



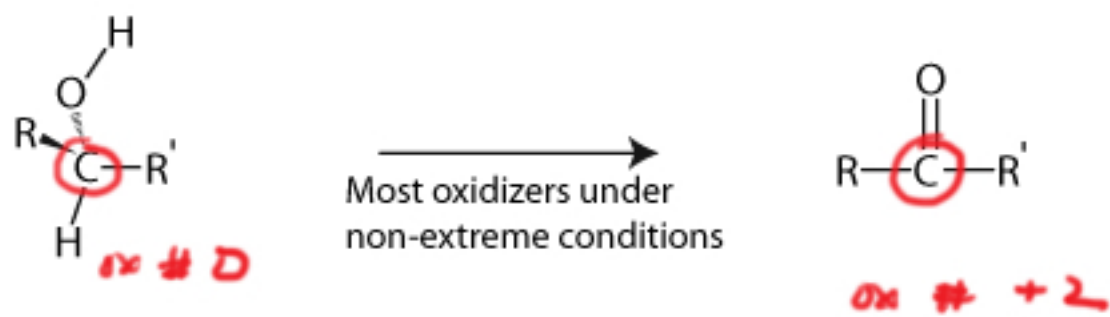
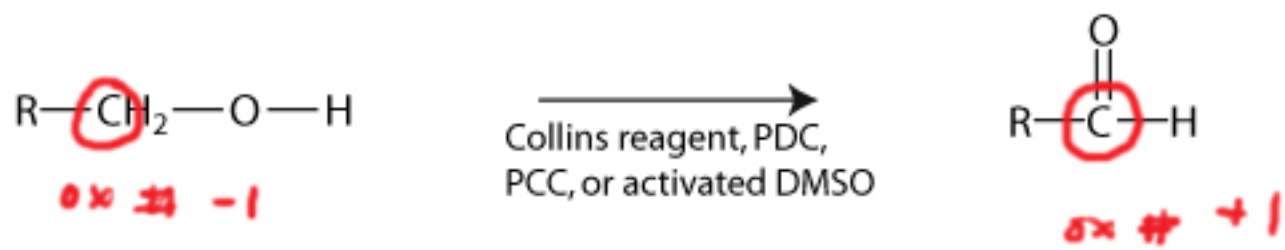
# Reactions of Alcohols

## Session Slides with Notes

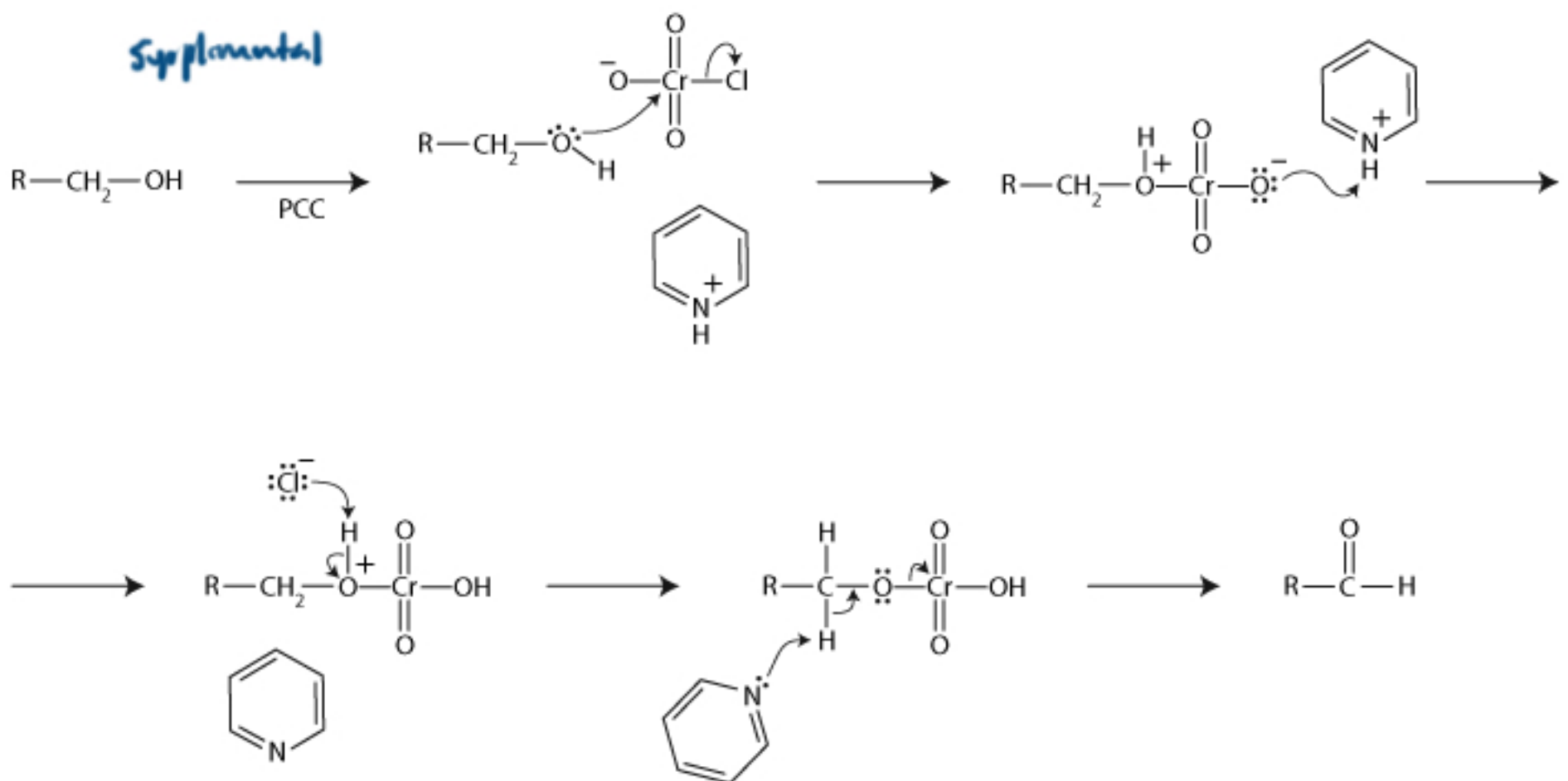
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# Oxidation of Alcohols



Supplemental

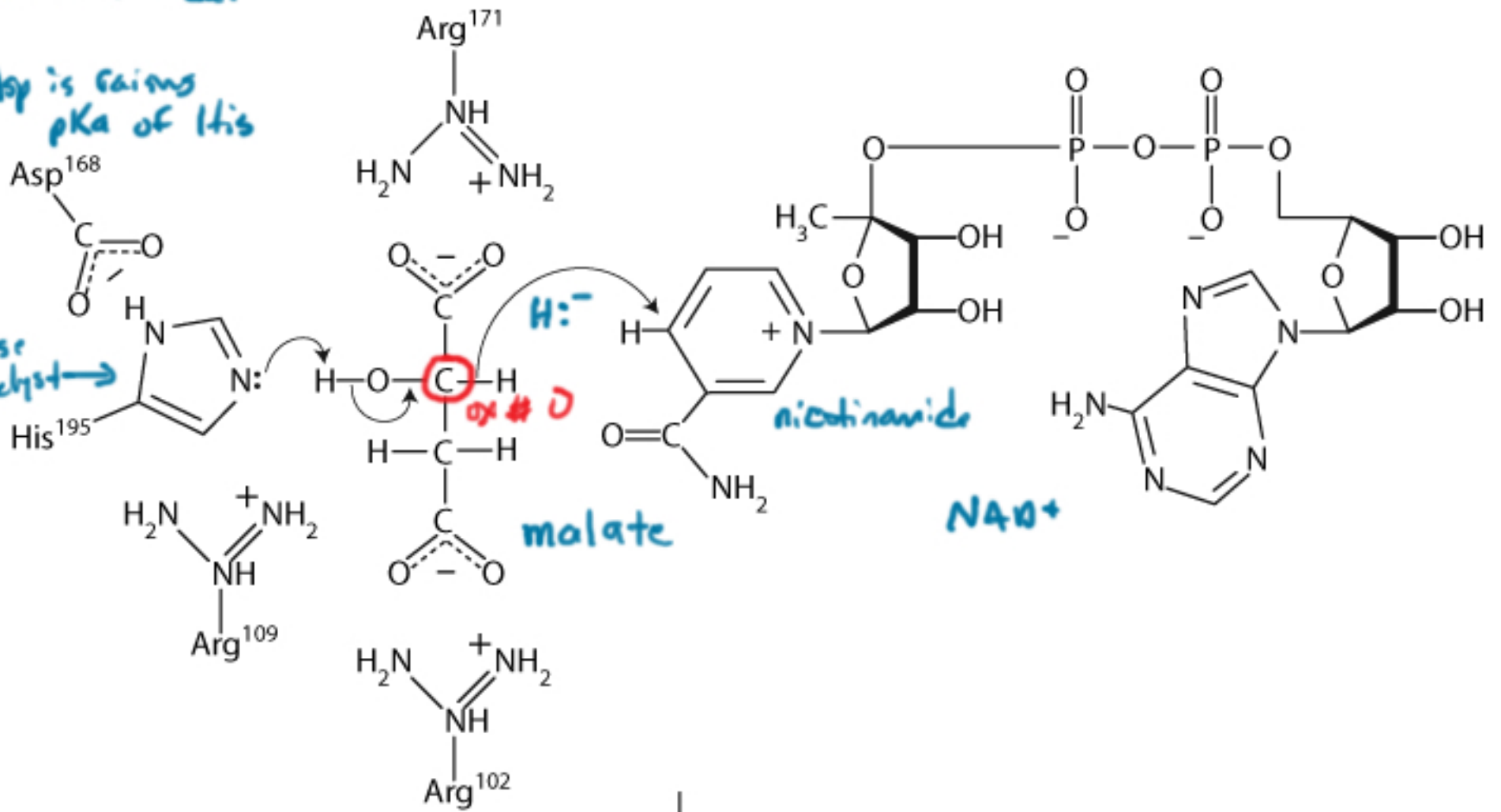


D169A  
would charge Keat

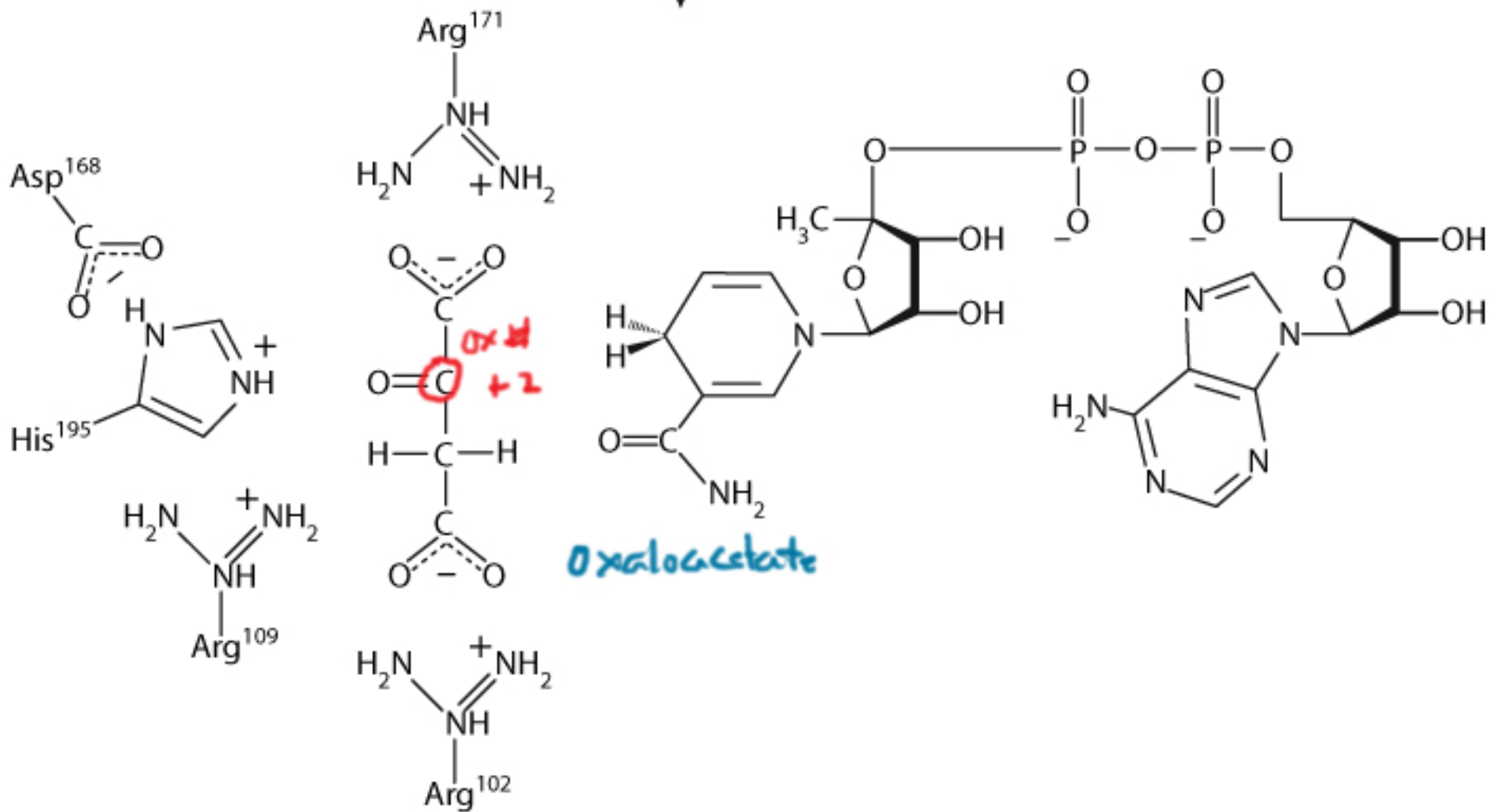
# malate dehydrogenase

Asp is gaining pKa of His

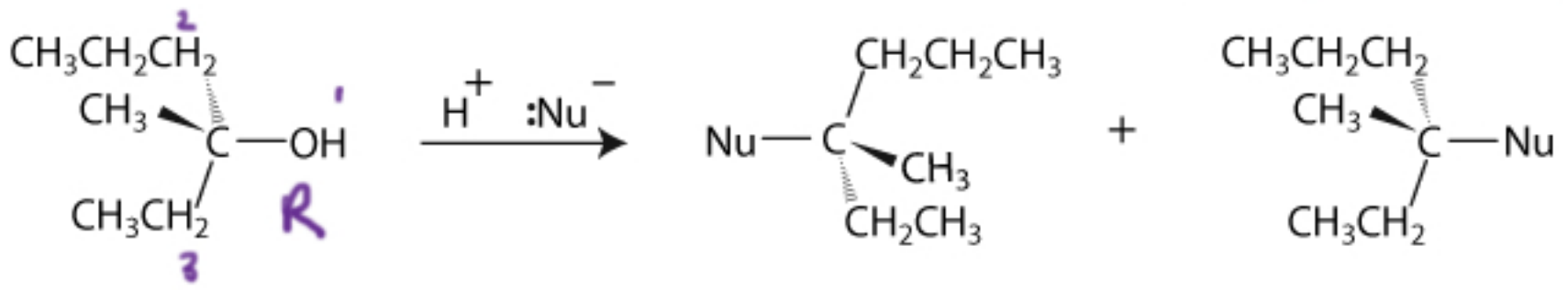
base catalyst →



R102A  
if we substituted with  
an alanine, would charge Keat



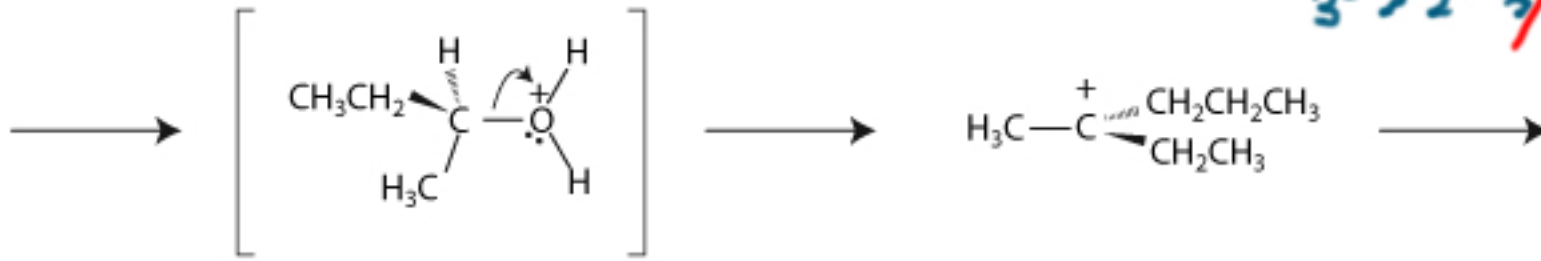
# S<sub>N</sub>1 Substitution



poor leaving group

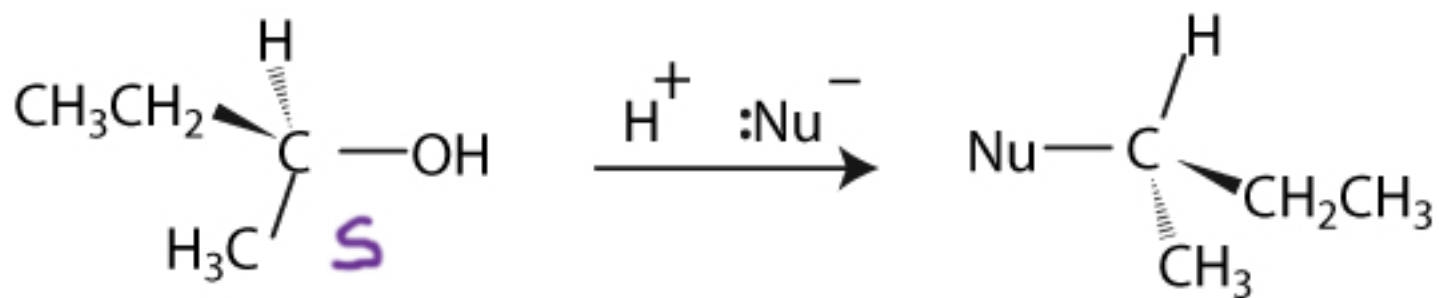


$3^\circ > 2^\circ > 1^\circ$  (might rearrange)



racemic mixture  
(not optically active)

# SN2

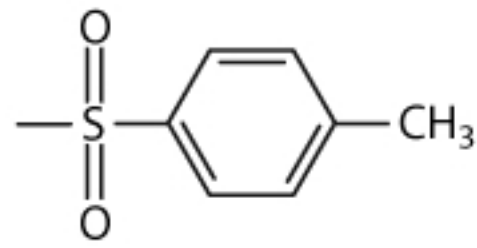
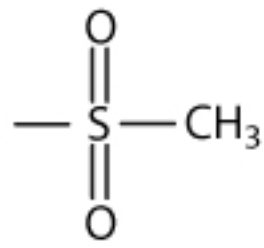


- prefers unhindered nucleophile and substrate
- polar aprotic solvent

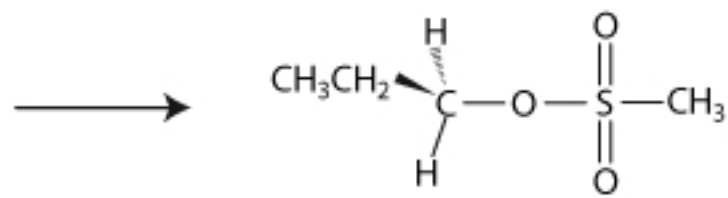
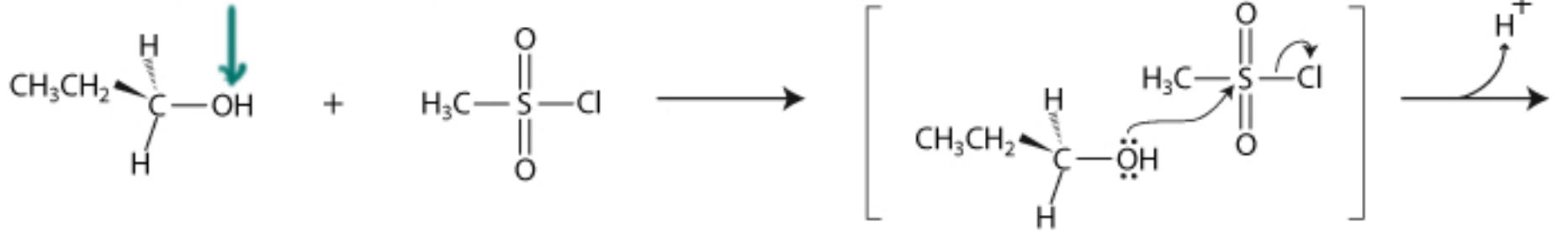


stereospecific for inversion of configuration

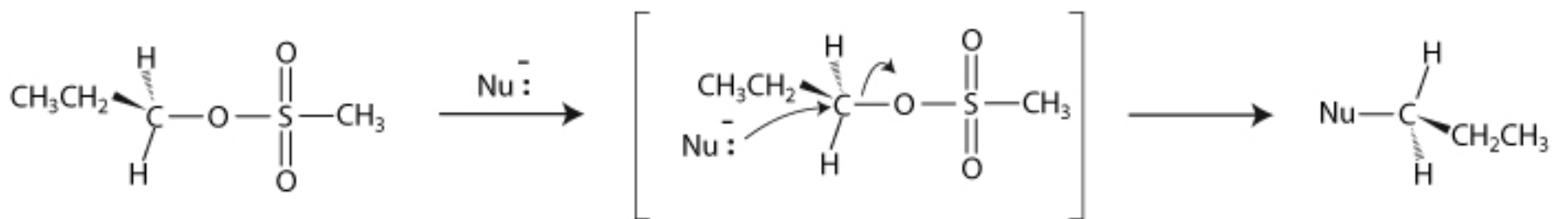
# Mesylyate and tosylate leaving group



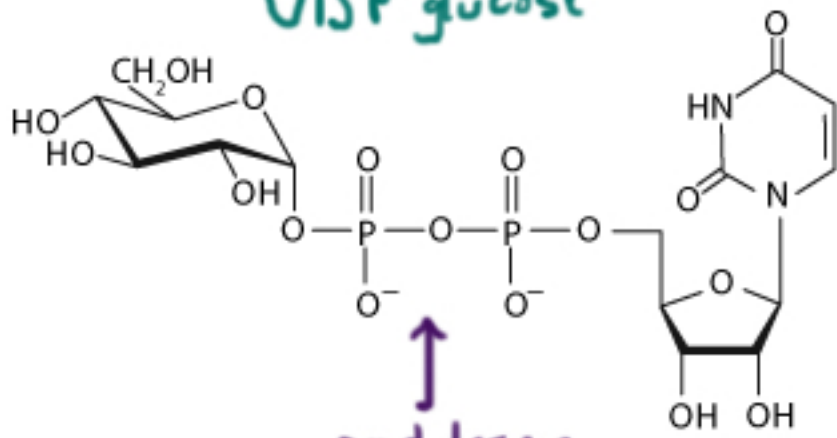
poor leaving group



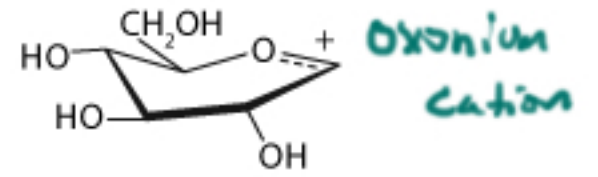
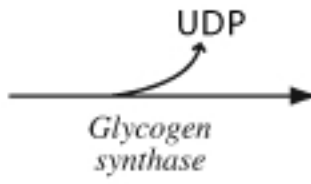
↑  
good leaving group



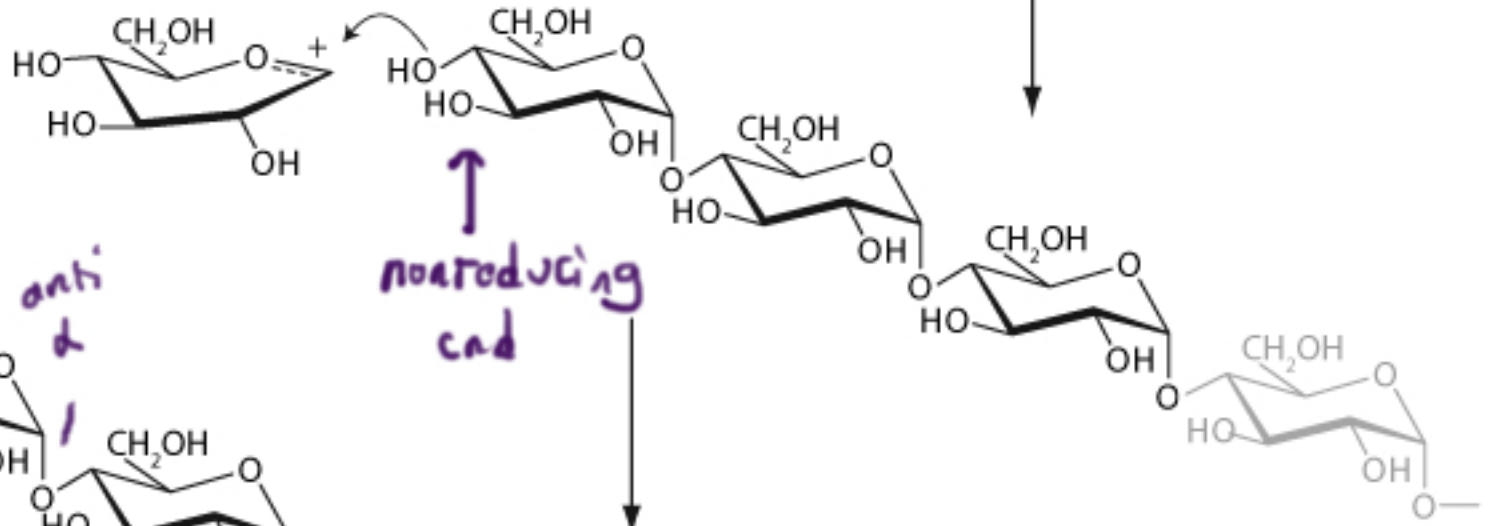
UDP glucose



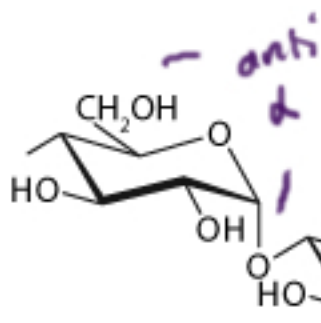
↑  
good leaving group



like step 2 of acetal formation

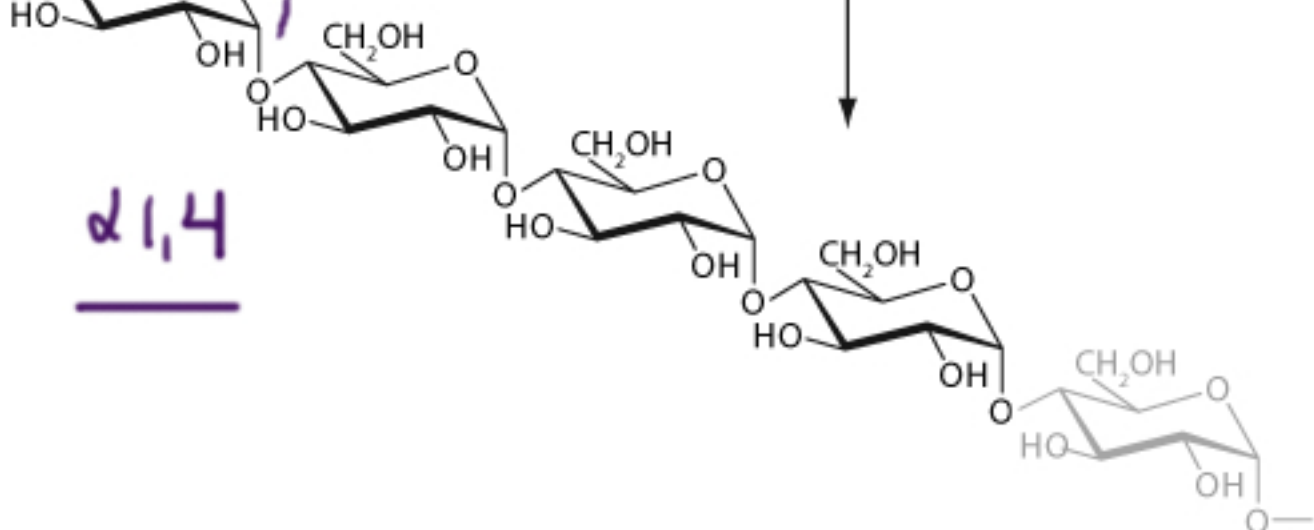


↑  
nonreducing end

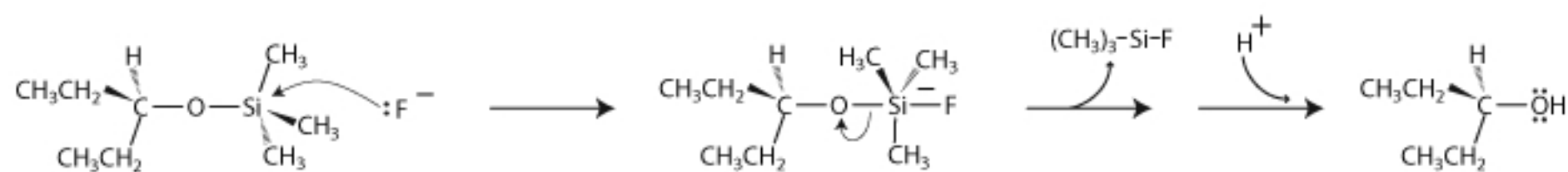
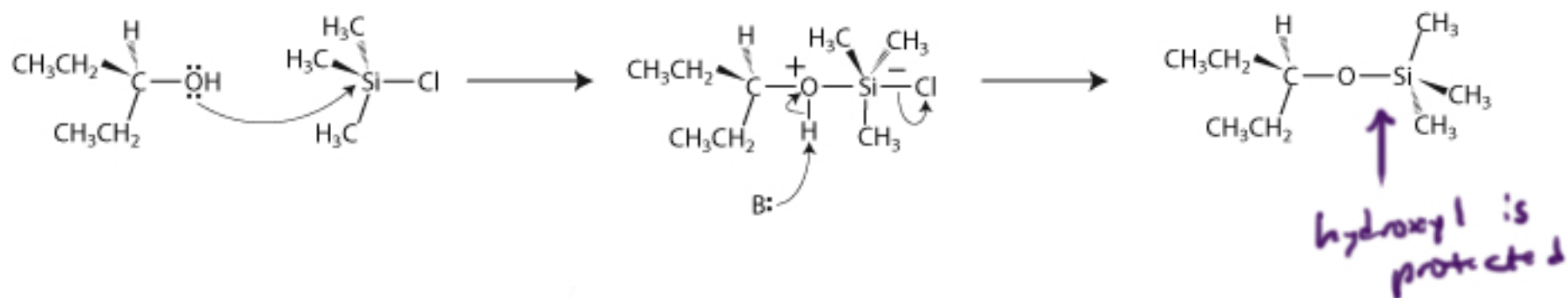
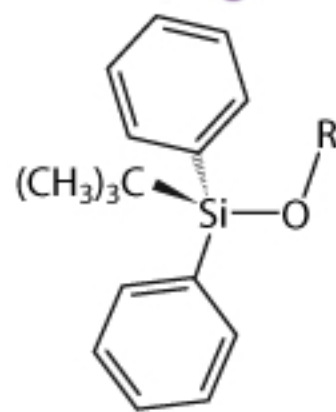
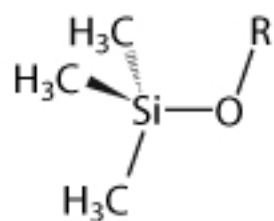


- anti

α1,4



# Silyl Protecting Group





DMT  
↓  
dimethoxytrityl

DMT protecting group

Solid Phase  
DNA Synthesis

