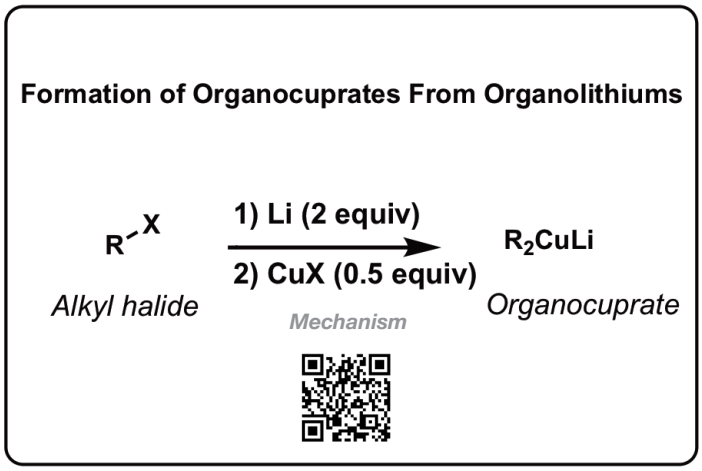
Formation of Mesylates From Alcohols

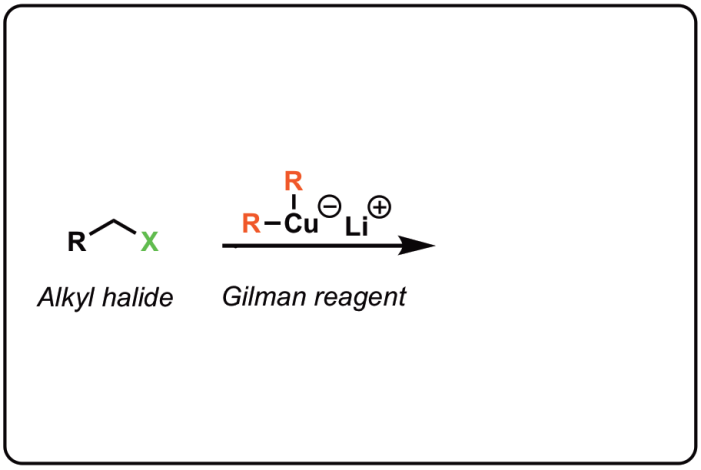


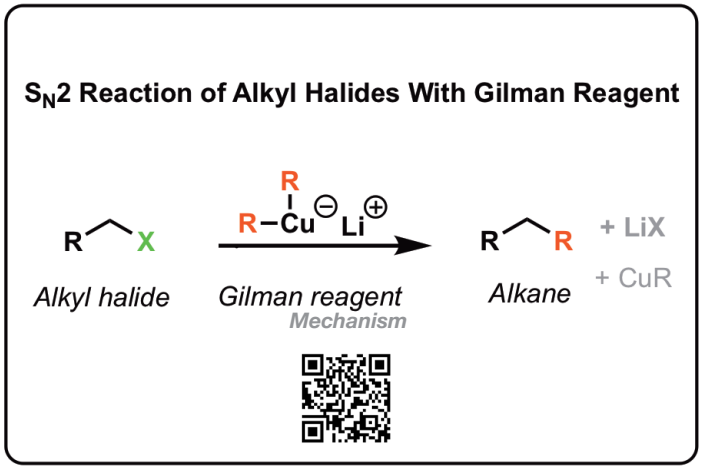
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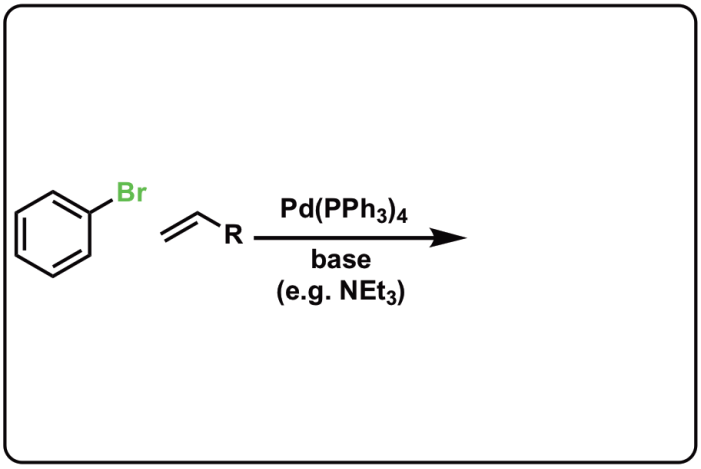


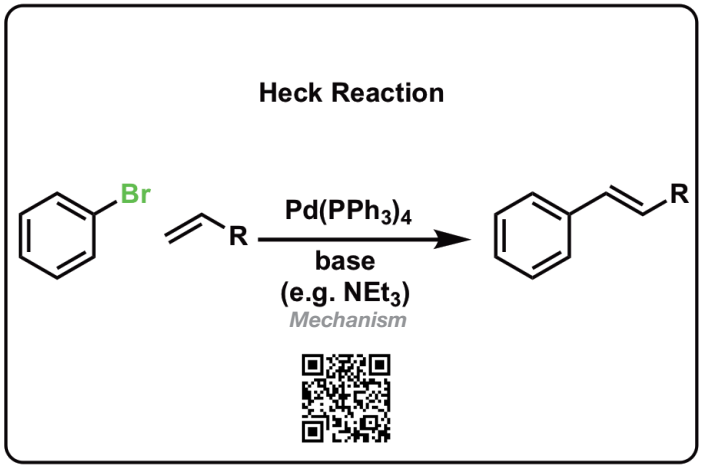

R–X
1) Li (2 equiv)
2) CuX (0.5 equiv)
Alkyl halide

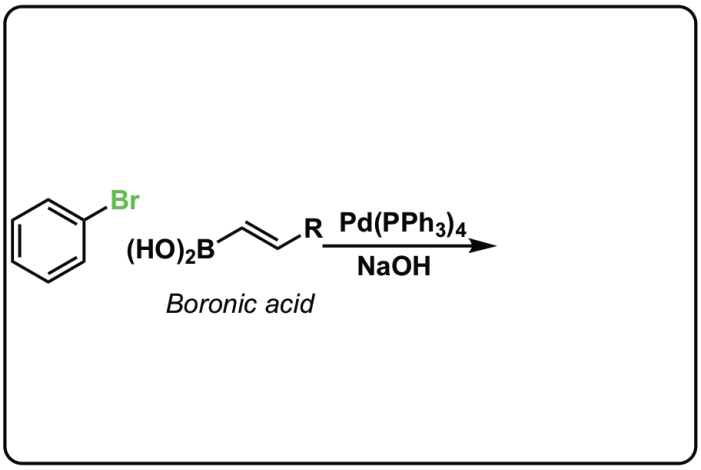

Formation of Organocuprates From Organolithiums
R–X
1) Li (2 equiv)
2) CuX (0.5 equiv)
R2CuLi
Alkyl halide
Organocuprate
Mechanism

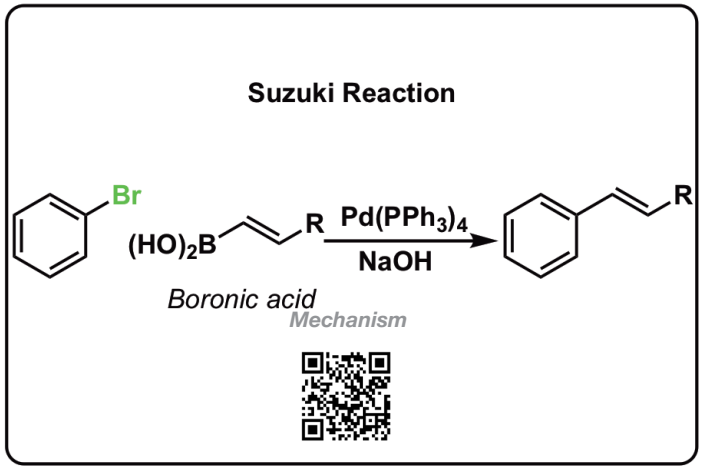

R–X
R–Cu–Li
Alkyl halide
Gilman reagent

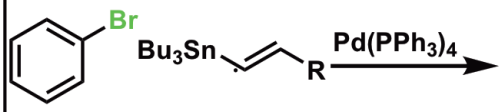

SN2 Reaction of Alkyl Halides With Gilman Reagent
R–X
R–Cu–Li
R–R
+ LiX
+ CuR
Alkyl halide
Gilman reagent
Alkane
Mechanism


Br
R
Pd(PPh3)4
base
(e.g. NEt3)


Heck Reaction
Br
R
Pd(PPh3)4
base
(e.g. NEt3)
Mechanism

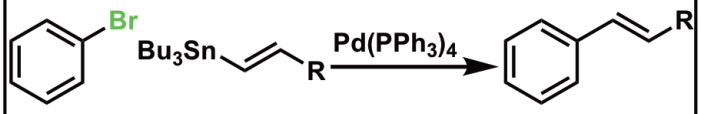

Br
(HO)2B
R
Pd(PPh3)4
NaOH
Boronic acid


Suzuki Reaction
Br
(HO)2B
R
Pd(PPh3)4
NaOH
Boronic acid
Mechanism



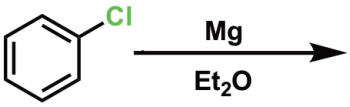
Organostannane

Stille Reaction

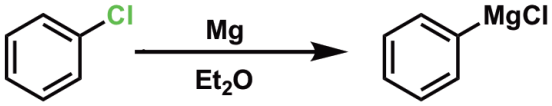


Organostannane

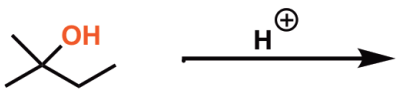
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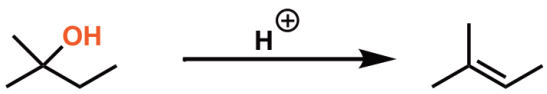
Formation of Grignards From Alkenyl Halides



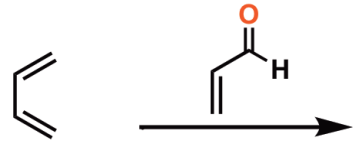
Mechanism



Elimination (E1) Of Tertiary Alcohols With Acid

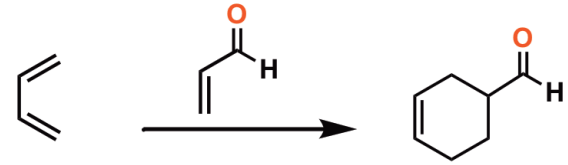


Mechanism



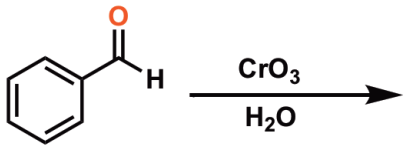
Diene *Dienophile*

Diels-Alder Reaction

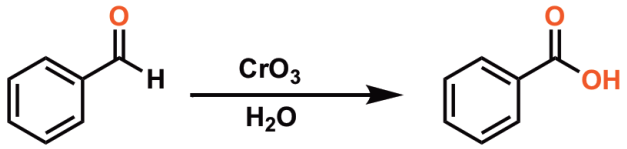


Diene *Dienophile*

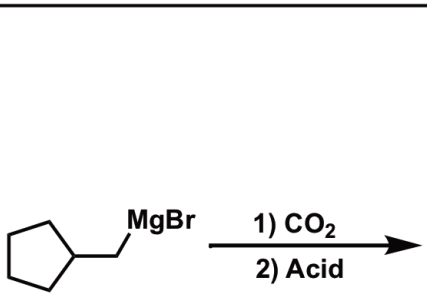
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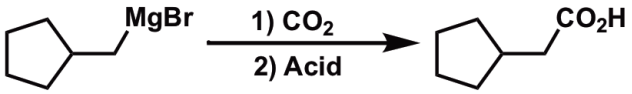
Oxidation of Aldehydes With CrO_3



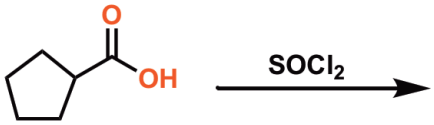
Mechanism



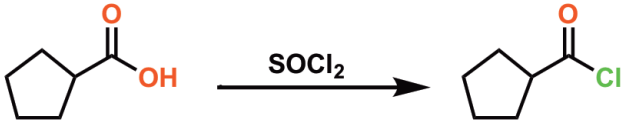
Reaction of Grignards With CO_2



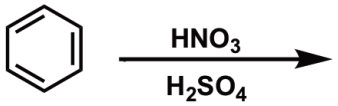
Mechanism



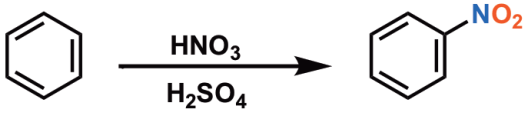
Conversion of Carboxylic Acids to Acid Chlorides



Mechanism



Nitration of Benzene



Mechanism



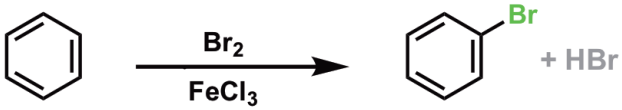
Chlorination of Benzene



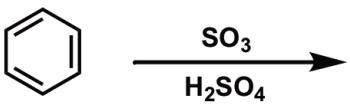
Mechanism



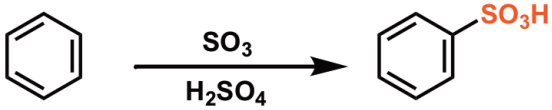
Bromination of Aromatic Rings



Mechanism



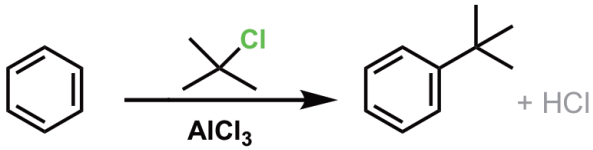
Sulfonation of Benzene



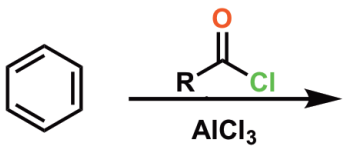
Mechanism



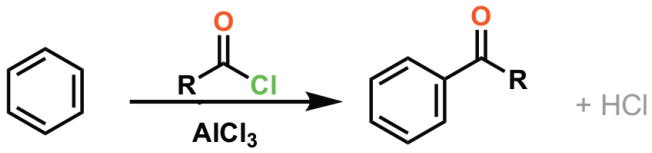
Friedel-Crafts Alkylation



Mechanism



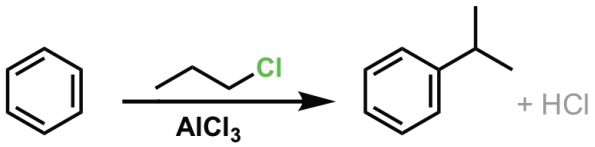
Friedel-Crafts Acylation



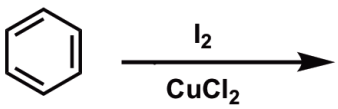
Mechanism



Friedel-Crafts Alkylation With Rearrangement



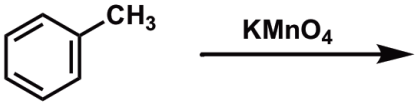
Mechanism



Iodination of Benzene



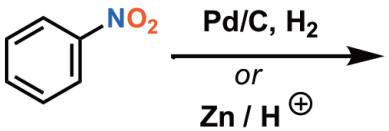
Mechanism



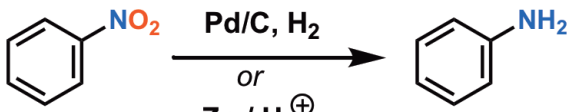
Benzylic Oxidation With $KMnO_4$



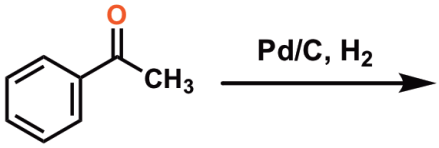
Mechanism



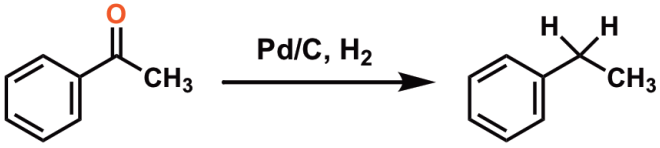
Reduction of Nitro Groups To Amines



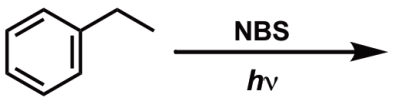
Mechanism



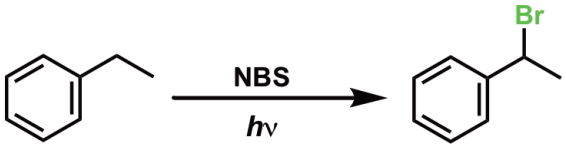
Hydrogenation of Aromatic Ketones



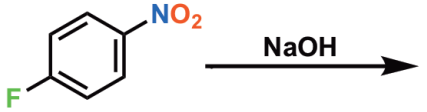
Mechanism



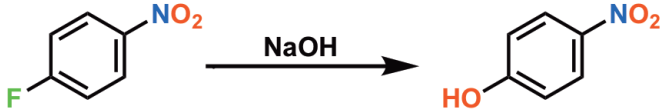
Title of Reaction



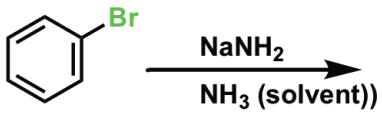
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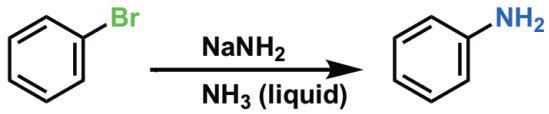
Nucleophilic Aromatic Substitution



Mechanism

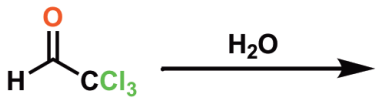


Nucleophilic Aromatic Substitution via Benzyne

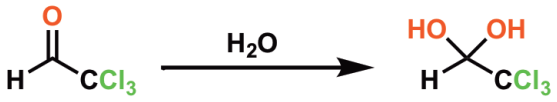


Mechanism



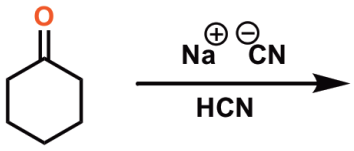


Hydrate Formation

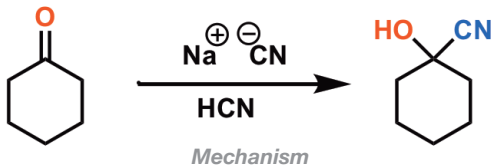


Mechanism



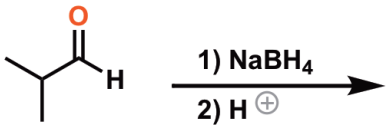


Cyanohydrin Formation From Ketones

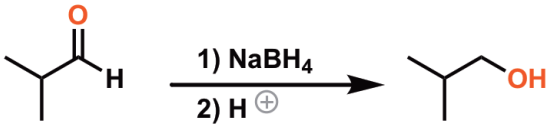


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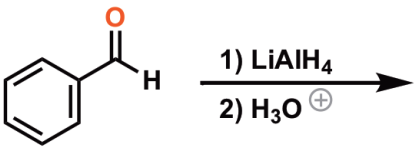


Reduction of Aldehydes To 1° Alcohols

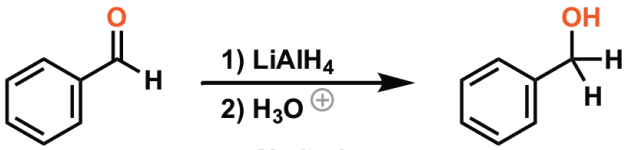


Mechanism

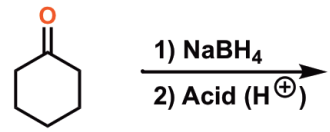




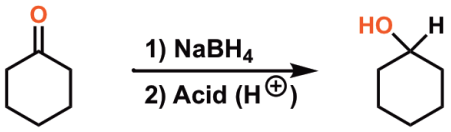
Reduction of Aldehydes To 1° Alcohols



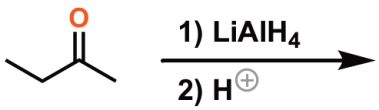
Mechanism



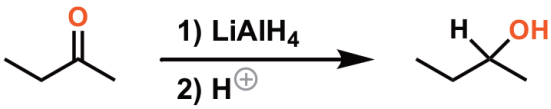
Reduction of Ketones To Alcohols With $NaBH_4$



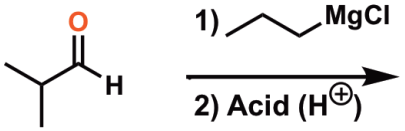
Mechanism



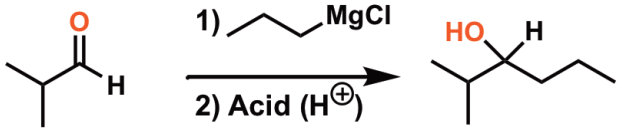
Reduction of Ketones To Alcohols With $LiAlH_4$



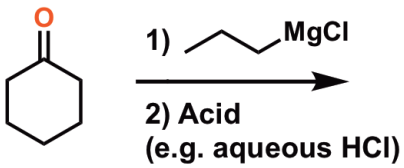
Mechanism



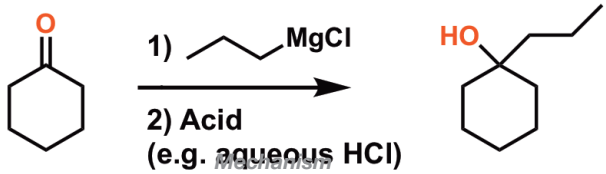
Addition of Grignard Reagents To Aldehydes



Mechanism

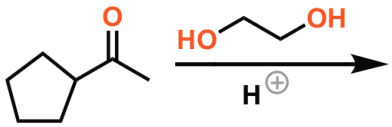


Addition of Grignard Reagents to Ketones

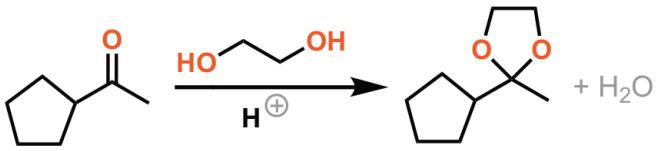


Mechanism



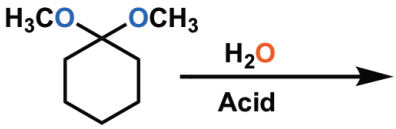


Acetal Formation

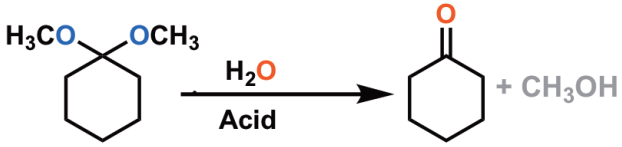


Mechanism



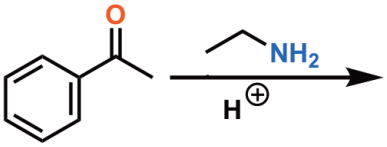


Hydrolysis of Acetals

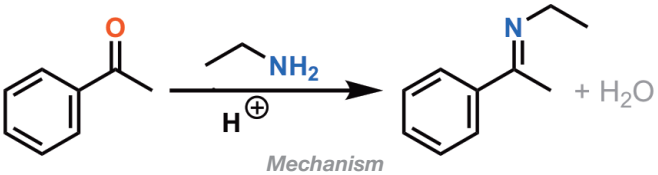


Mechanism



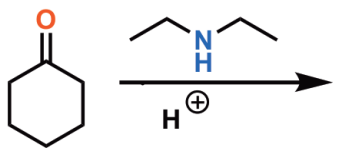


Imine Formation From Ketones

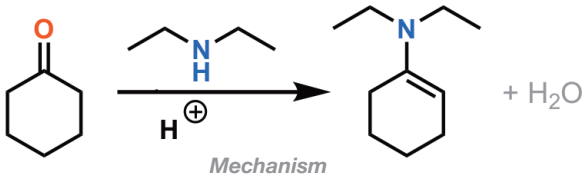


Mechanism



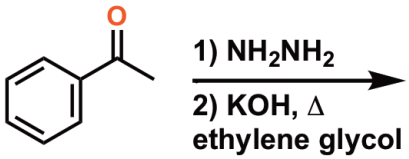


Enamine Formation

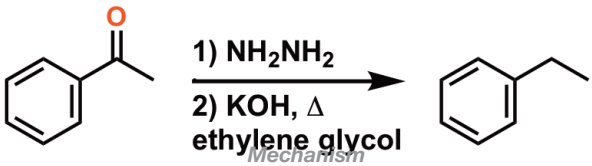


Mechanism



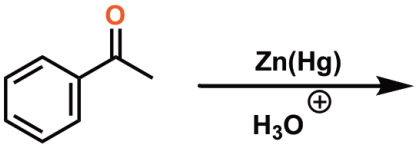


Wolff-Kishner Reduction of Ketones

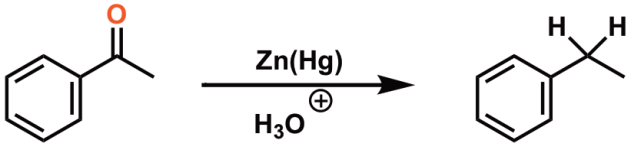


Mechanism



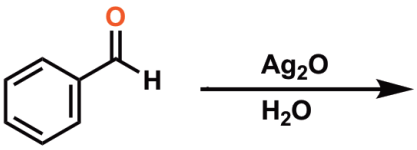


Clemmensen Reduction

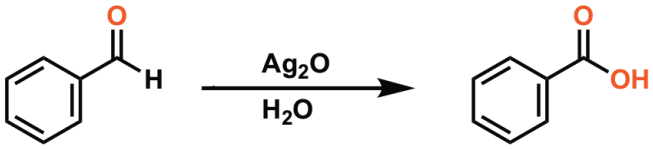


Mechanism





Oxidation of Aldehydes With Ag_2O

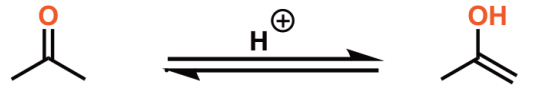


Mechanism

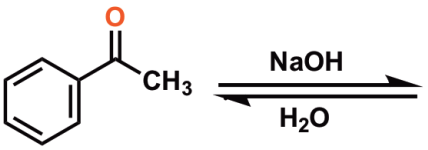




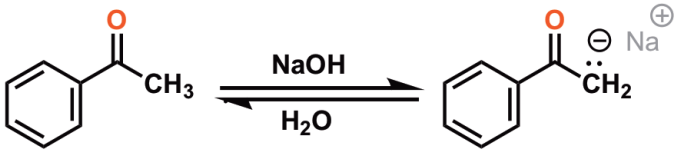
Keto-Enol Tautomerism



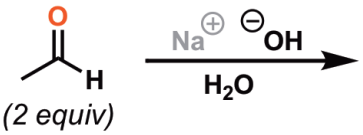
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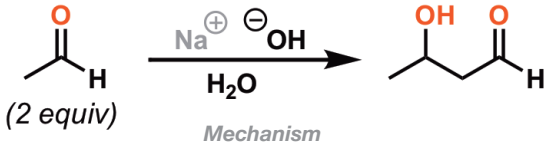
Formation of Enolates



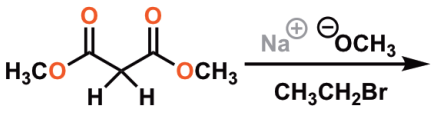
Mechanism



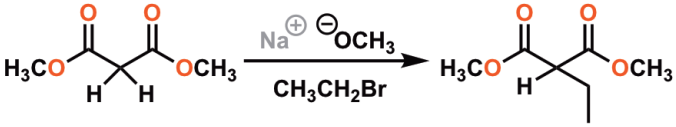
Aldol Addition Reaction (Base-Catalyzed)



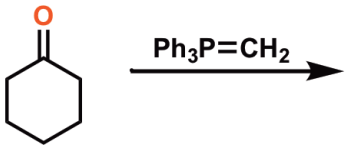
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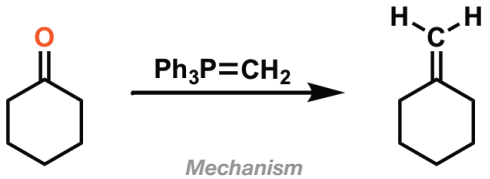
Alkylation of Enolates



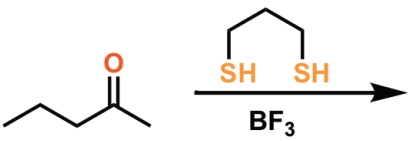
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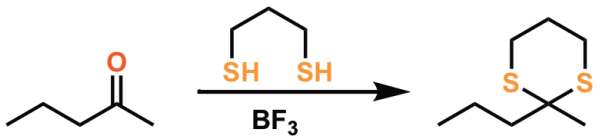
Wittig Reaction



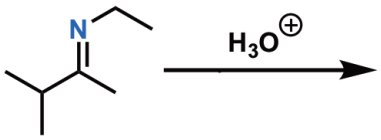
Mechanism



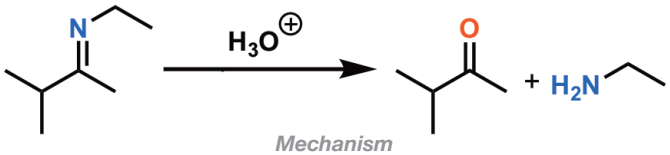
Formation of Thioacetals



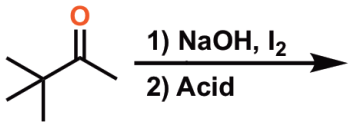
Mechanism



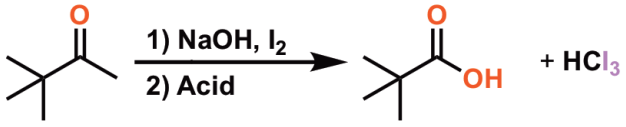
Hydrolysis of Imines



Mechanism



Haloform Reaction



Mechanism

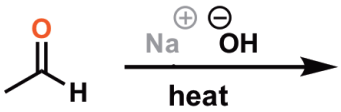


Baeyer-Villiger Oxidation

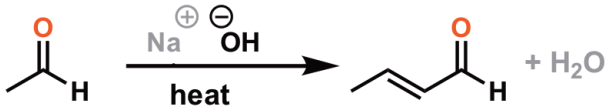


Mechanism



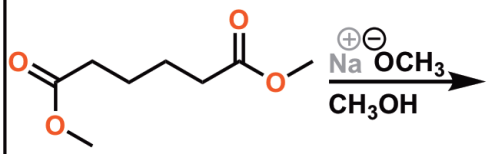


Aldol Condensation Reaction

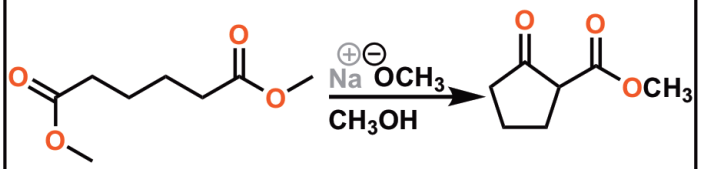


Mechanism



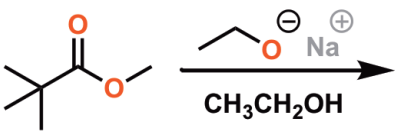


Dieckmann Condensation

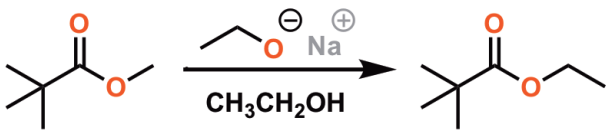


Mechanism





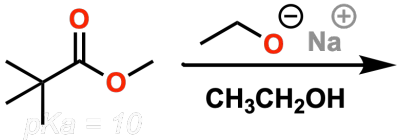
Transesterification (Basic Conditions)



Mechanism

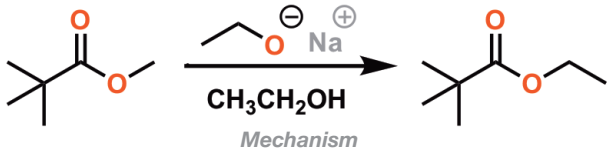


MOC Flashcards

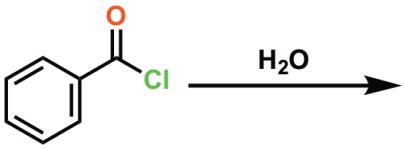


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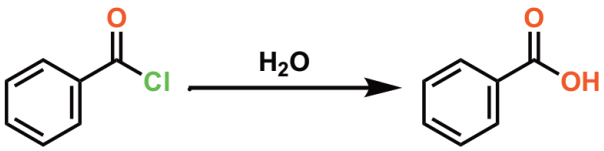
Transesterification (Basic Conditions)



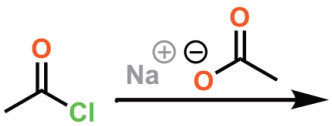
Mechanism



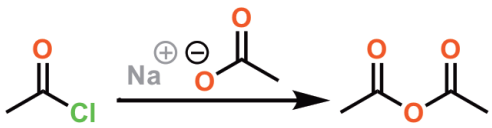
Hydrolysis of Acyl Chlorides



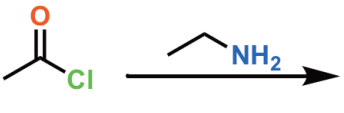
Mechanism



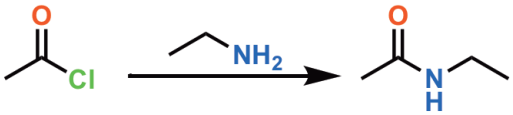
Anhydride Formation



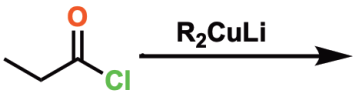
Mechanism



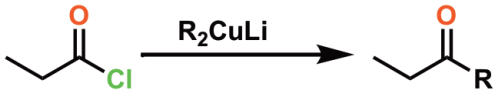
Amide Formation



Mechanism



Addition of Organocuprates To Acid Chlorides

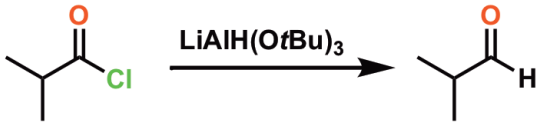


Mechanism



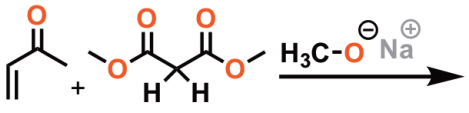


Reduction of Acid Chlorides To Aldehydes

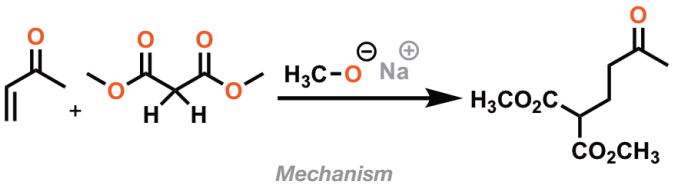


Mechanism



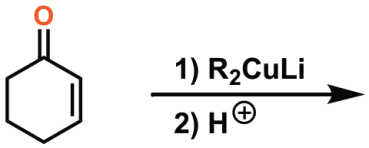


Michael Reaction

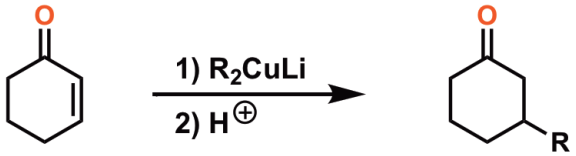


Mechanism



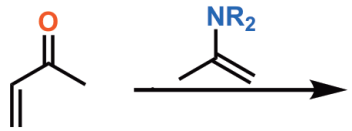


Conjugate Addition With Organocuprates

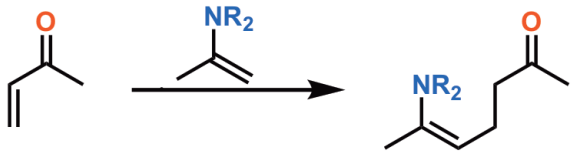


Mechanism

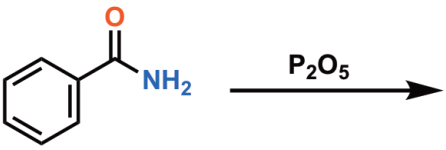




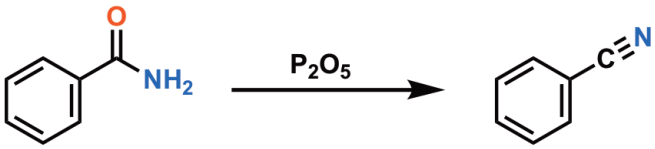
Stork Enamine Reaction



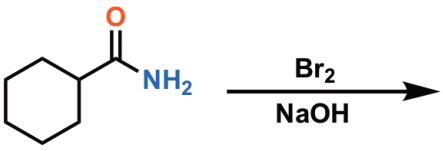
Mechanism



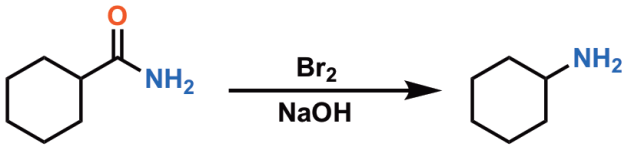
Dehydration of Amides To Nitriles



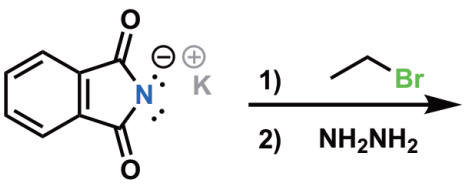
Mechanism



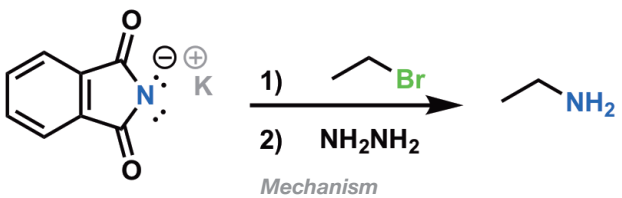
Hofmann Rearrangement



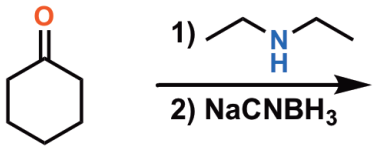
Mechanism



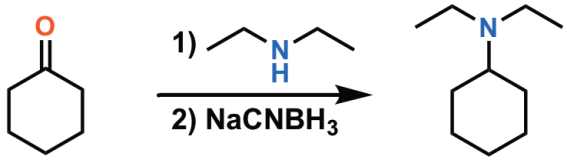
Gabriel Synthesis of Amines



Mechanism

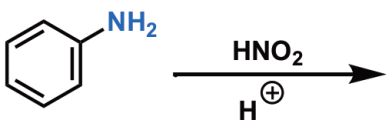


Reductive Amination

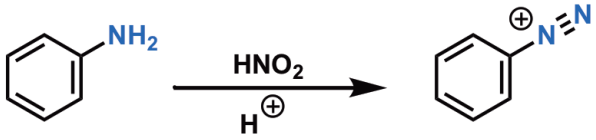


Mechanism



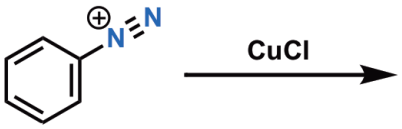


Diazonium Salt Formation

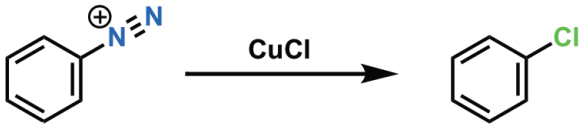


Mechanism



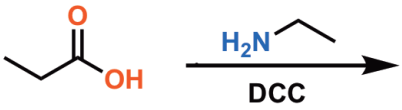


Sandmeyer Reaction

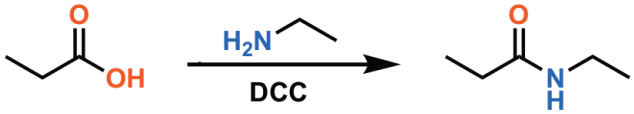


Mechanism



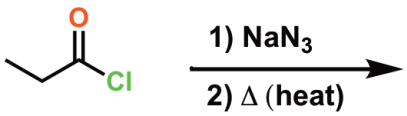


Amide Formation With DCC

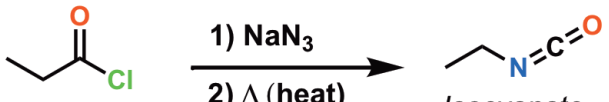


Mechanism





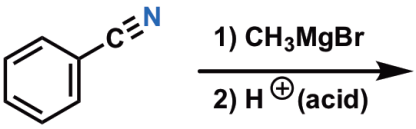
Curtius Rearrangement



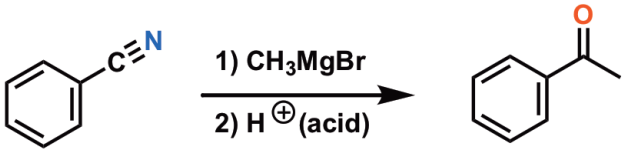
Isocyanate

Mechanism



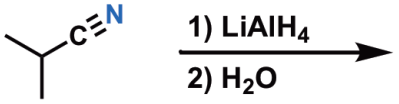


Addition of Grignards To Nitriles

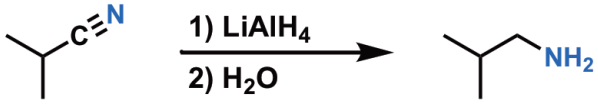


Mechanism



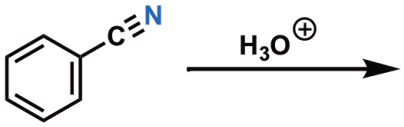


Reduction of Nitriles To Amines

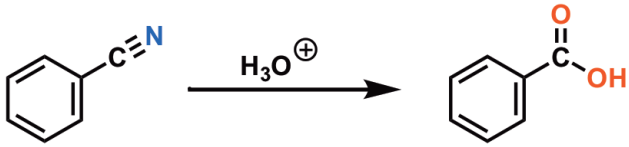


Mechanism



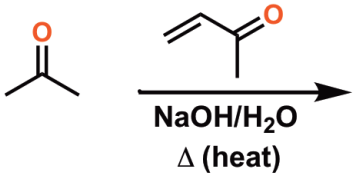


Hydrolysis of Nitriles

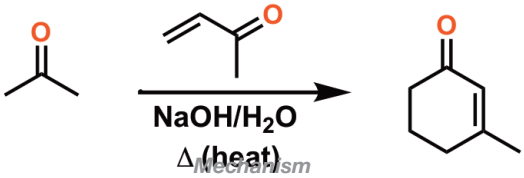


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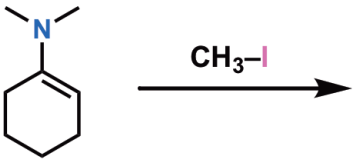


Robinson Annulation

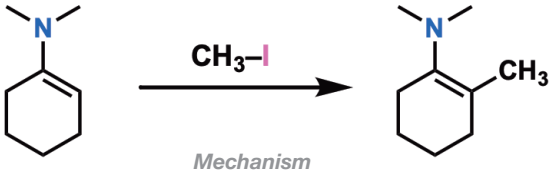


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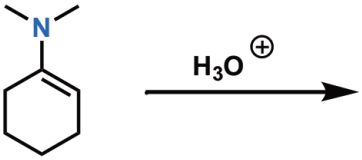


Enamine Alkylation

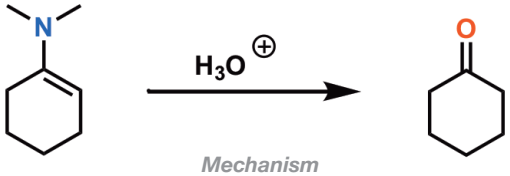


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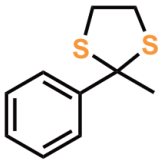


Hydrolysis of Enamines

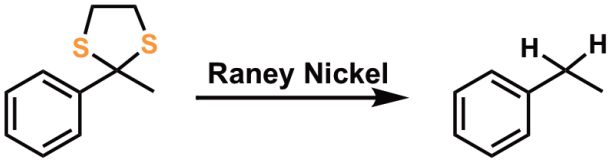


Mechanism



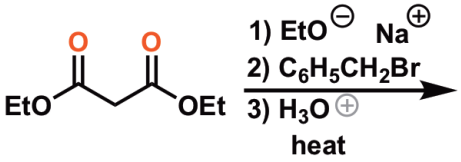


Reduction of Thioacetals

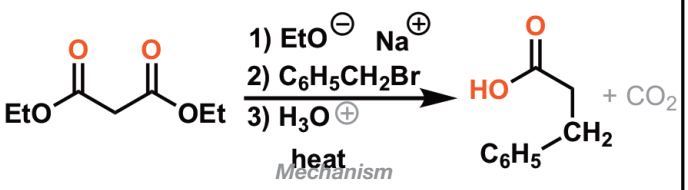


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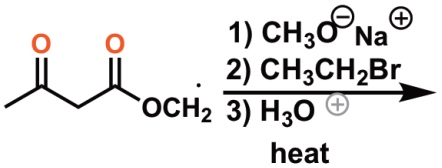




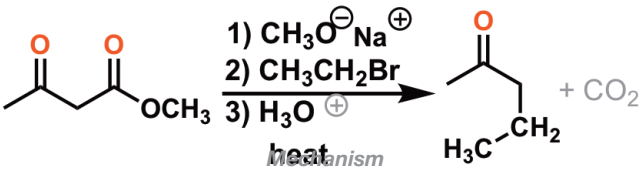
Malonic Ester Synthesis



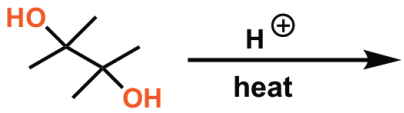
Mechanism



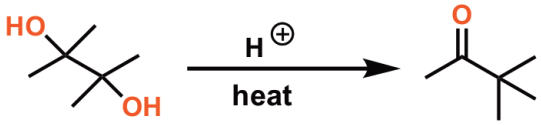
Acetoacetic Acid Synthesis



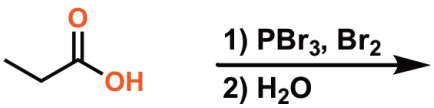
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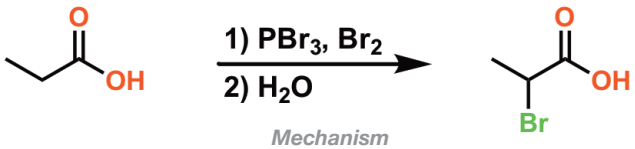
Pinacol Rearrangement



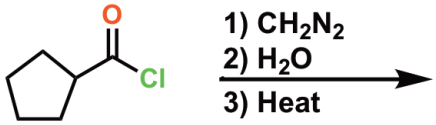
Mechanism



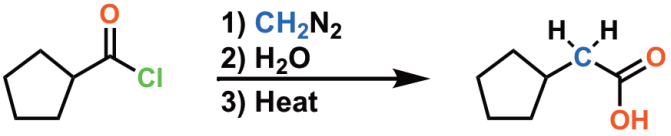
Hell-Vollhard-Zelinsky Reaction



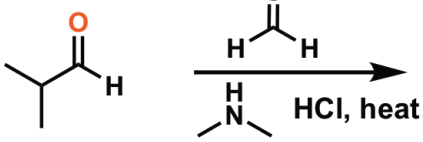
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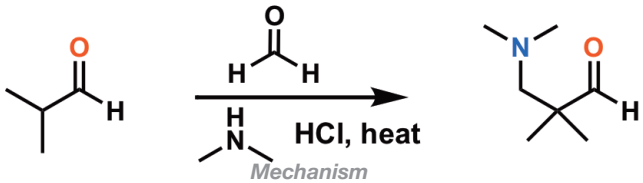
Wolff Rearrangement



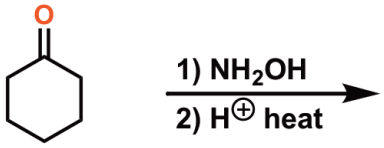
Mechanism



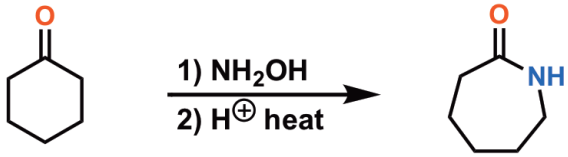
Mannich Reaction



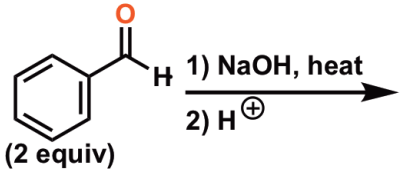
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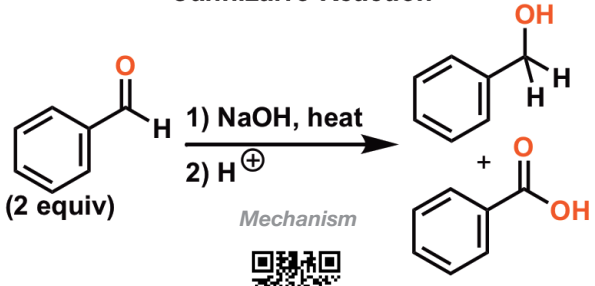
Beckmann Rearrangement



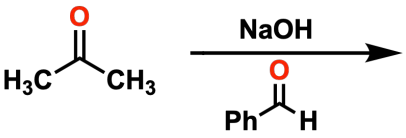
Mechanism



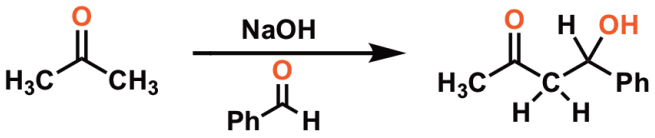
Cannizarro Reaction



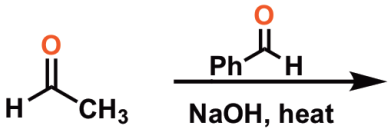
Mechanism



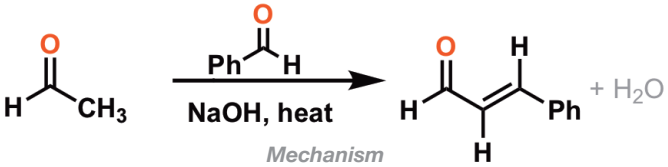
Aldol Addition (Crossed-Aldol)



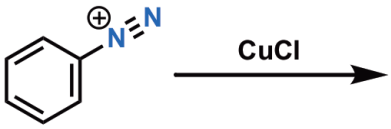
Mechanism



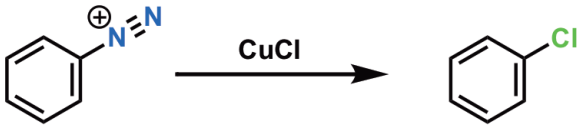
Aldol Condensation (Crossed-Aldol)



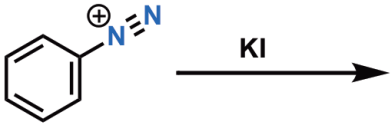
Mechanism



Sandmeyer Reaction



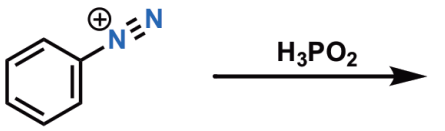
Mechanism



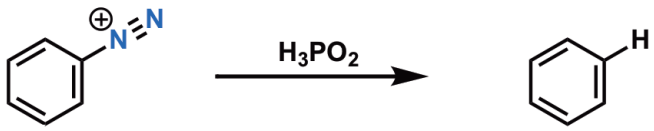
Iodination of Diazonium Salts



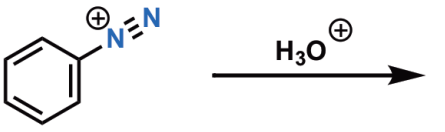
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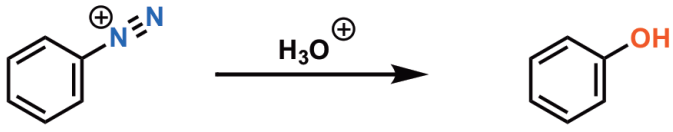
Reduction of Diazonium Salts



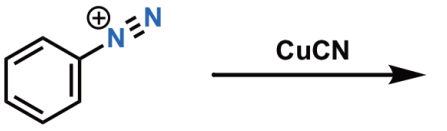
Mechanism



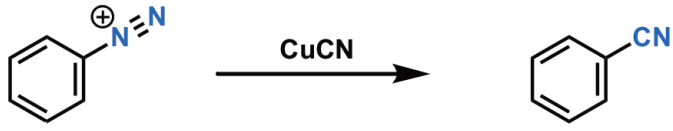
Conversion of Diazonium Salts To Phenols



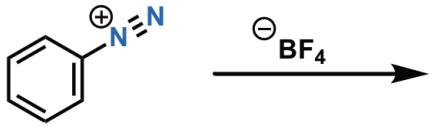
Mechanism



Sandmeyer Reaction



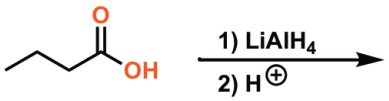
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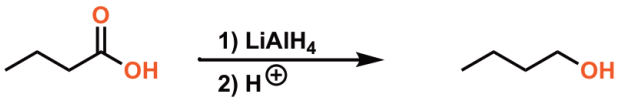
Fluorination of Diazonium Salts



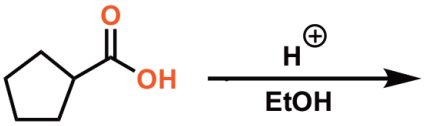
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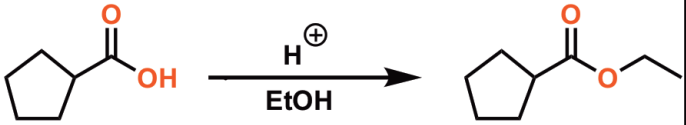
Reduction of Carboxylic Acids



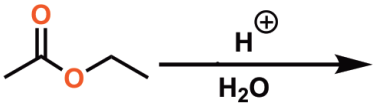
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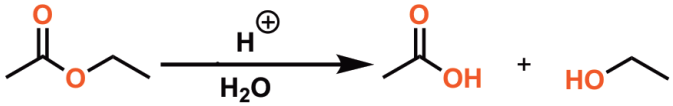
Fischer Esterification



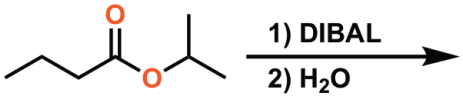
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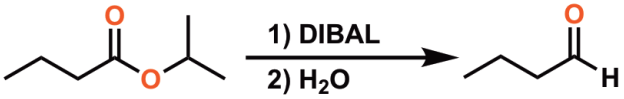
Ester Hydrolysis (Acidic)



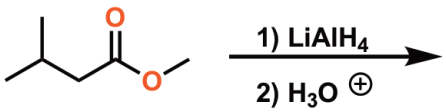
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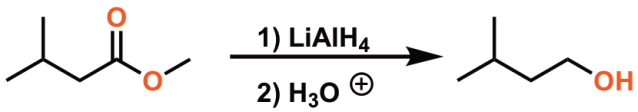
Reduction of Esters To Aldehydes



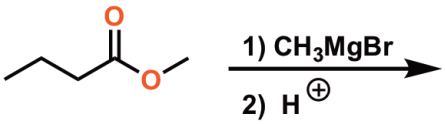
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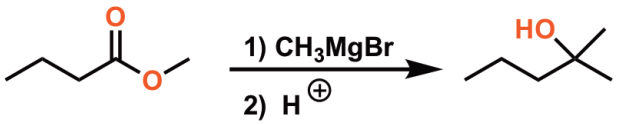
Reduction of Esters To Alcohols



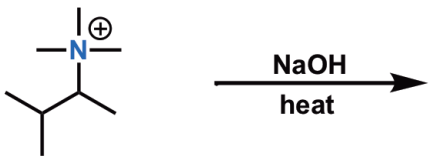
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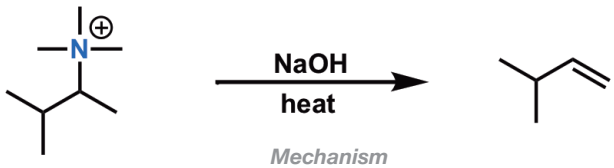
Addition of Grignard Reagent To Ester (Twice)



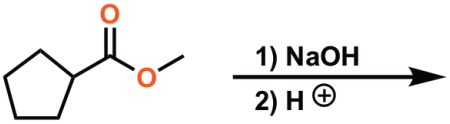
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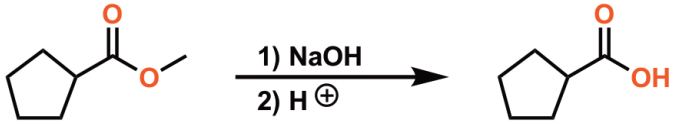
Hoffmann Elimination



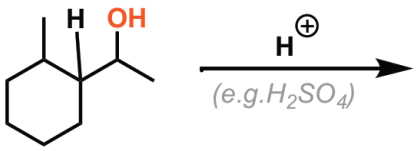
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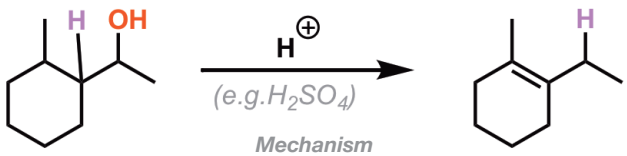
Hydrolysis of Esters (Basic Conditions)



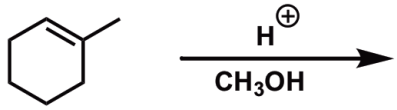
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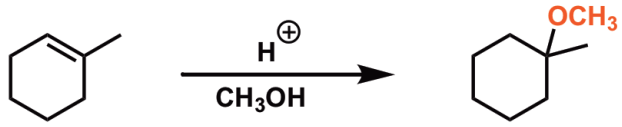
Elimination (E1) With Hydride Shift



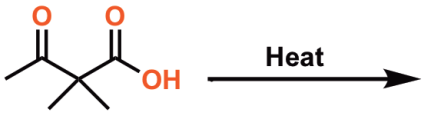
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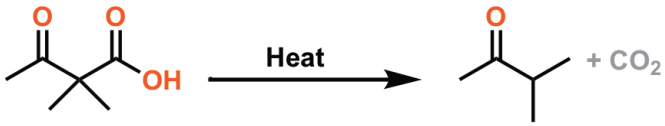
Addition of Alcohols To Alkenes (Acidic Conditions)



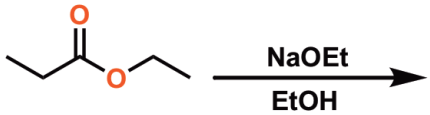
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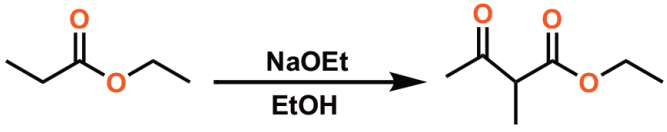
Decarboxylation



Mechanism



Alkylation of Enolates



Mechanism