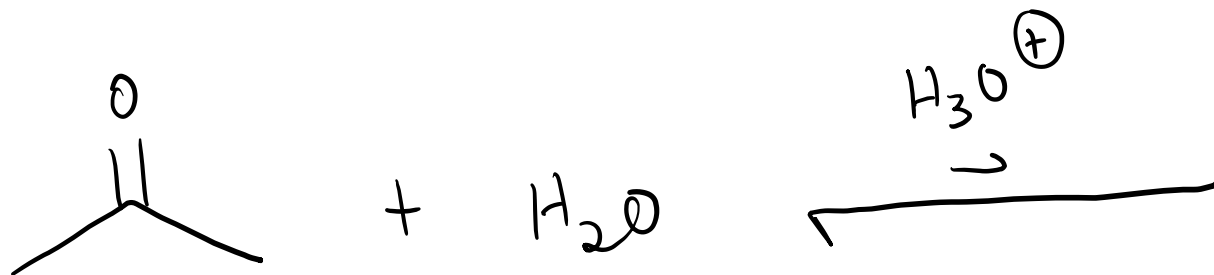
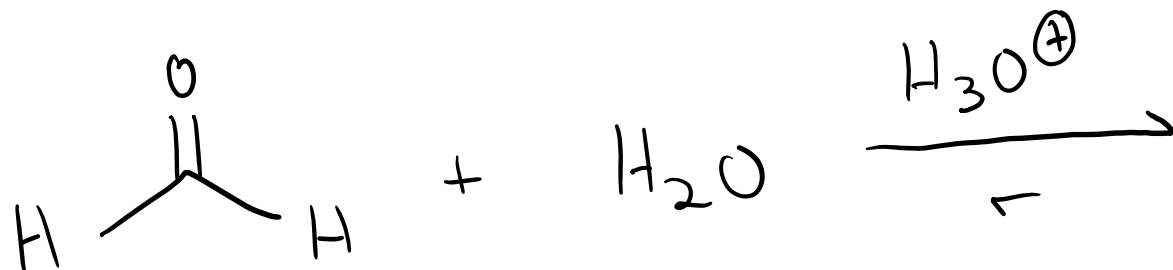


Aldehyde and Ketone Electrophiles
with
Oxygen and Nitrogen Nucleophiles

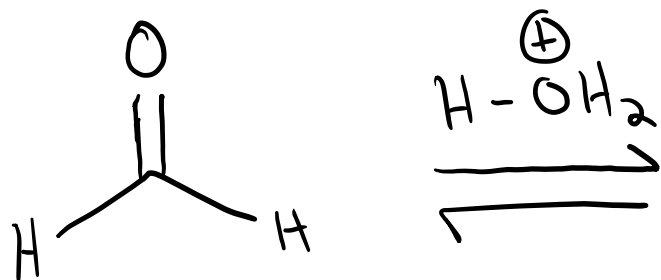
2/6/2023

Oxygen Nucleophiles: Formation of Hydrates (*gem*-diols)

(19.5)

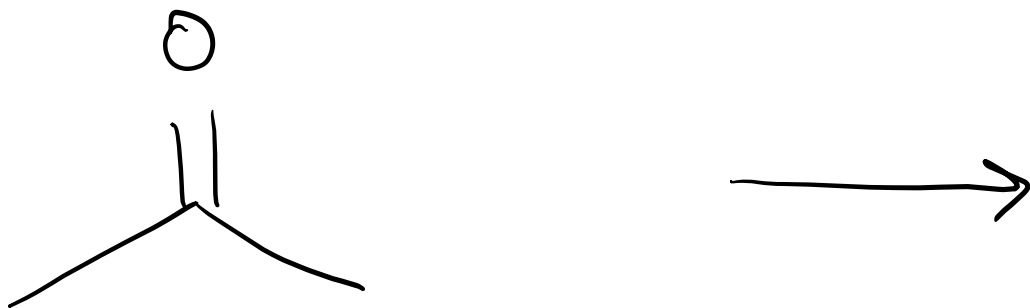
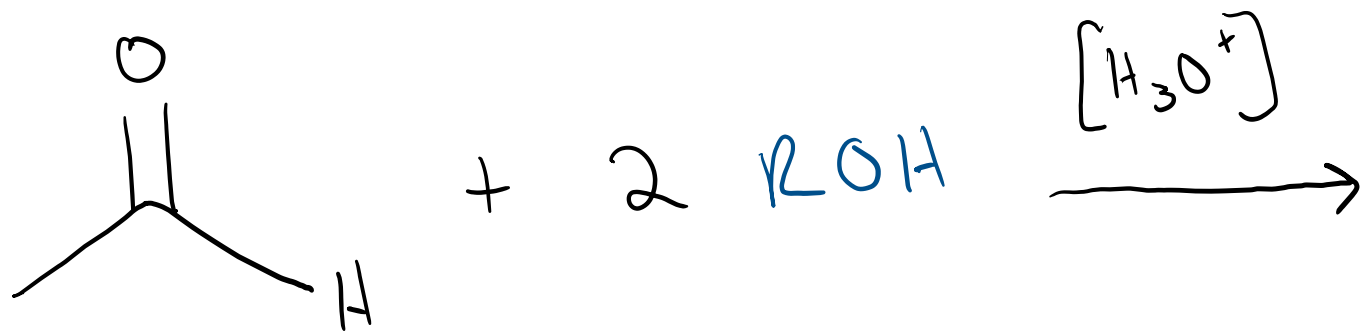


mechanism:



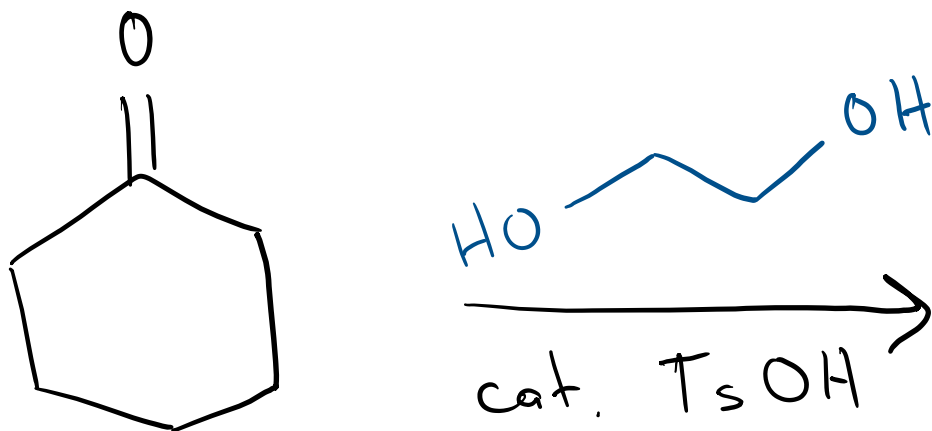
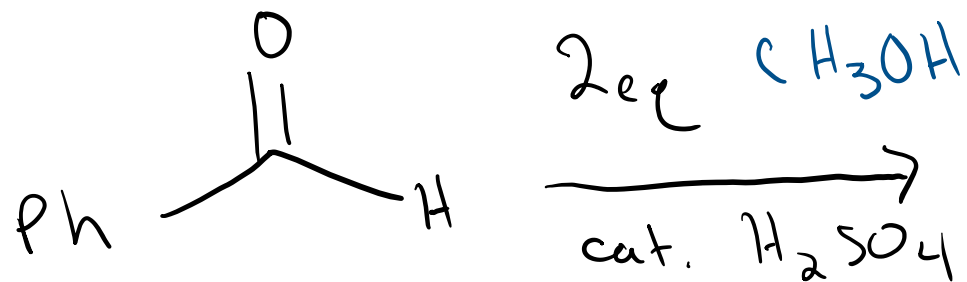
Oxygen Nucleophiles: Formation of Acetals

(19.5)

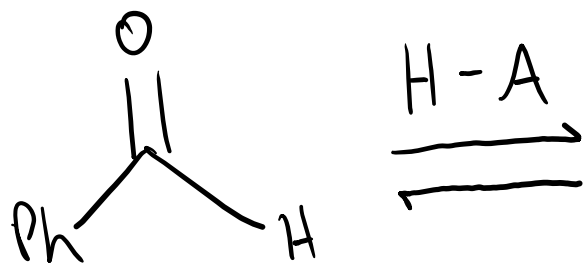


Oxygen Nucleophiles: Formation of Acetals

(19.5)

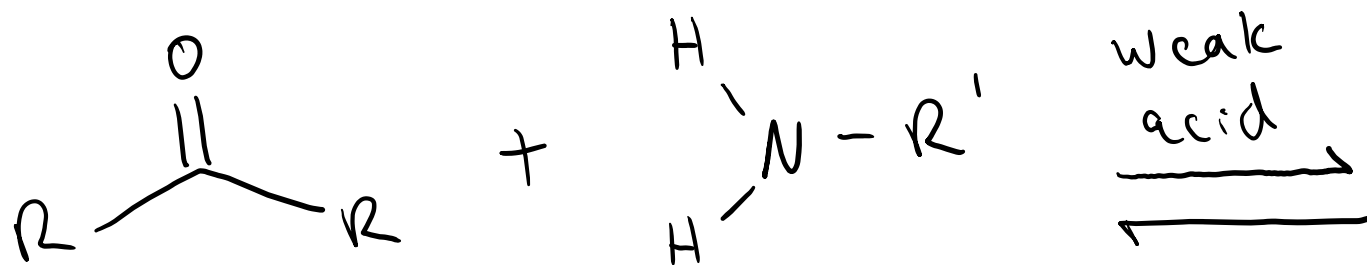


Acetal Formation: Mechanism

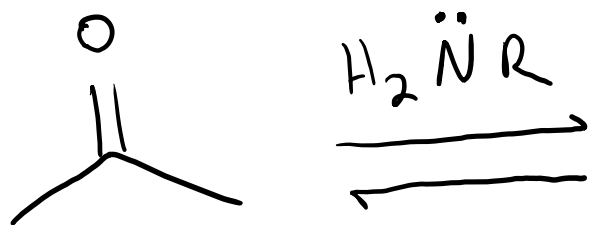


Nitrogen Nucleophiles: 1° Amines

(19.6)



1° Amine Nucleophiles: Mechanism



2° Amine Nucleophiles

