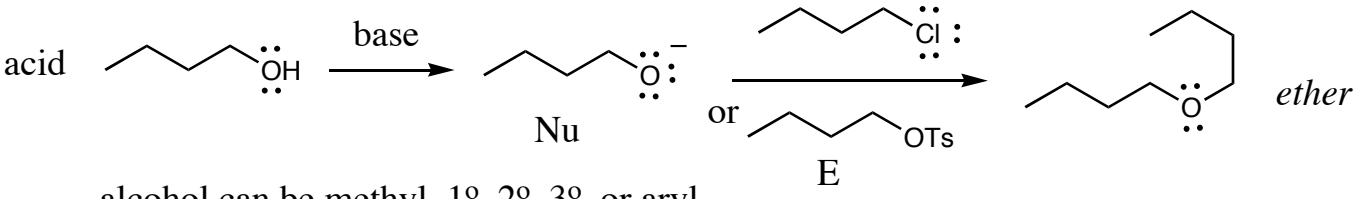
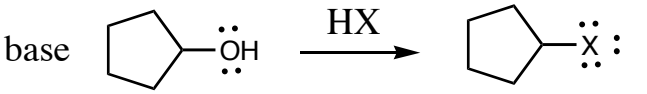
Reaction List - Ch 15
Reactions of Alcohols

Alkoxides reacting as a Nu to form ethers

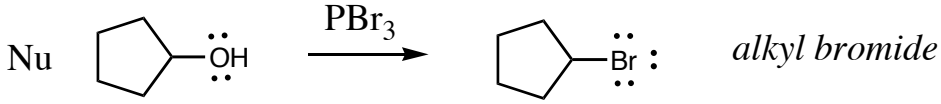


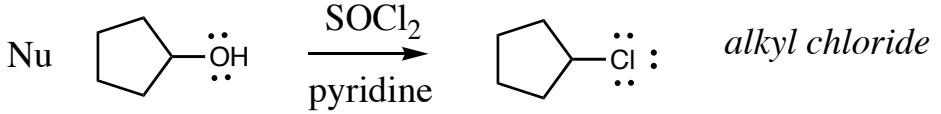
alcohol can be methyl, 1°, 2°, 3°, or aryl
base can be NaH, Na, K, or NaOH as appropriate
alkyl halide or tosylate must be 1° to avoid E2 products

Alcohols reacting as bases or nucleophiles to form alkyl halides



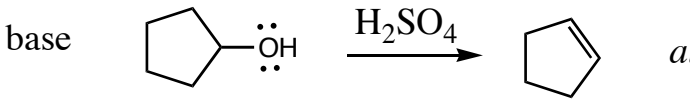
HI, HBr, or HCl may be used; HCl should be accompanied by $ZnCl_2$
alcohols must be 2° or 3° in order to form C+
rearrangements may occur





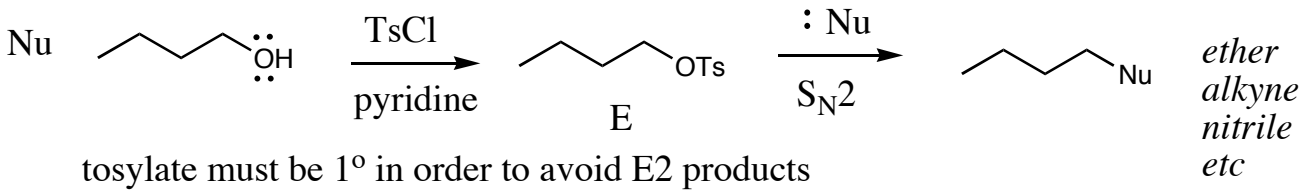
PCl_3, PCl_5, or P/I_2 may be used
alcohol must be 1° or 2° since mechanism contains and S_N2 step

Alcohols reacting as bases to form alkenes



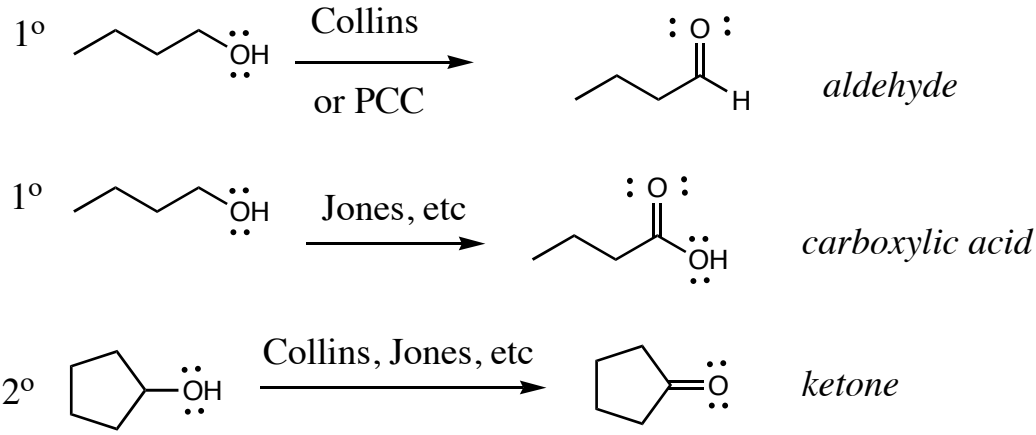
alcohol must be 2° or 3° in order to form C+
rearrangements may occur
constitutional and stereoisomers may form

Tosylates acting as electrophiles to make substitution products



tosylate must be 1° in order to avoid E2 products

Oxidation of alcohols to aldehydes, carboxylic acids, or ketones



Collins = CrO_3, pyridine
PCC = CrO_3, pyridine, HCl
Jones = CrO_3, H_2O, H_2SO_4
etc = Na_2CrO_4 or $Na_2Cr_2O_7$, and H_2O, H_2SO_4
3° and aryl alcohols cannot be oxidized using these methods