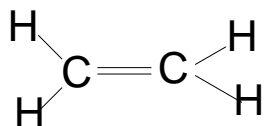


## 第三章 烯烃

### 3.1 烯烃的结构

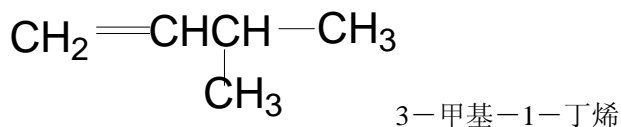
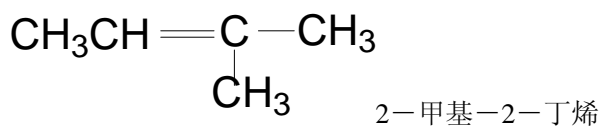
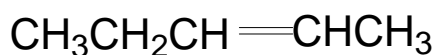
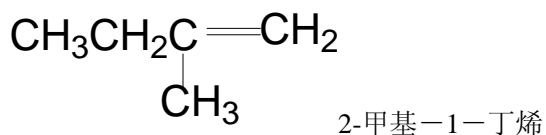
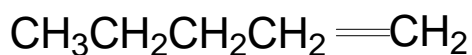


$sp^2$  杂化, 4 个 C-H  $\sigma$  键, 一个 C-C  $\sigma$  键, 一个  $\pi$  键。由于  $\pi$  键不能旋转, 顺反异构。  
 $\pi$  键能比较小, 易于极化。

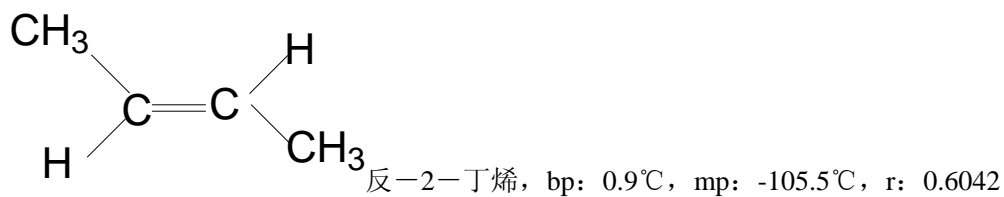
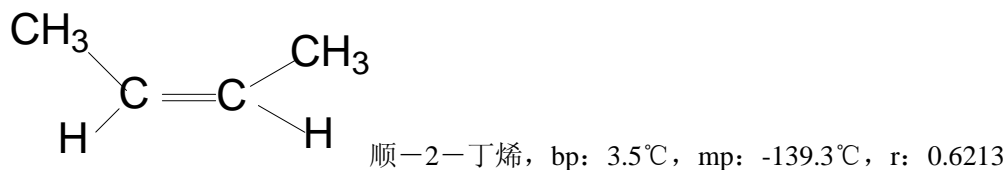
### 3.2 烯烃的同分异构和命名

1. 构造异构: 碳链异构和双键的位置异构。通式  $C_nH_{2n}$

例如:



2. 顺反异构: 由于双键旋转受阻, 构造相同的分子中的原子在空间排列方式的不同所造成的异构现象。

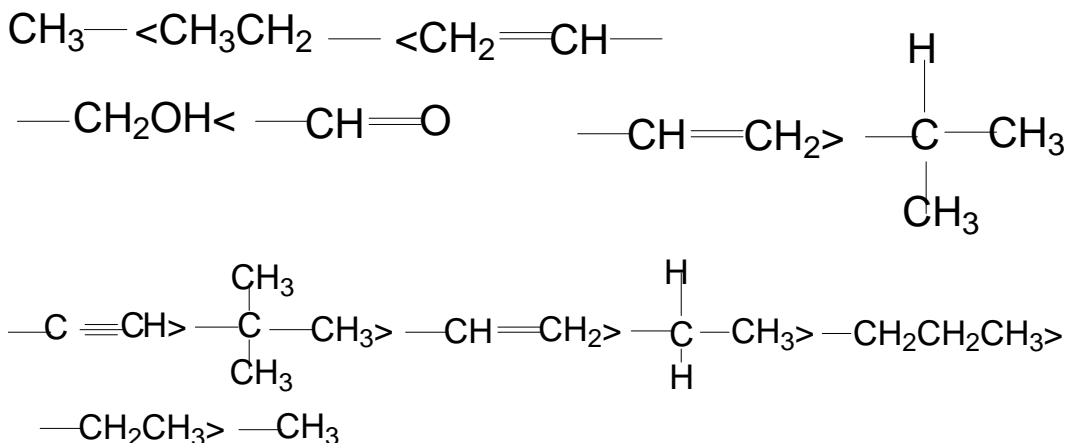


思考: 1-丁烯和 2-甲基丙稀 有顺反异构吗?

二.命名



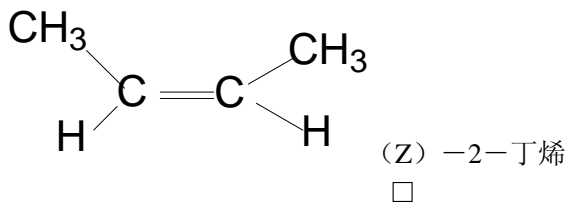
按原子序数排列（于双键相连的原子）I>Br>Cl>S>P>O>N>C>D>H，如直接相连的原子相同，在比较第二个原子，依次外推。



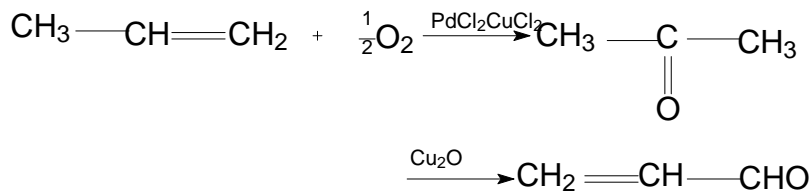
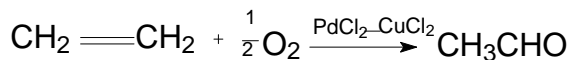
(2) Z, E 命名

优先原子或基在同一侧为 Z

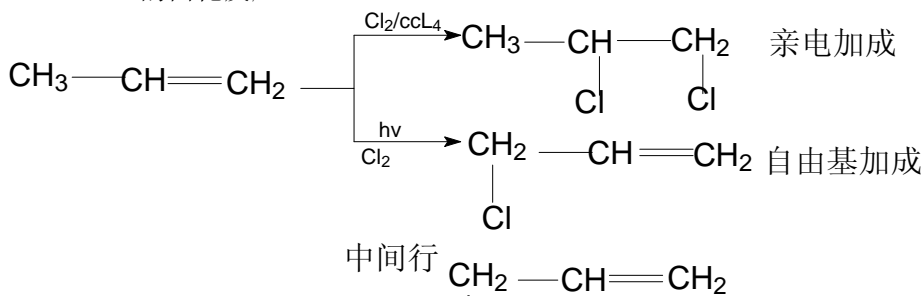
优先原子或基在异侧为 E



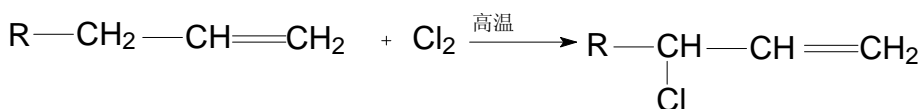
indow.Document

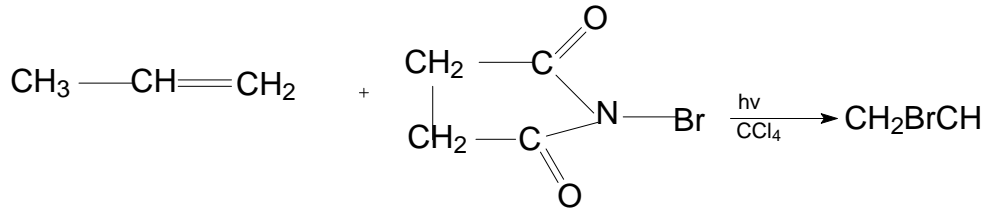


1.  $\alpha$ -H 的卤化反应

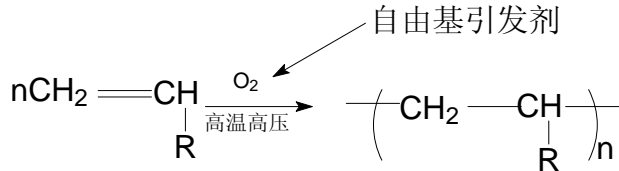


例如：



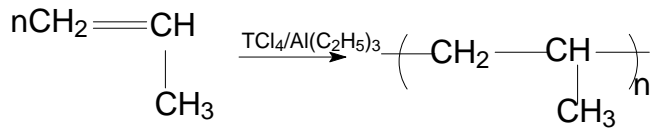


七.聚合：有低分子量的化合物自相加成而转化为高分子量的化合物的反应

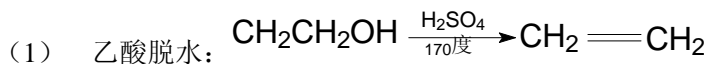


链节式量 \* n = 平均分子量

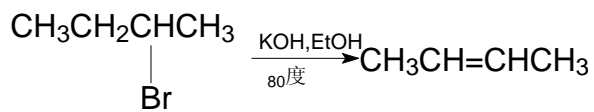
Ziegler-Natta 催化剂:  $\text{TiCl}_4/\text{Al}(\text{C}_2\text{H}_5)_3$



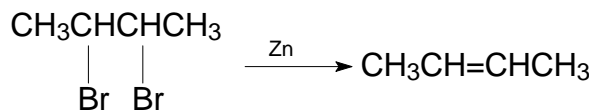
3.5 烯烃的来源和制备



(2) 卤代烷脱 HX



(3) 邻卤代物脱卤素



附加题

1, 2-二甲基环己烯与  $\text{Br}_2$  加成得到什么化合物, 以构型表示, 并写出反应历程; 如果顺-2-丁烯和反-2-丁烯与  $\text{Br}_2$  加成, 是否得到相同的化合物? 试以 Newman 式做判断为同一化合物还是构型不同的两个化合物?

解:

