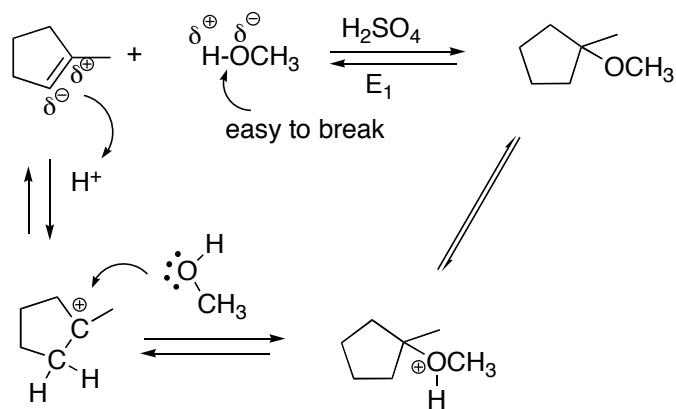
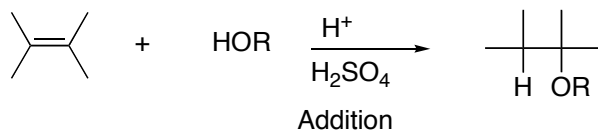
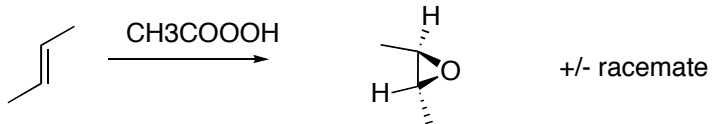
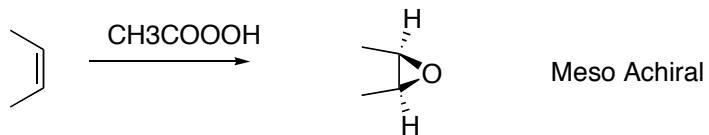
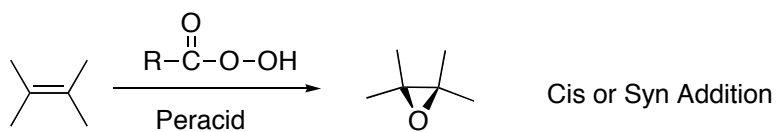
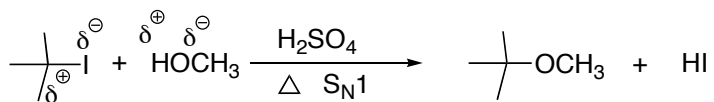
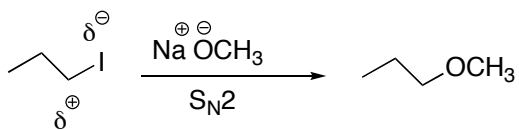


Formation of Ethers**1) From Alkenes**

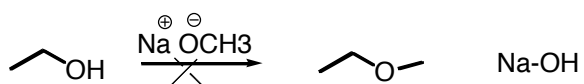
Epoxides



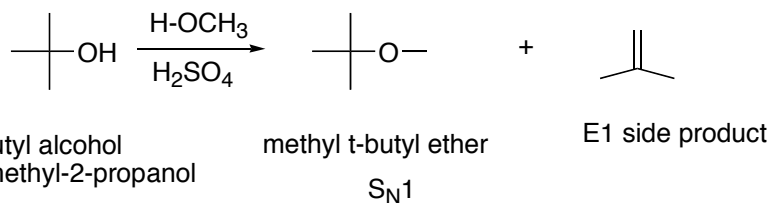
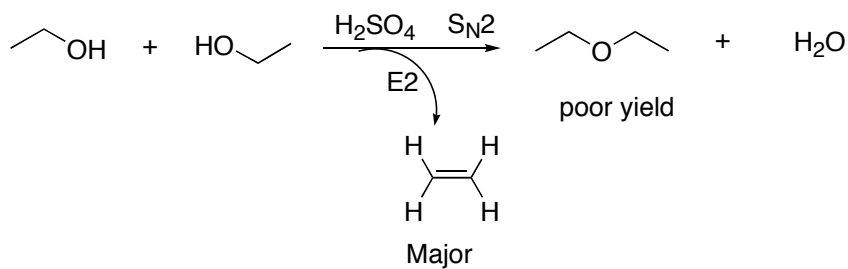
2) From alkyl halides



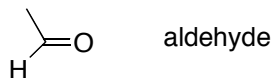
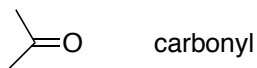
3) From alcohols – only under acidic conditions



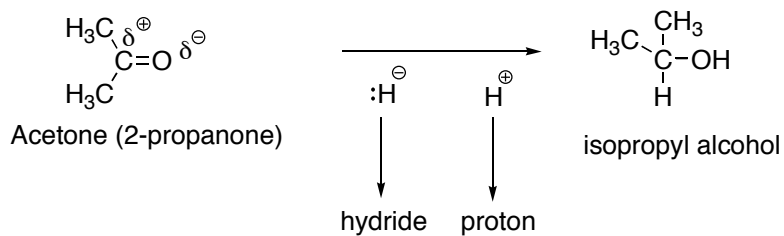
Reaction Fails -OH and -OR are bad leaving groups



Carbonyl Chemistry Introduction

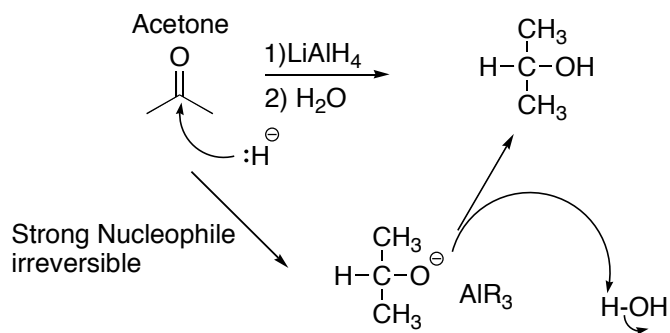
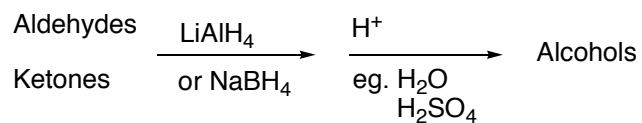
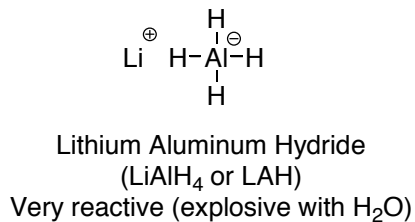
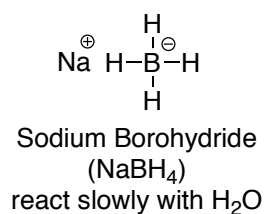


Can do addition reaction

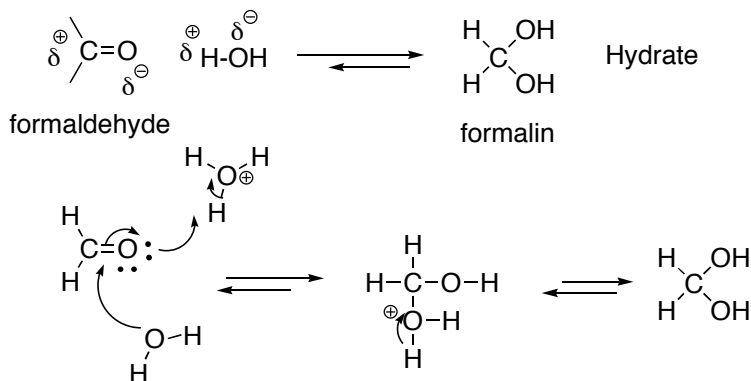


H_2/Pt is difficult

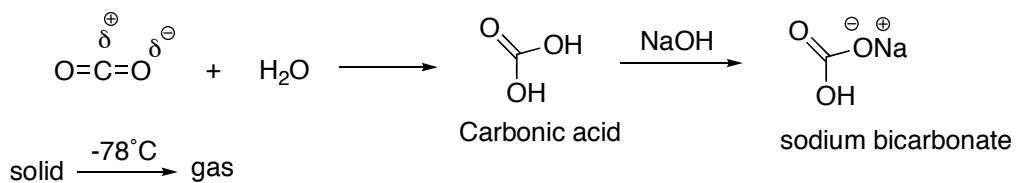
Hydride Donors



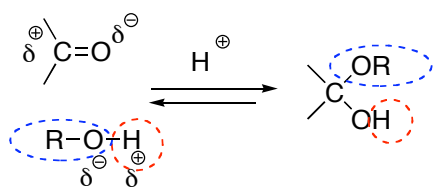
Reversible addition of H-OH and H-OR to C=O of aldehyde and ketone



CO₂ carbon dioxide



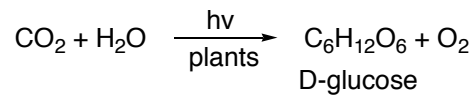
Addition of ROH to carbonyl



Sugars = Carbohydrates = Saccharides

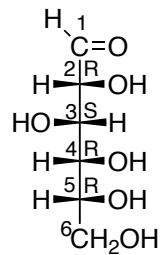
- $C + H_2O$
- $C_NH_{2N}O_N$ is the approximate general molecular formula

Classification:	3C	Triose	Prefix:	H	Aldo-
	4C	Tetrose		C=O	
	5C	Pentose			
	6C	Hexose		C	
				C=O	Keto-
				C	



- 4×10^{11} metric tons of CO_2 fixed
- $h\nu = 0.02\%$ sun's energy on earth used in photosynthesis
- Green Plants perform photosynthesis

D-Glucose:



- groups on horizontal are toward you
- Fischer projection
- Aldo-Hexose