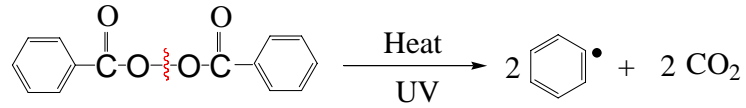
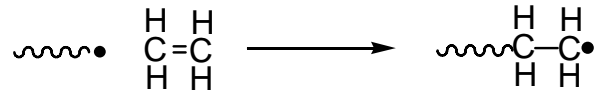


自由基加成聚合—机理

- 链引发：例如，过氧化苯甲酰(BPO)

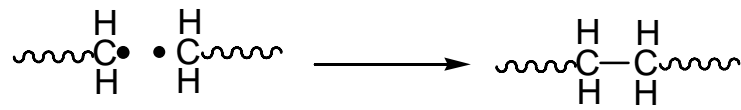


- 链增长：

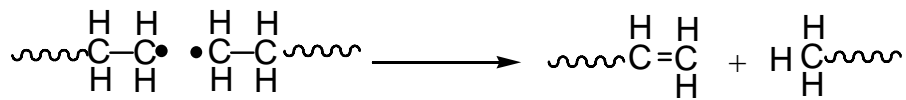


- 链终止：

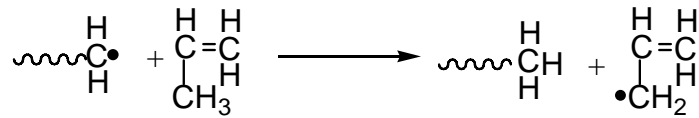
—耦合终止



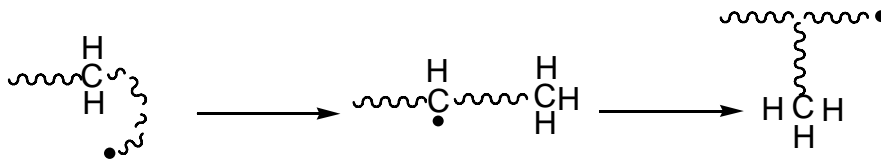
—歧化终止



- 链转移：

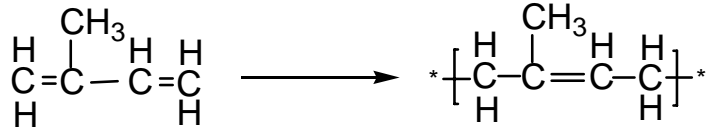


- 链“反咬”：

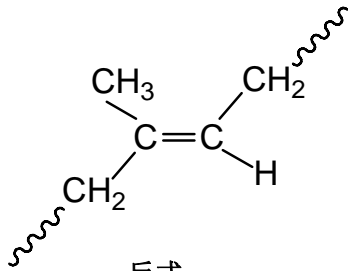


化学异构控制

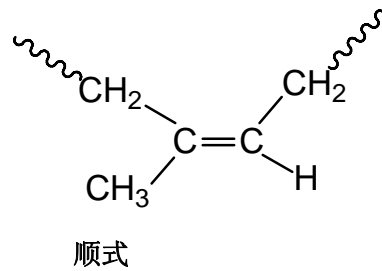
- 1, 3-二烯聚合 (例如异戊二烯)



其几何构型如下:



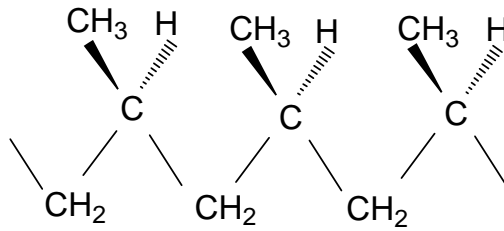
反式



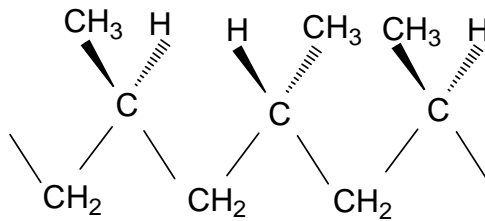
顺式

- 手性构型 (以聚丙烯为例)

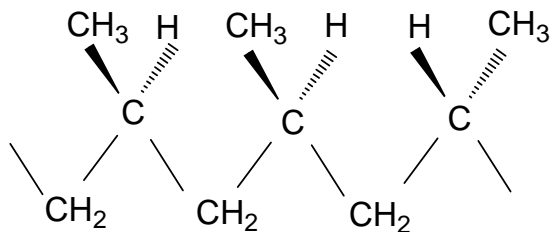
全同立构



间同立构



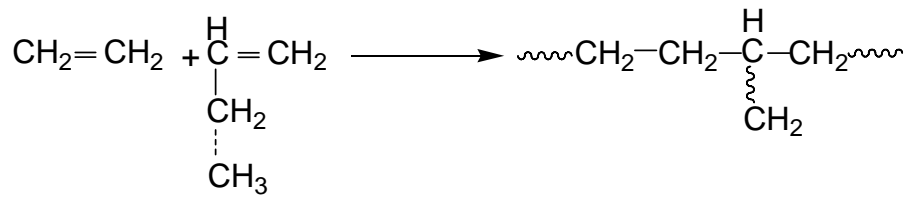
无规立构



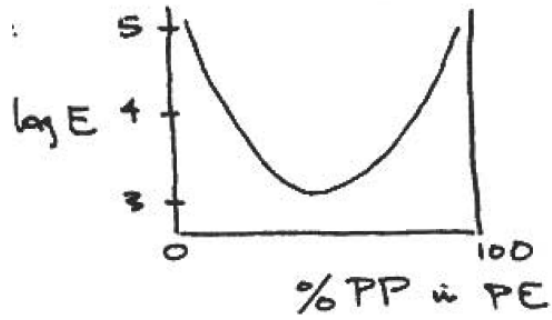
- Ziegler-Natta 催化剂

共聚反应

- 无规共聚反应(例如线性低密度聚乙烯 LLDPE)



或者



嵌段共聚反应

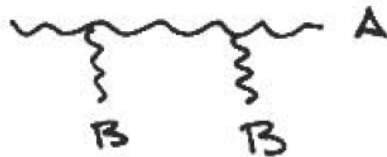


A 为苯乙烯 B 为丁二烯

相分离



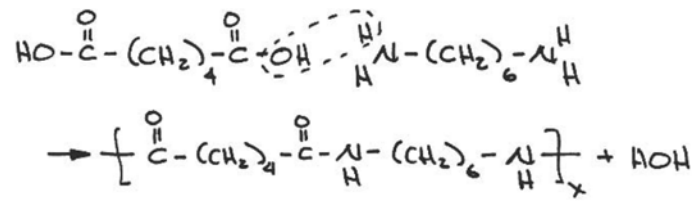
接枝共聚反应



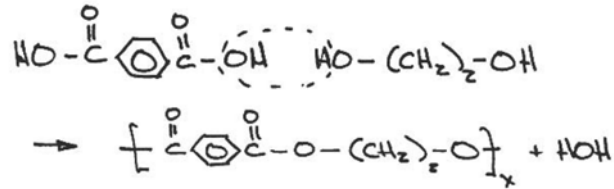
例如：高抗冲聚苯乙烯 HIPS：聚苯乙烯+丁二烯+丁二烯/苯乙烯的接枝共聚物

缩聚物

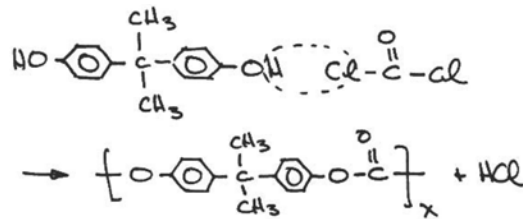
- 聚酰胺(例如：尼龙 66)



- 聚酯 (例如: 聚对苯二甲酸乙二醇酯 PET)

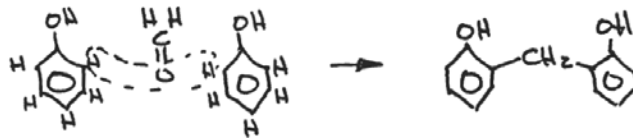


- 聚碳酸酯 (例如 PC-BPA)

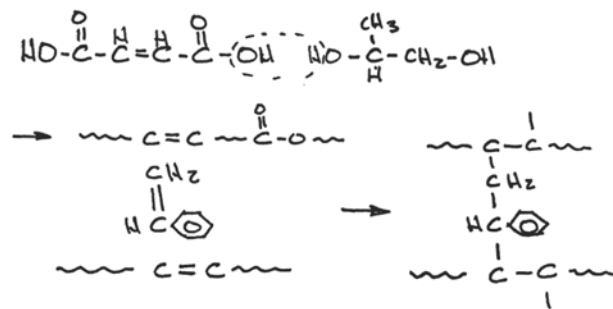


热固性树脂

- 酚醛树脂



- 不饱和聚酯



- 环氧树脂 (DGEBA)

