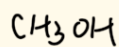
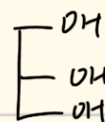


醇 alcohol.

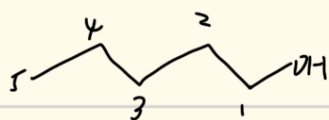
命名

ane $\rightarrow$ anol

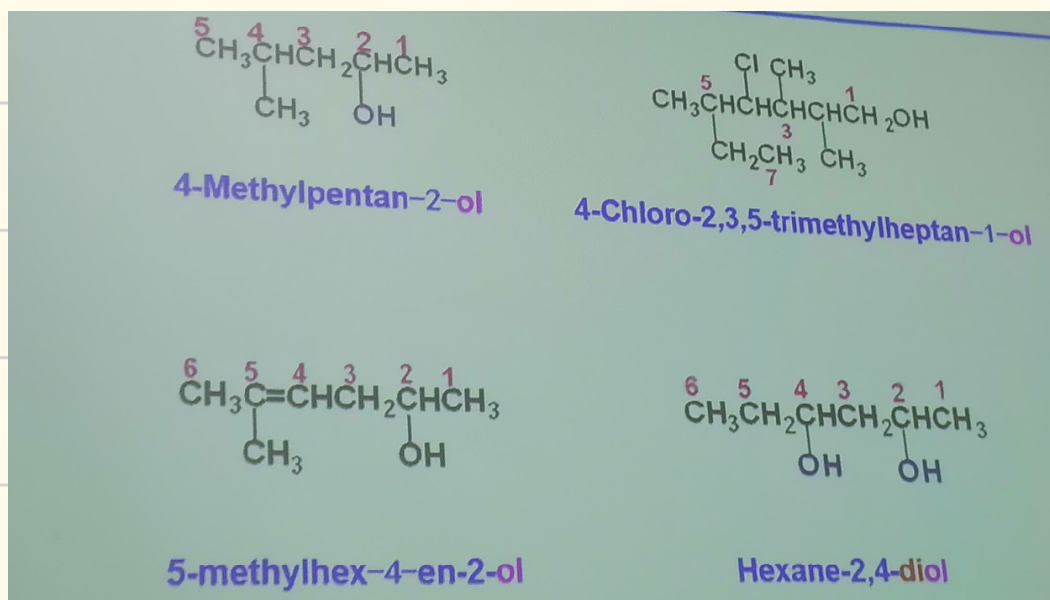
甘: 田 (丙三醇)



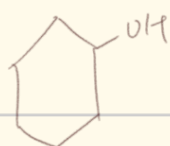
Methanol



pentan-1-ol



醇 $\rightarrow$ 炔 烯



$+ \text{Na} \rightarrow$ ph 显色剂: 碱性

鉴别



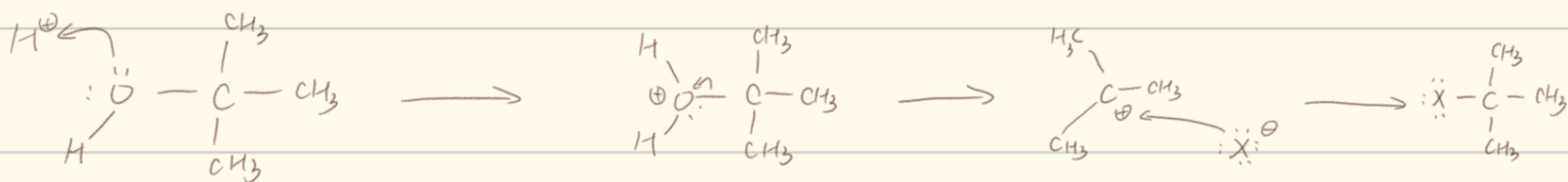
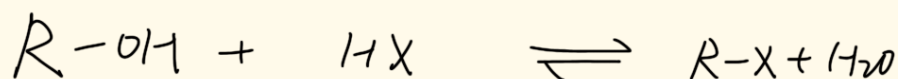
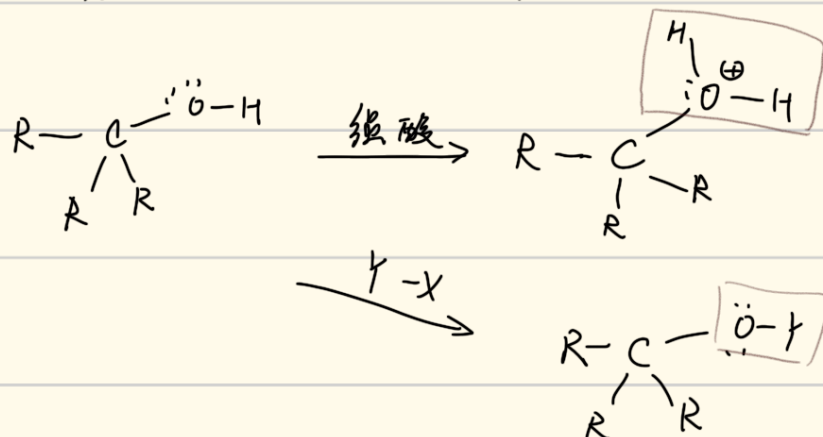
$\xrightarrow{\text{Br}}$ 褪色

$\text{pK}_a:$ $\text{H}_2\text{O} < \text{CH}_3\text{CH}_2\text{OH}$

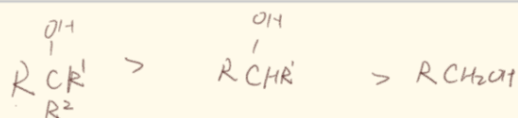
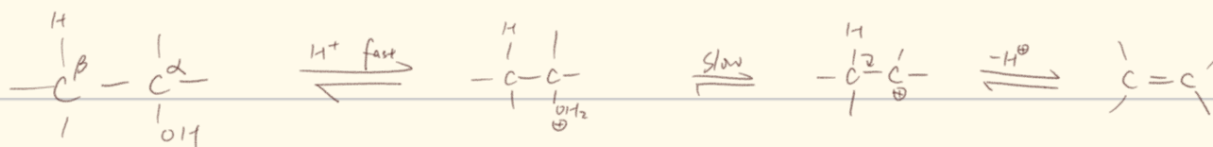
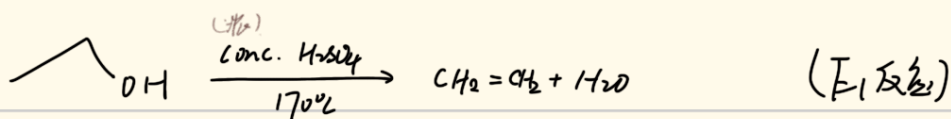
$\text{CH}_3\text{OH} < 1^\circ \text{ROH} < 2^\circ \text{ROH} < 3^\circ \text{ROH}$

1) 合成卤代烷

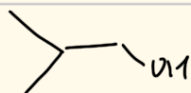
OH 为 差的 离去基团. 所以取代 应先将其转化



2) 消除

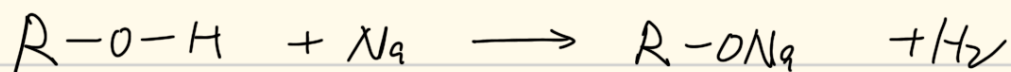


Zaitsev's rule 应用

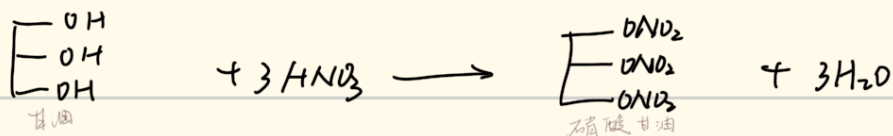
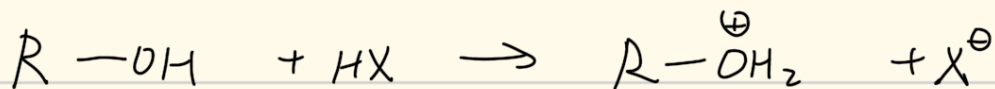


醇

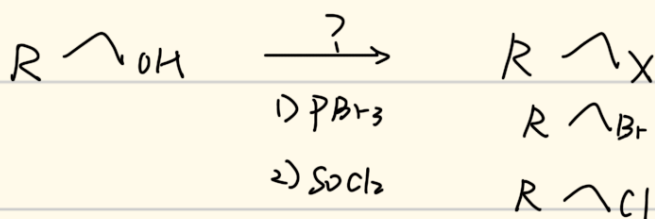
① 与活泼金属反应



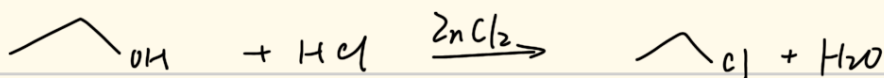
② 与无机酸反应



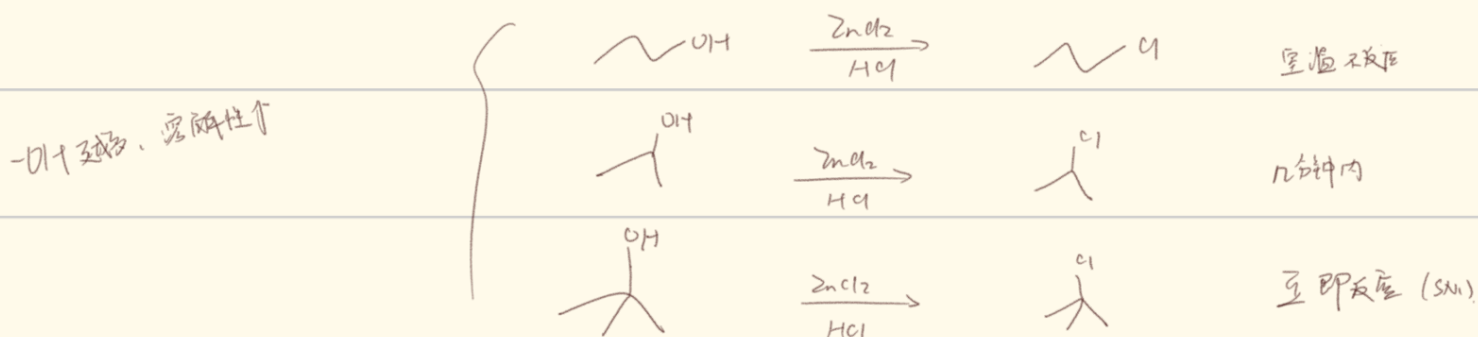
③ 与卤化氢反应



Lucas试剂 ($ZnCl_2 + \text{浓}HCl$) 可将醇 $\rightarrow$ 烷基氯



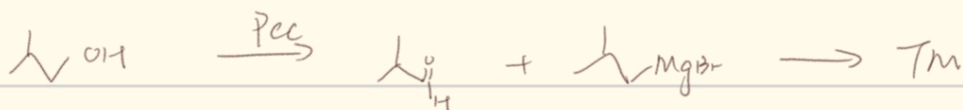
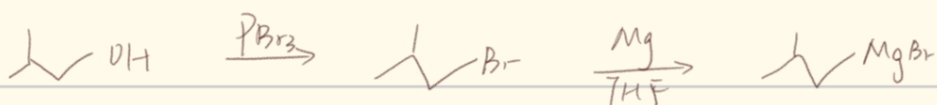
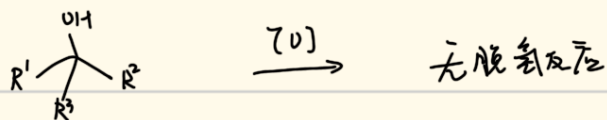
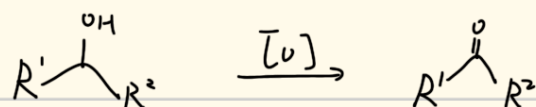
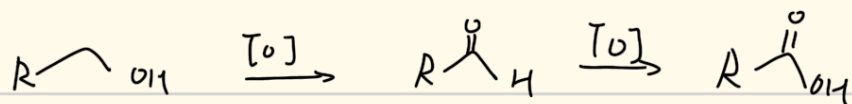
不同结构低级醇 ($C \leq 6$) 与 Lucas 反应速率不同。反应不同醇 生成 ↓



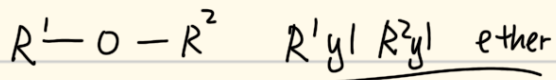
卤代烷鉴别



④ 氧化反应 (TO): KMnO_4 $\text{K}_2\text{Cr}_2\text{O}_7$. PCC . CrO_3

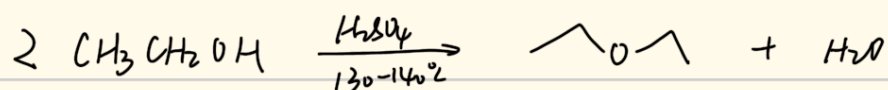


醚



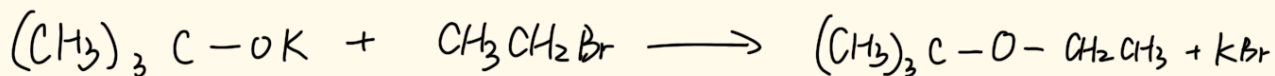
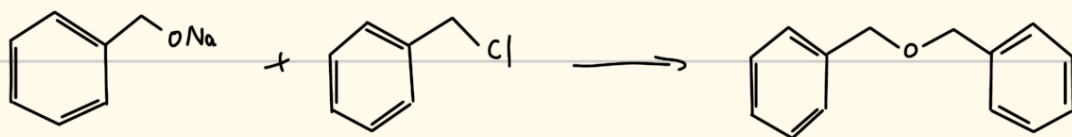
制备:

1) 醇分子间脱水



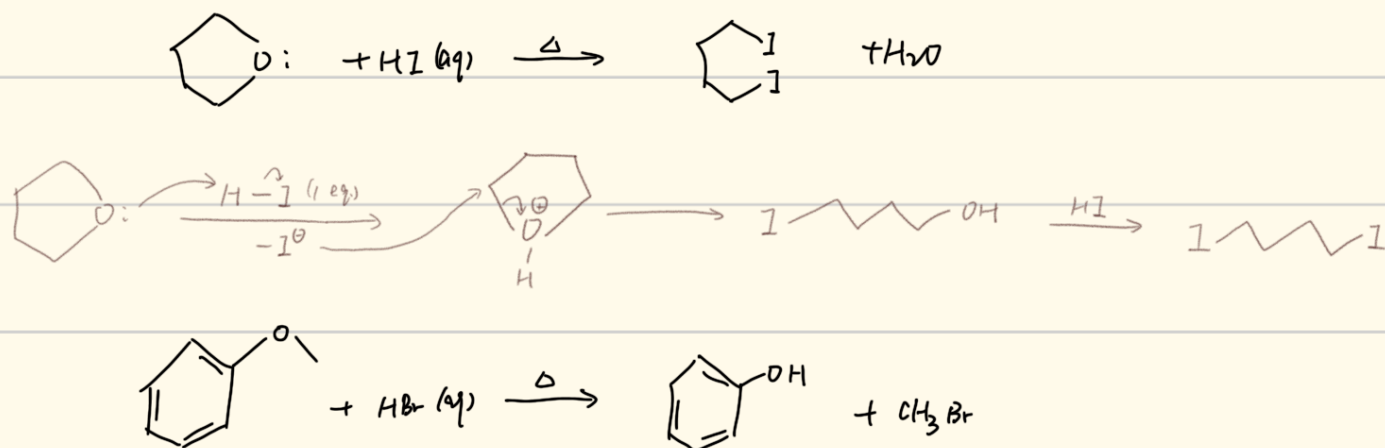
制备对称醚
适用伯醇

2) 醇钠与卤代烃反应 (威廉姆森合成法)

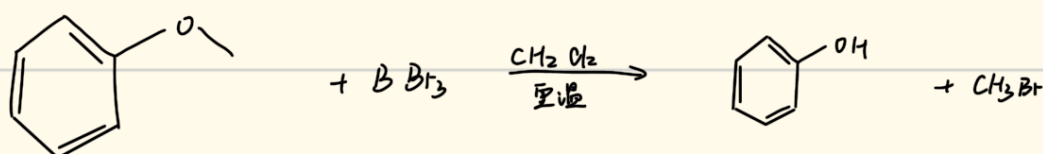


性质

1) 醚键活化使醚键活化, 可发生 S_N1 S_N2 取代

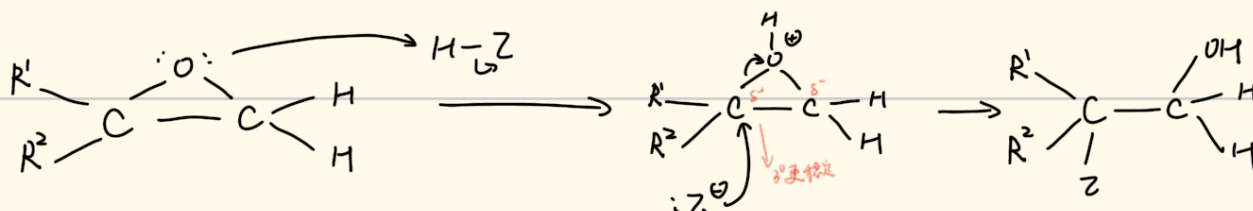


2) 醚与 Lewis 酸反应也会导致醚键裂解



环氧开环

$\rightarrow$ 常为 HCl , HBr , HI , 也可为 H_3O^+ , ROH (酸性)
 1) 酸性, 与 H-Z 开环 — S_N2 (类 S_N1) 机理



2) 碱性 — S_N2 : 位阻主导

