

Oxidations

from chapter(s) _____ in the recommended text

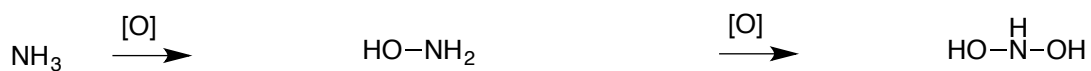
A. Introduction

B. Amine Oxidations

increasing the

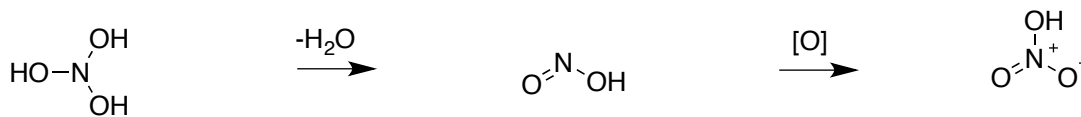
Ammonia

dehydrates
water.



hydroxylamine

dihydroxylamine or azinic acid



trihydroxylamine

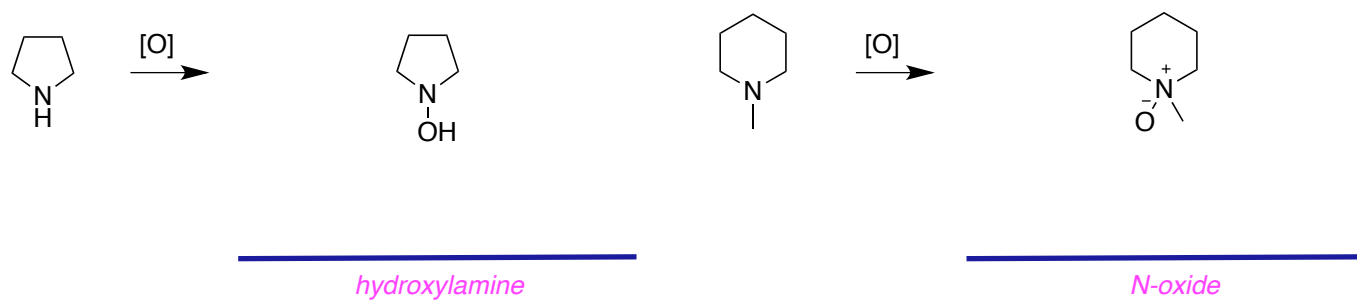
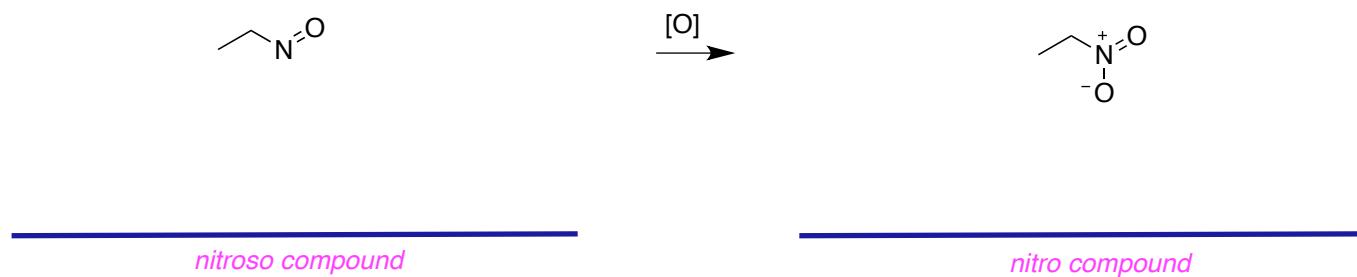
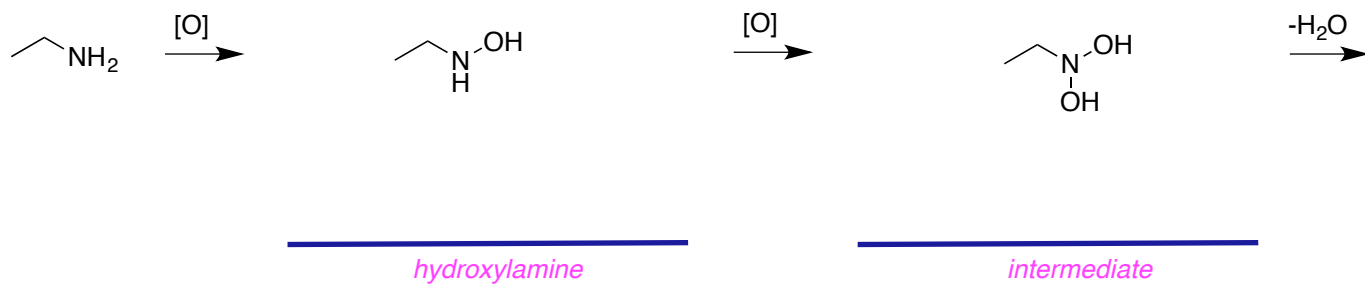
nitrous acid

nitric acid

tautomers.

do tend

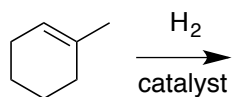
Organic Amines



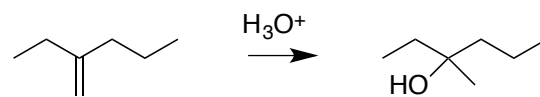
easier to

C. Oxidations Of Alkenes And Alkynes Via Additions Of Heteroatoms

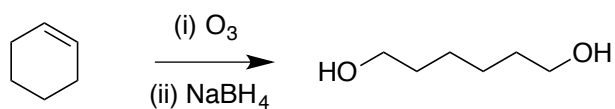
oxidation.



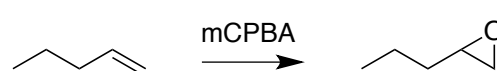
-1



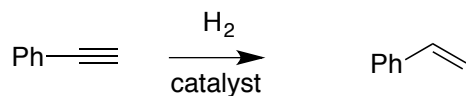
+1



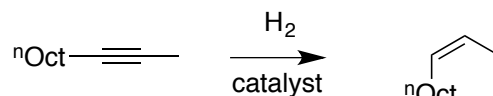
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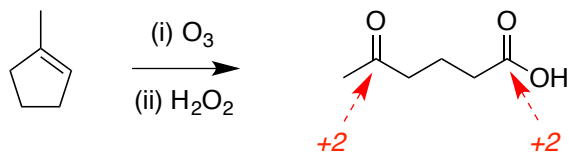
+1



-1

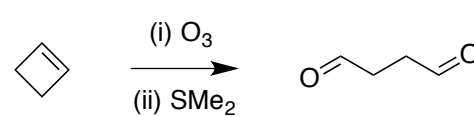


-1

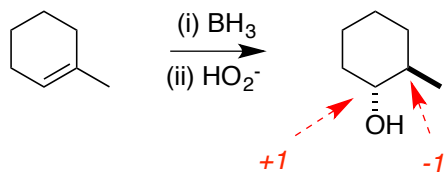


+2

+2

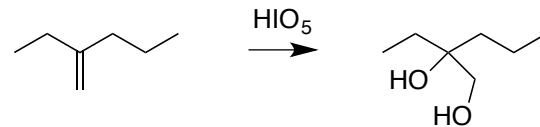


+2



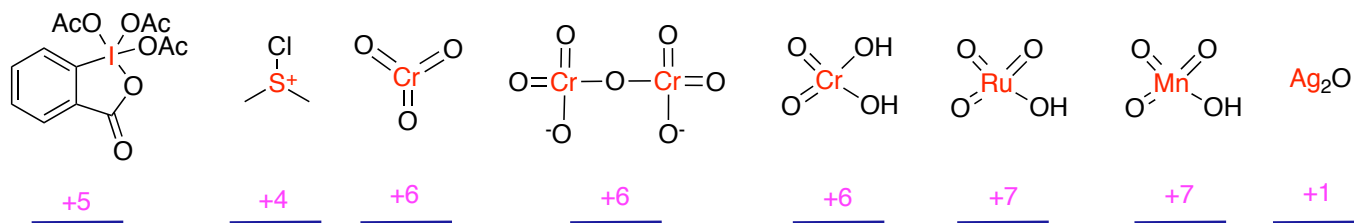
+1

-1



+1

D. Oxidation States Of Common Oxidants



high oxidation states

E. Dehydrogenation Reactions

oxidation reaction.

do not influence

does lower it

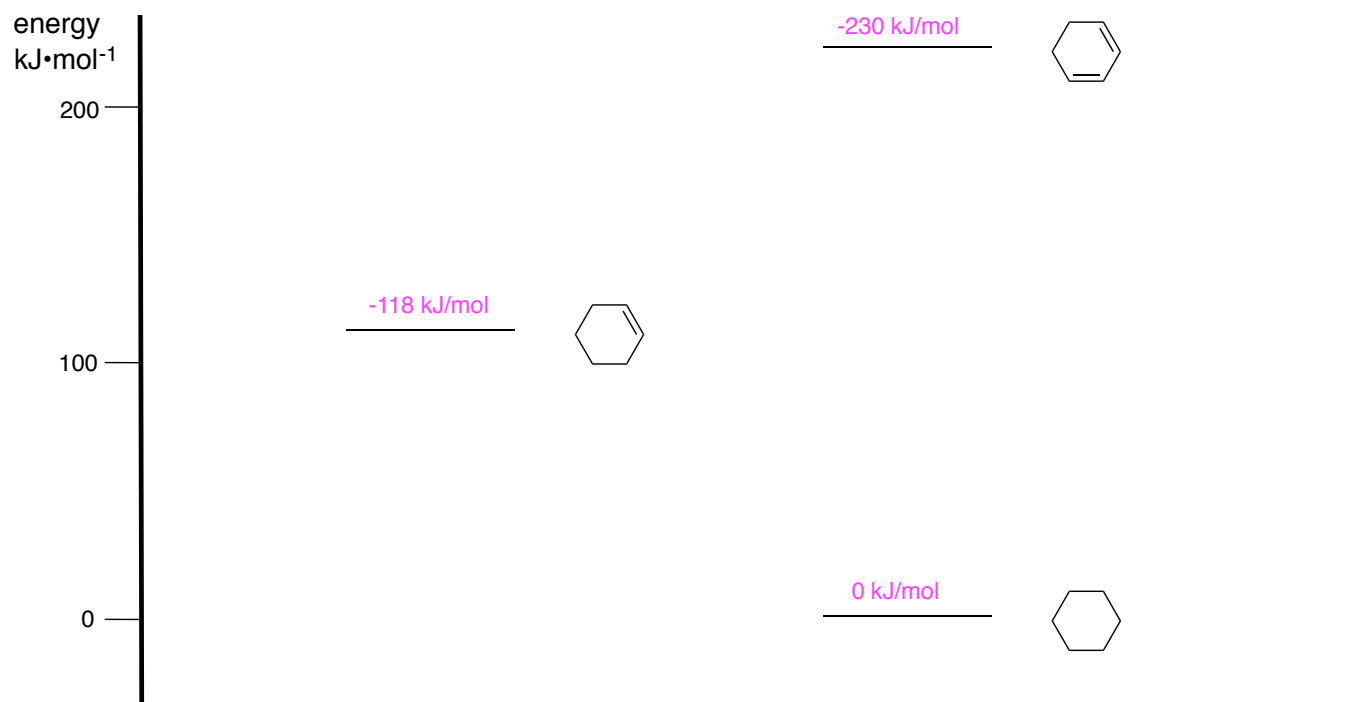
The Principle of Microscopic Reversibility.

kinetic barrier

enclosed from

easier to find

greater.

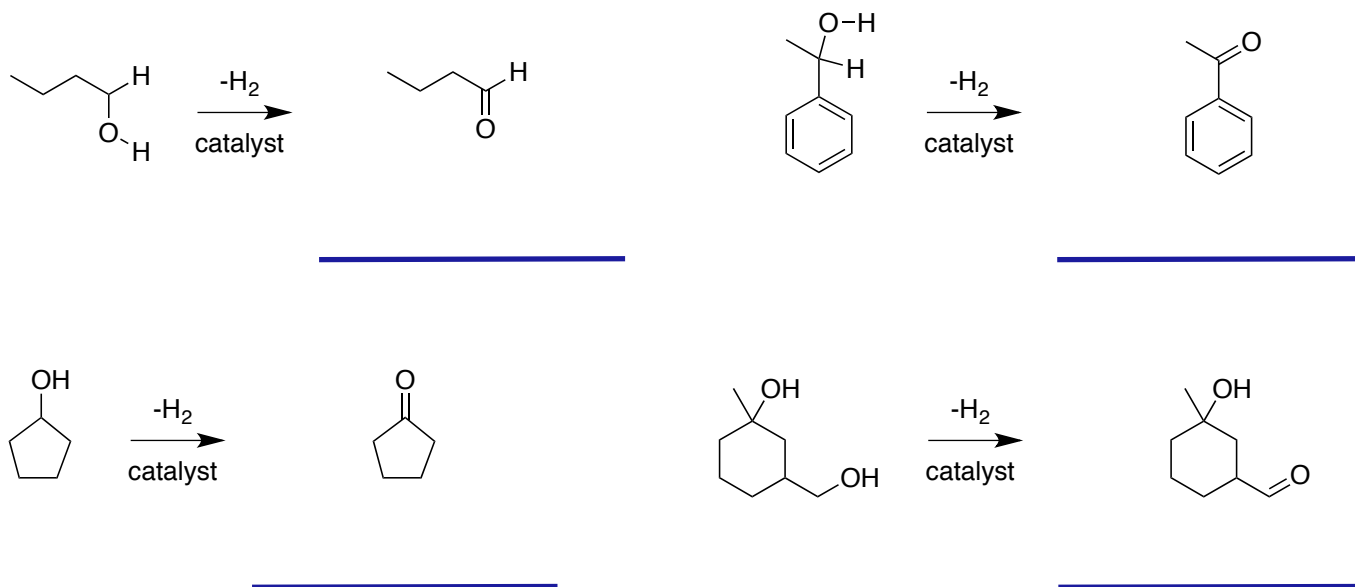


*downhill
oxidation*

F. Oxidation Of Alcohols

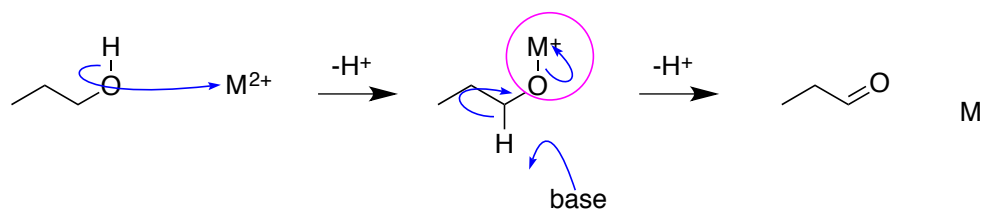
Catalytic Dehydrogenation

oxidize



primary / secondary and not *tertiary*
tertiary alcohols than *primary / secondary*

Elimination From Alkoxides: A Mechanistic Commonality Between Many Alcohol Oxidations



E_2 mechanism.

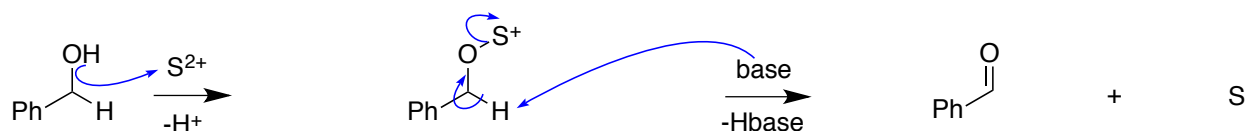
reduced;

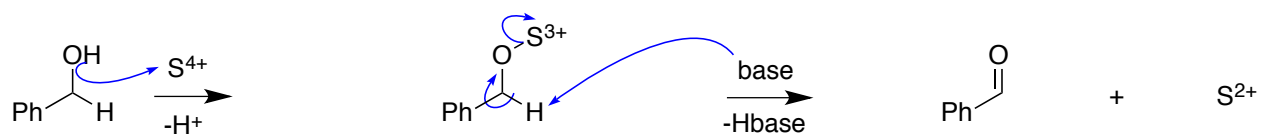
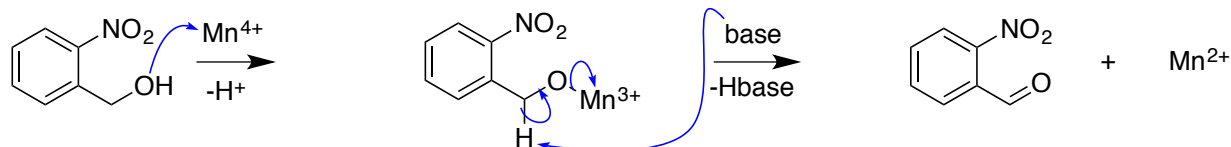
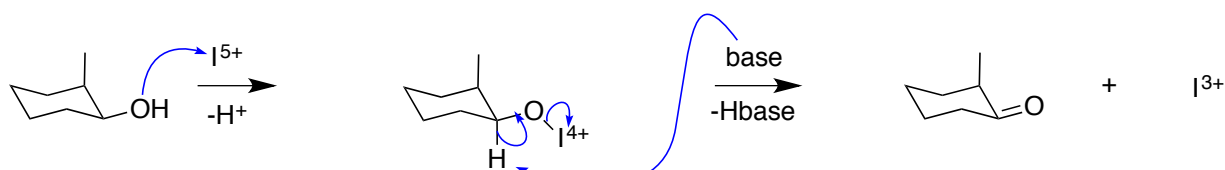
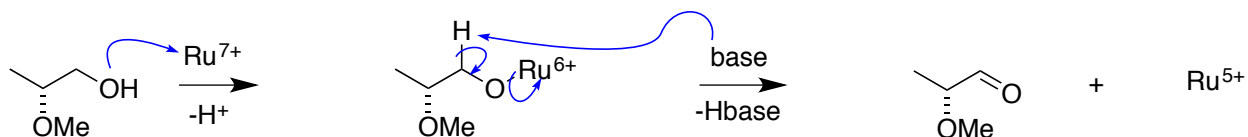
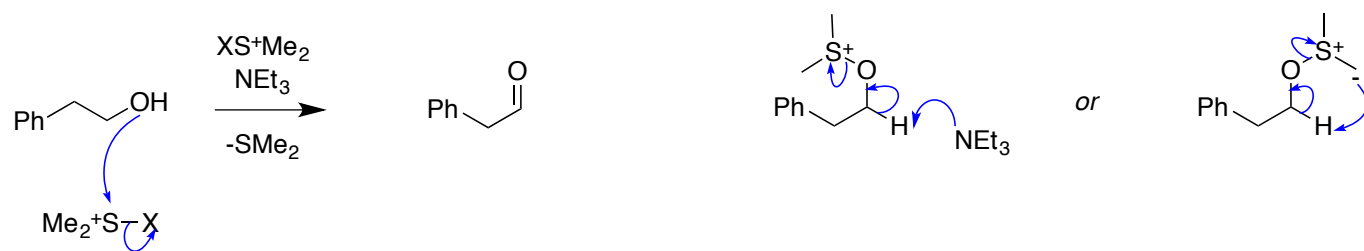
high oxidation

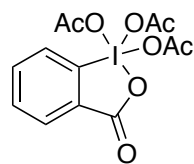
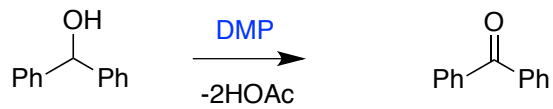
reduced.

It is *harder*

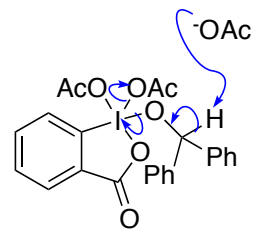
high oxidation state.



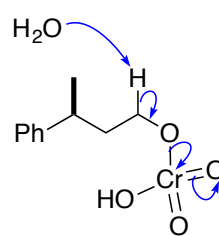
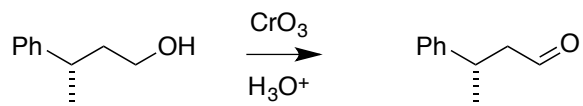
*alkoxide**alkoxide**alkoxide**alkoxide**intermolecular**intramolecular*



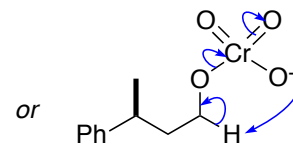
DMP



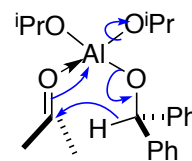
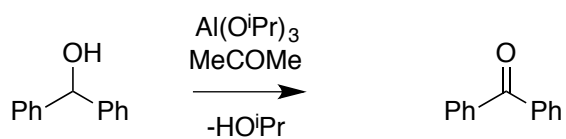
intermolecular



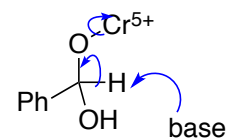
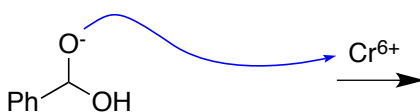
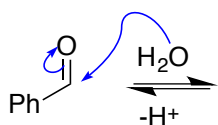
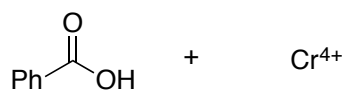
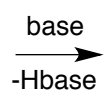
intermolecular



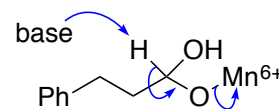
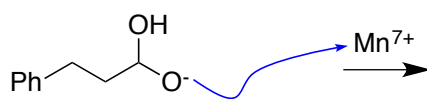
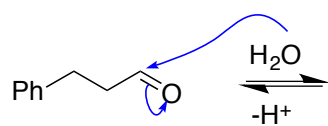
intramolecular

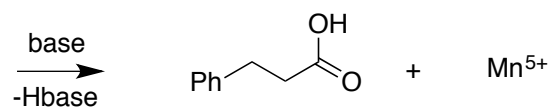
*intramolecular*

G. Oxidation Of Aldehydes

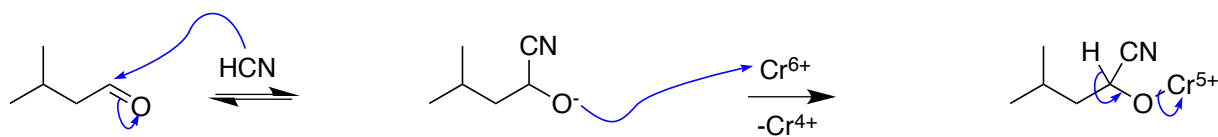
*hydrate**alkoxide*

indicate what happens to the metal here

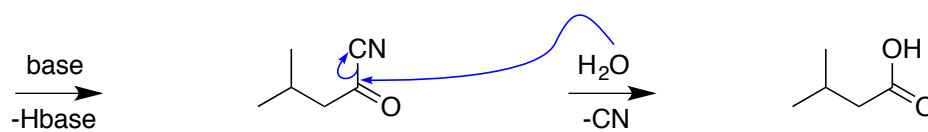
*hydrate**alkoxide*



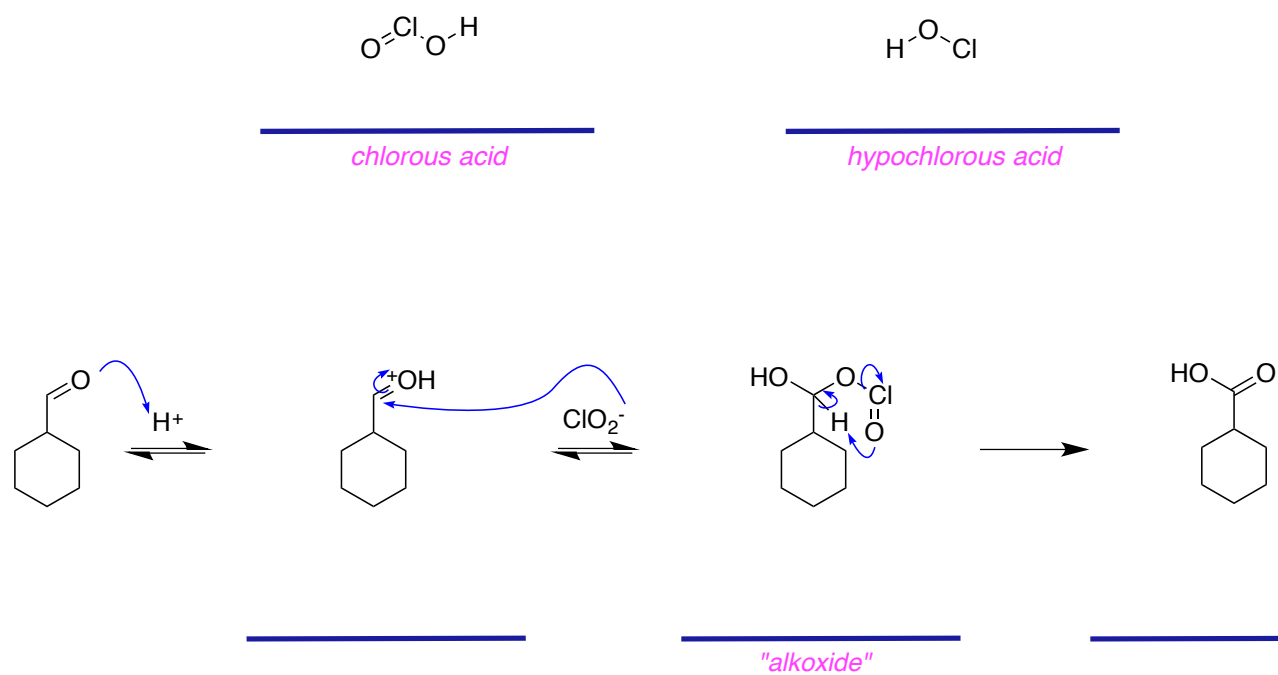
Ketones *cannot*
do not have



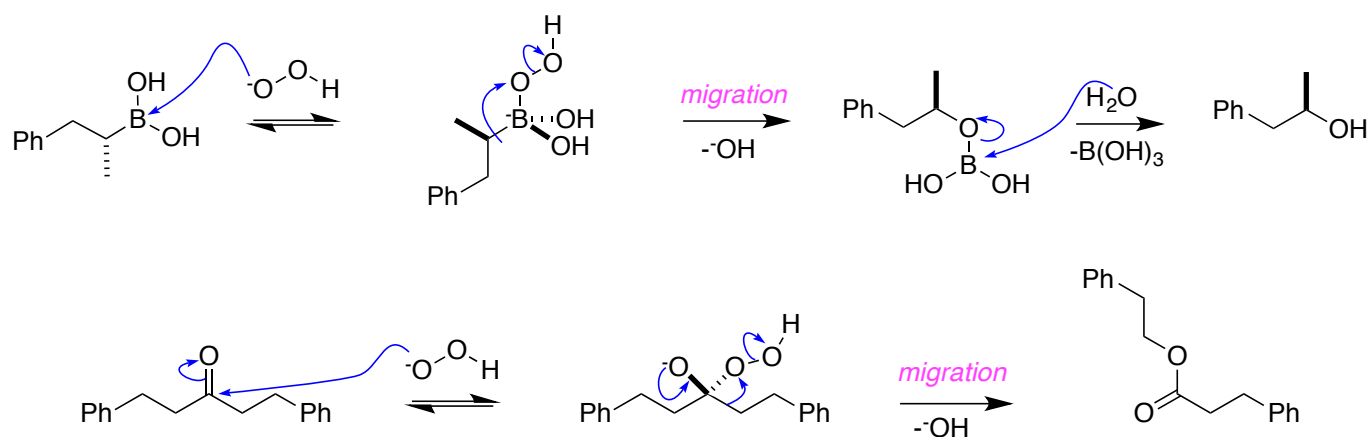
alkoxide



acyl nitrile



H. Oxidation Of Ketones



anti-periplanar in

