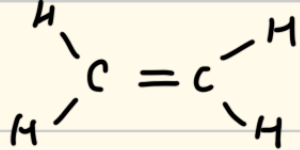
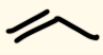


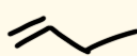
烯



ethene.



propene



but -1-ene.

丁-1-烯



but -2-ene

丁-2-烯



buta-1,3-diene.

多烯加a

烯：6种异构体

$H_2C=CHCH_2CH_2CH_3$ 戊-1-烯 Pent-1-ene	$\begin{matrix} H_3C & & CH_2CH_3 \\ & C=C & \\ H & & H \end{matrix}$ 顺-戊-2-烯 cis-pent-2-ene	$\begin{matrix} H & & CH_2CH_3 \\ & C=C & \\ H_3C & & H \end{matrix}$ 反-戊-2-烯 trans-pent-2-ene
$H_2C=C(CH_3)CH_2CH_3$ 2-甲基丁-1-烯 2-methylbut-1-ene	$H_2C=CHCH(CH_3)CH_3$ 3-甲基丁-1-烯 3-methylbut-1-ene	$H_3CHC(CH_3)=CCH_3$ 2-甲基丁-2-烯 2-methylbut-2-ene

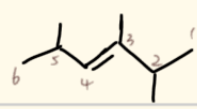
命名：从双键最近地方标



hex-2-ene



2,4-dimethyl hex-3ene



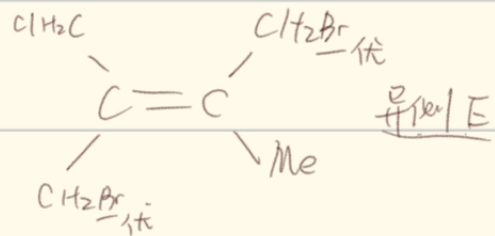
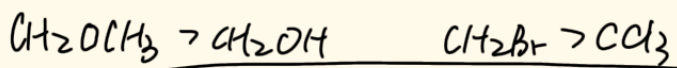
2,3,5-trimethyl hex-3-ene

E Z 标记法

E 式: 较大基团同侧

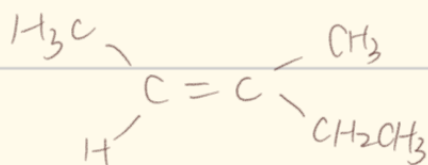
Z 式: 较大基团异侧

次序规则: 原子序数. 大优先. (同元素质量排)

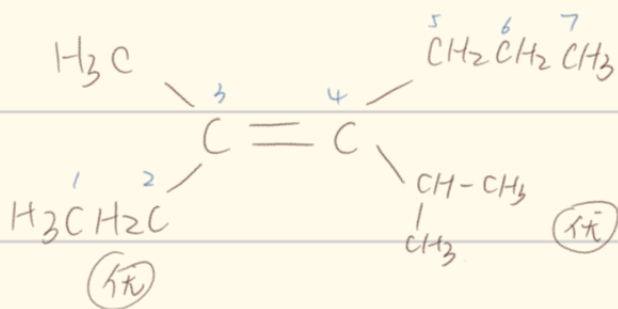


不饱和键中 三键 = 3x 单键

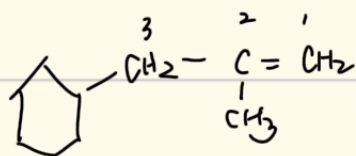
双键 = 2x 单键



(E) - 3-methylpent-2-ene



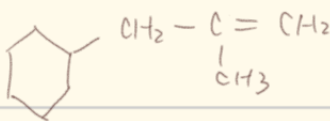
(Z) - 4-isopropyl-3-methylhept-3-ene



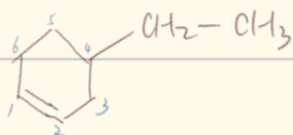
3-cyclohexyl-2-methylprop-1-ene



2,3-dimethylhept-2-ene



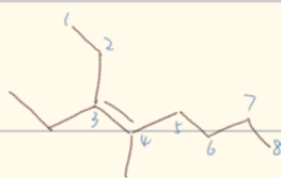
2-methyl-3-cyclohexylprop-1-ene



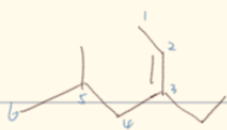
4-ethylcyclohex-1-ene



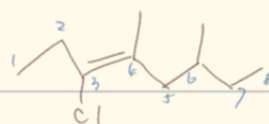
2,3-dimethylhept-2-ene



3-ethyl-4-methyloct-3-ene



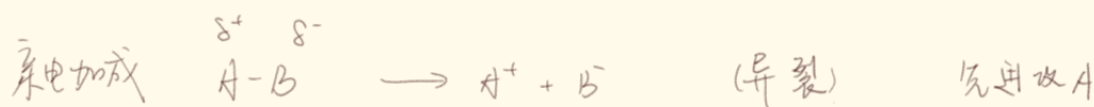
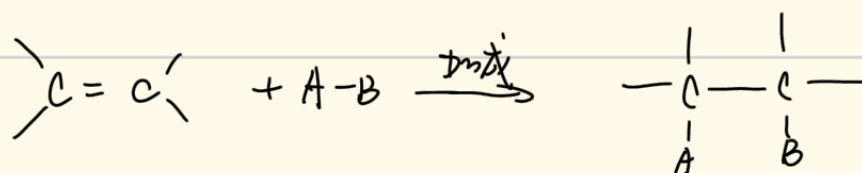
(Z)-3-ethyl-5-methylhex-2-ene



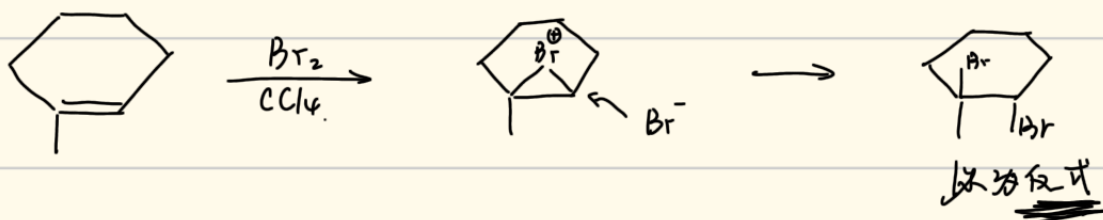
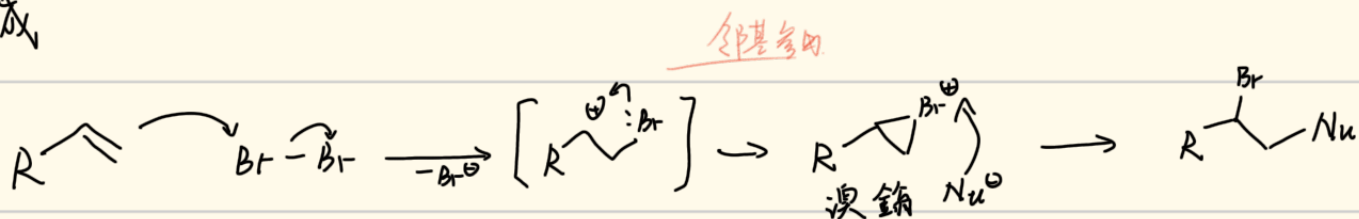
(Z)-3-chloro-4,6-dimethyloct-3-ene

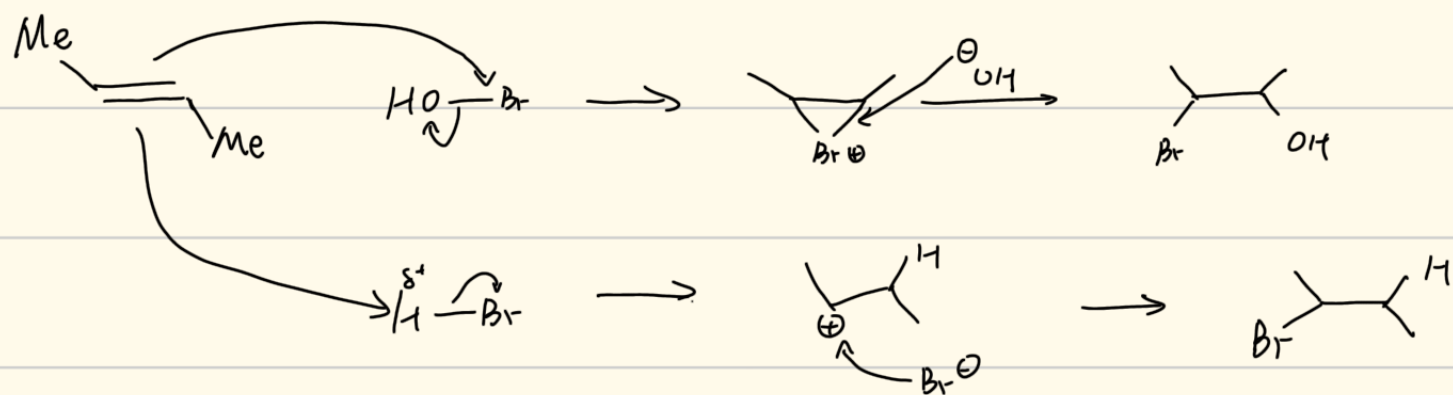
烯烃

1. 加成反应

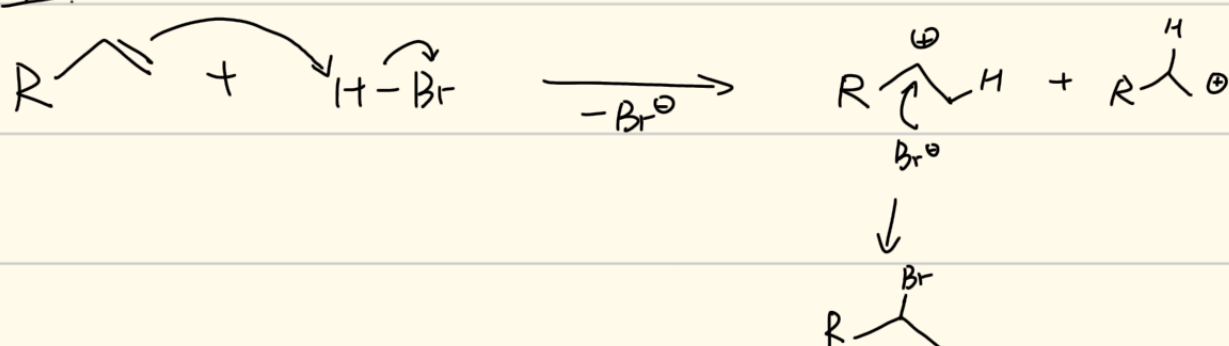


卤素加成

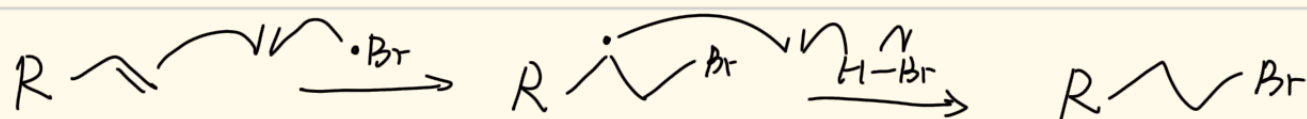
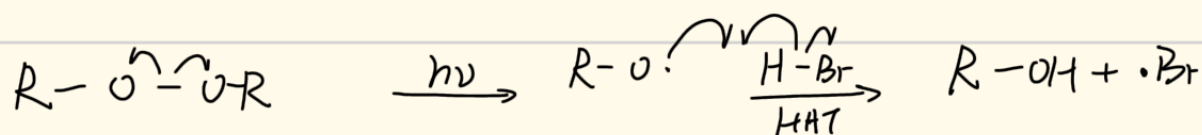
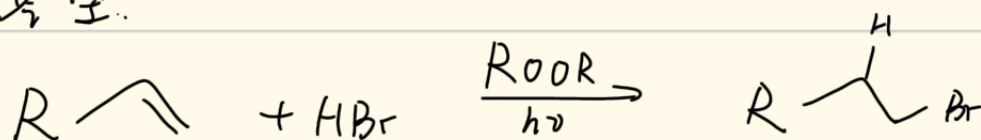




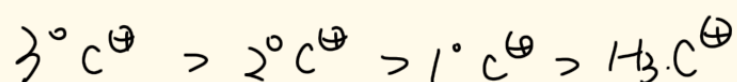
① 离子型



② 自由基型

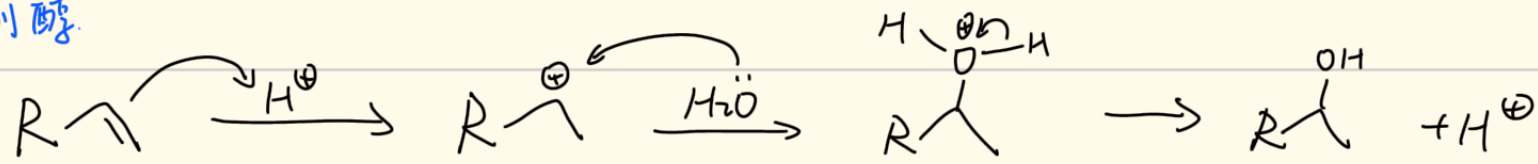


马氏规则：(离子型)

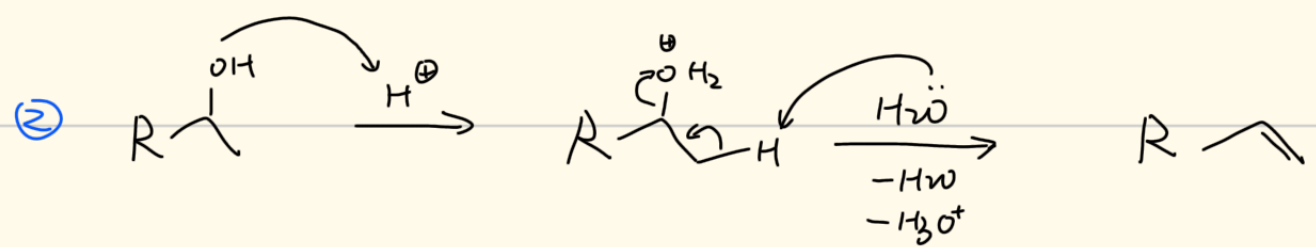
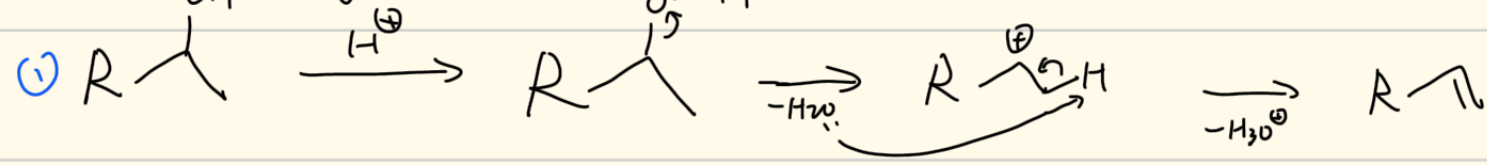


③ 酸催化水合

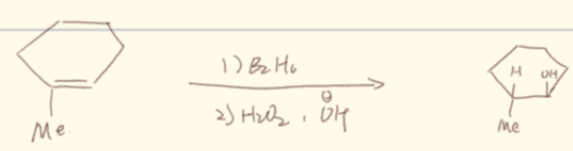
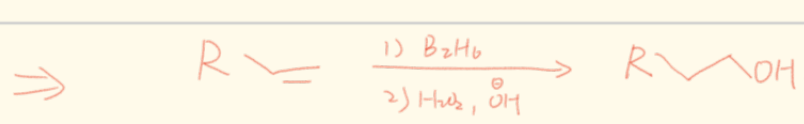
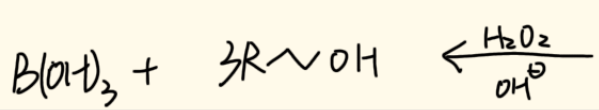
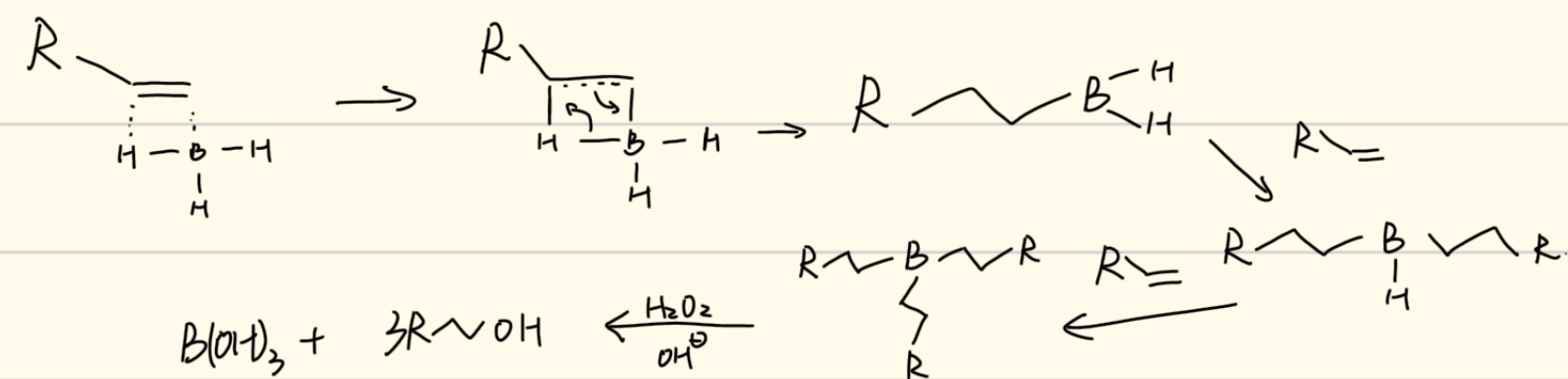
烯制醇



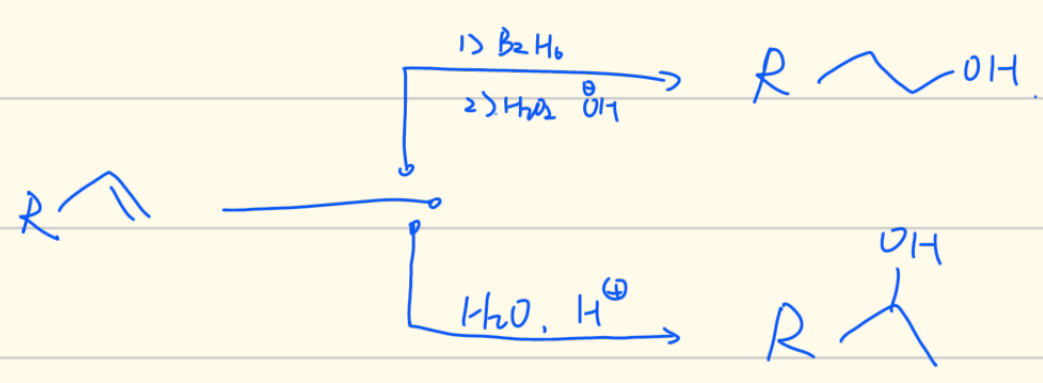
醇制烯



④ 硼氢化-氧化反应

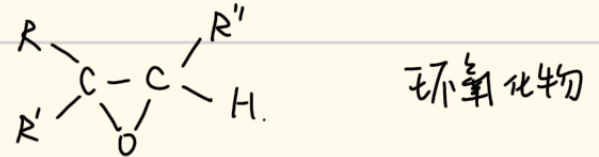
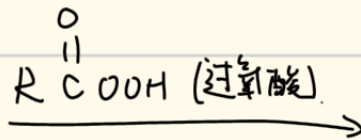
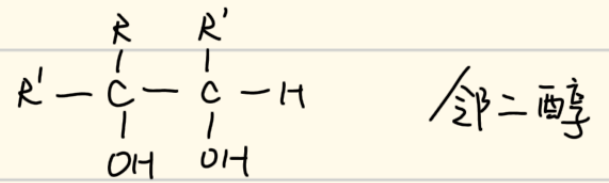
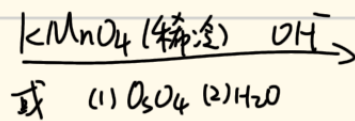
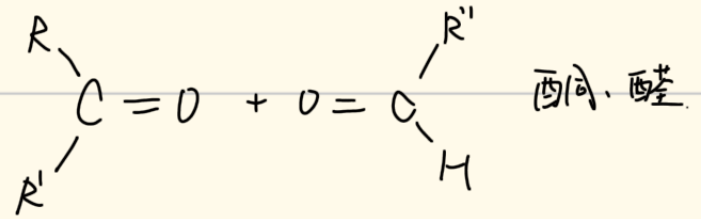
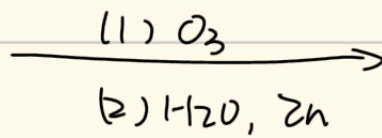
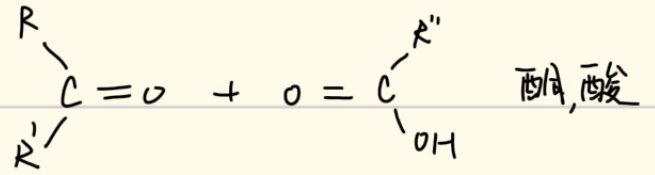
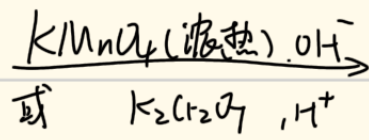
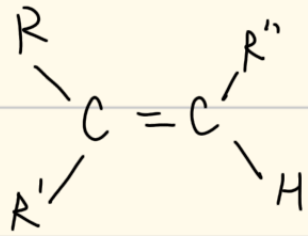
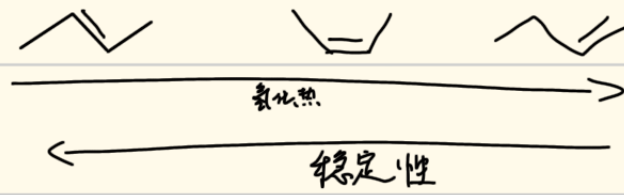


1,2-顺式加成

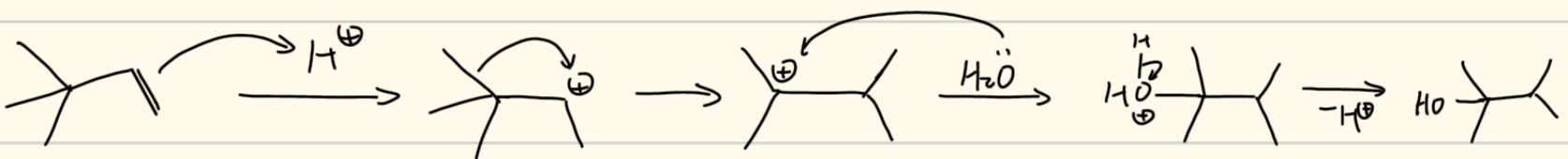
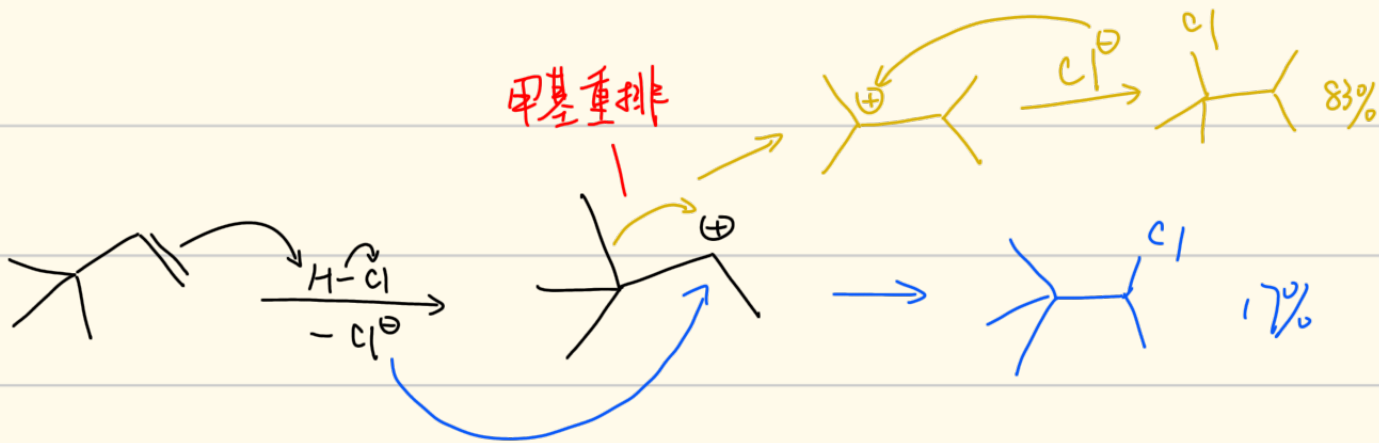


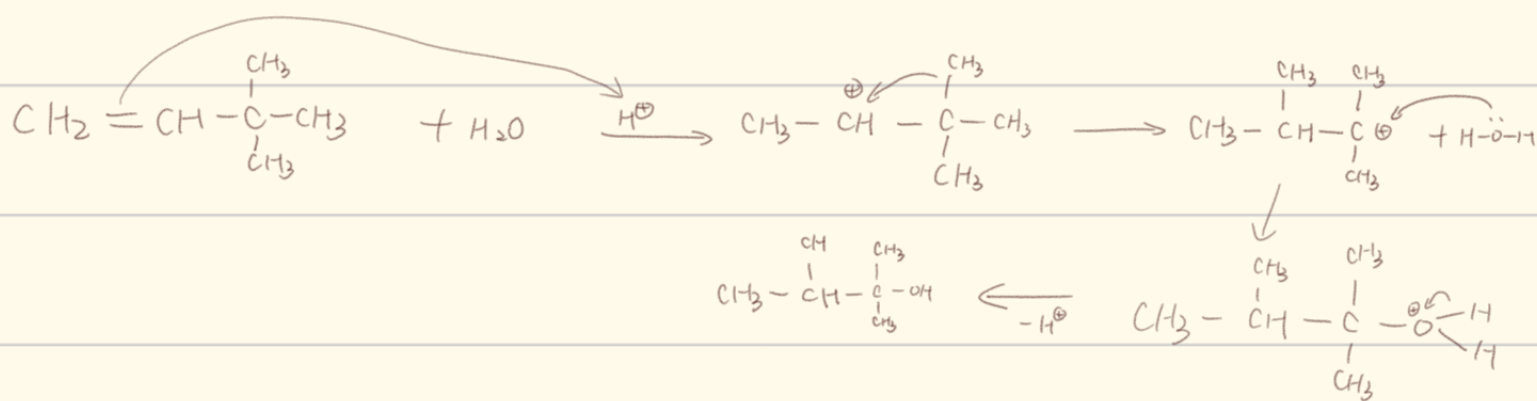
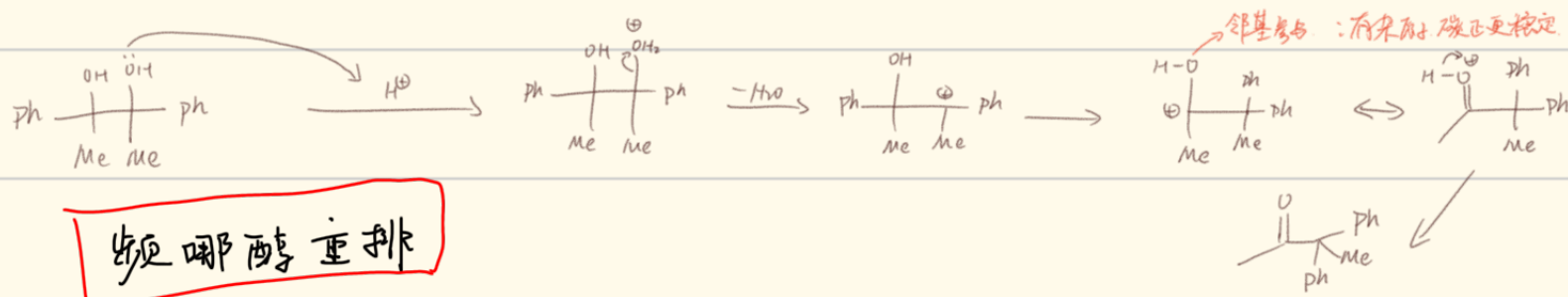
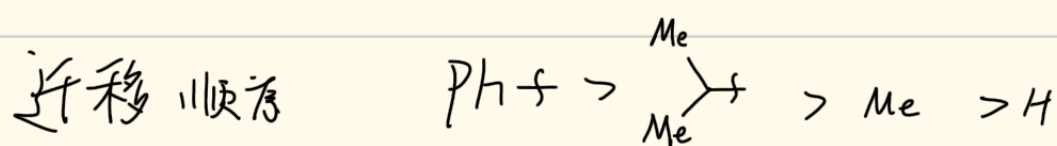
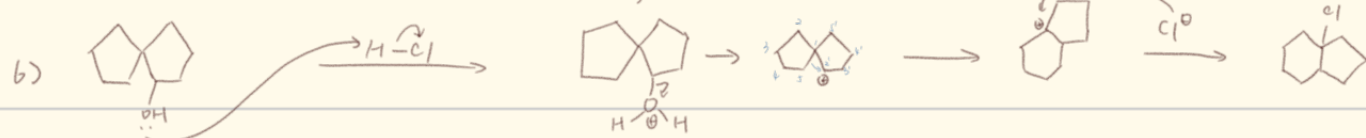
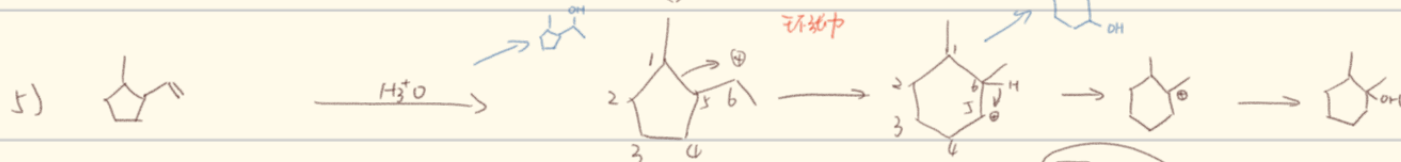
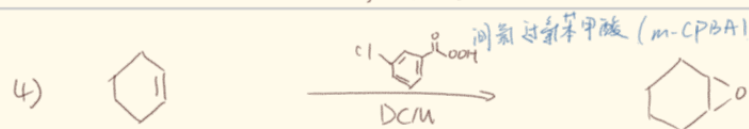
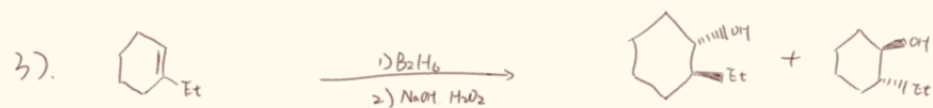
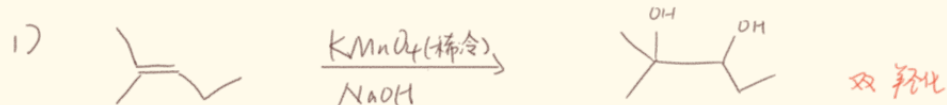
氢化热:

1mol 不饱和烃氧化时放出的能量

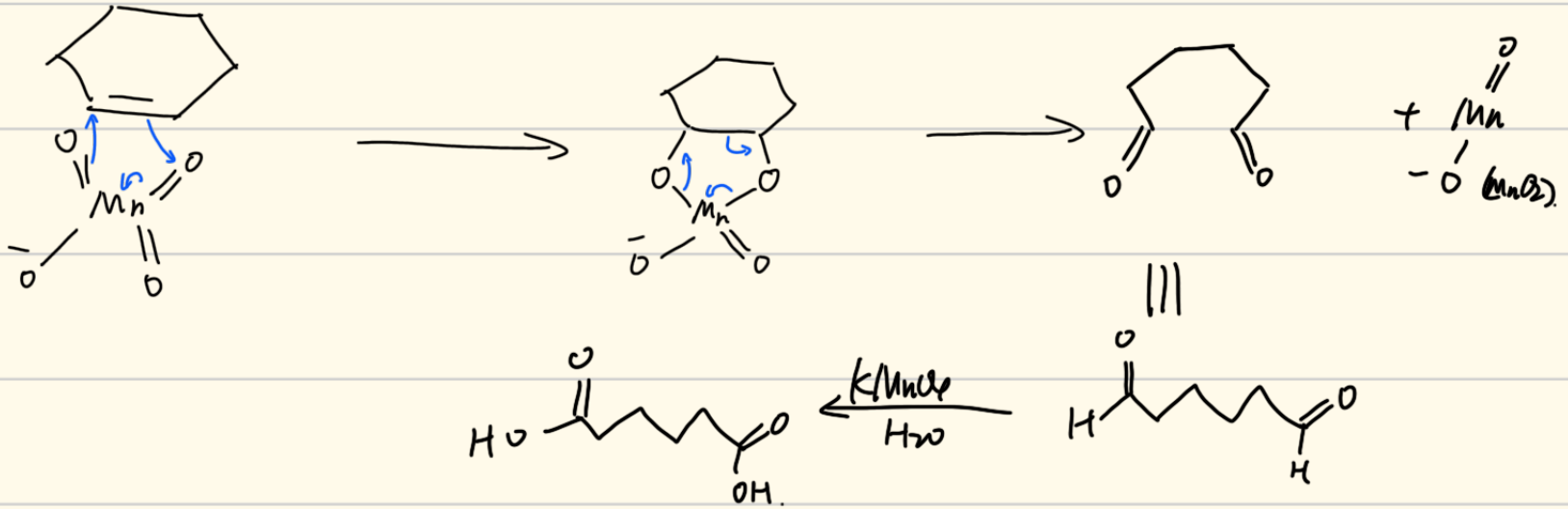


甲基重排

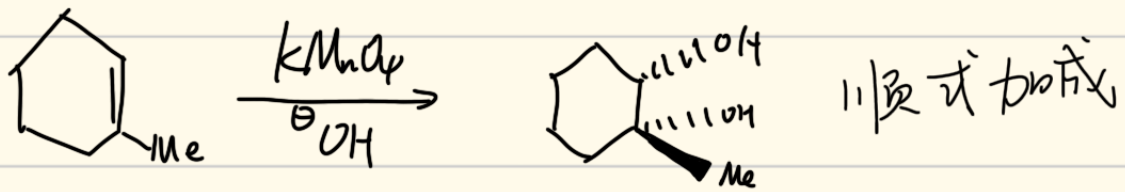




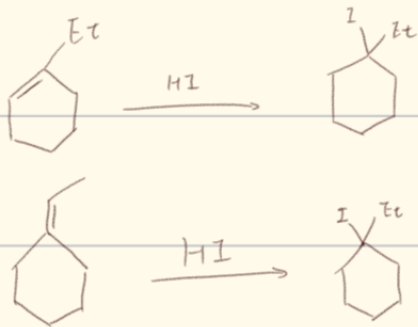
酸性 MnO_4^-



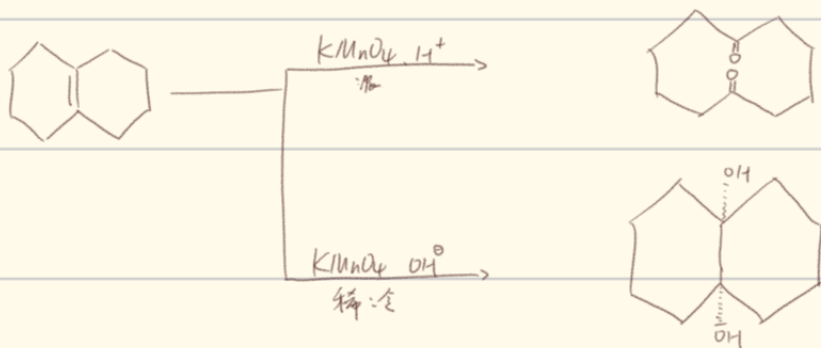
碱性



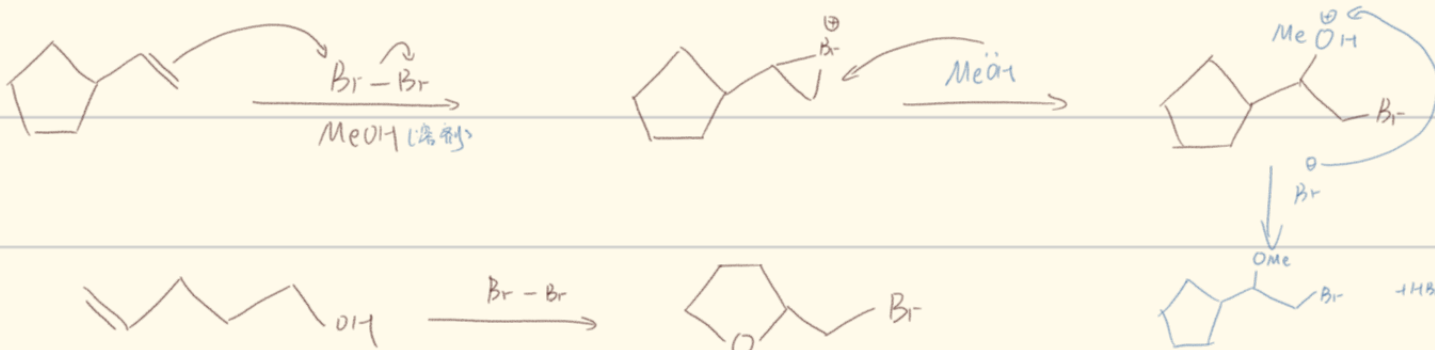
1)



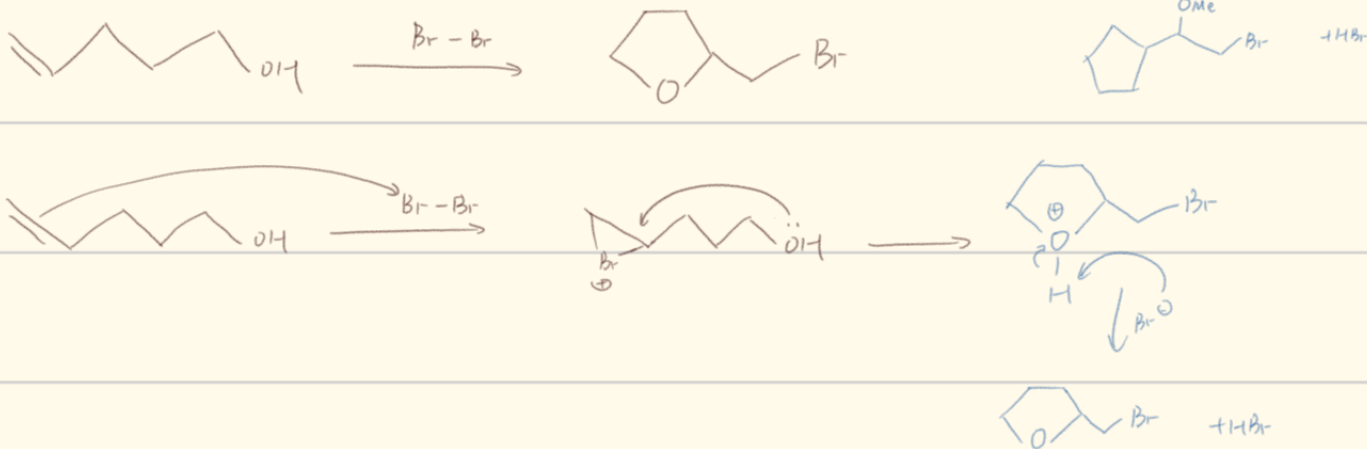
2)



3)



4)



5)

