

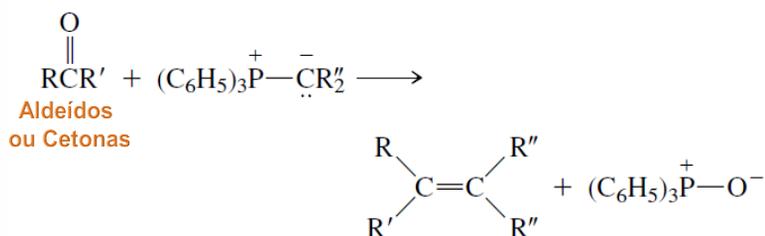


A reação de Wittig

O Prêmio Nobel de Química de **1979** foi concedido conjuntamente a **H. C. Brown** e **Georg Wittig** "pelo desenvolvimento e uso de compostos contendo **boro** e **fósforo**, respectivamente, como importantes reagentes na síntese orgânica"

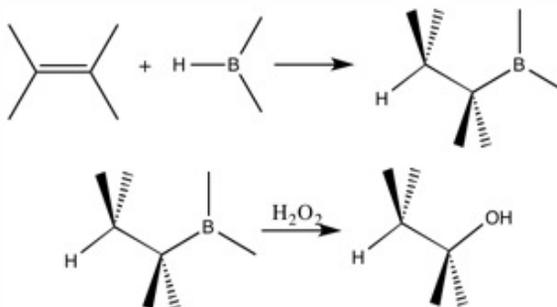


Contribuições de destaque em química



Herbert Charles Brown. Prêmio Nobel em 1979

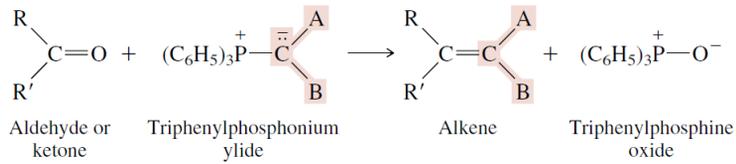
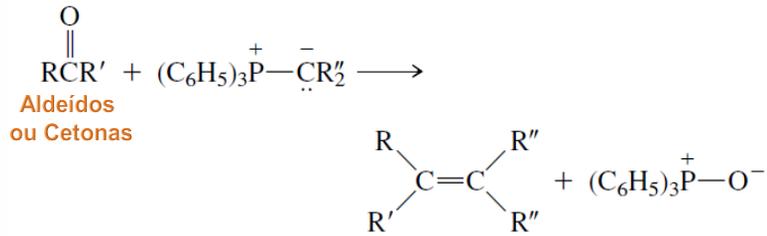
Na hidroboração-oxidação, o grupo OH adiciona-se ao carbono menos substituído na ligação dupla.



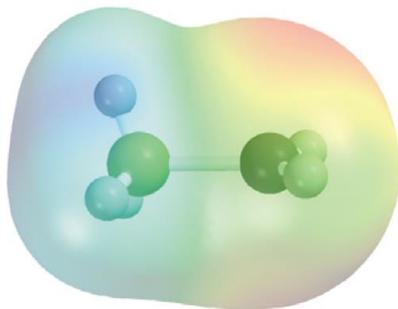
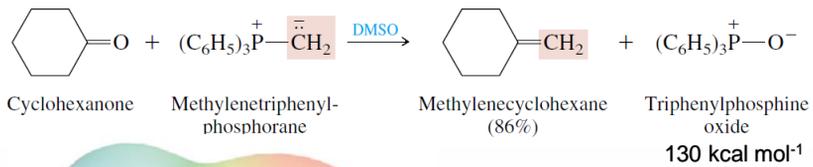
Álcoois anti-Markovnikov



A reação de Wittig



...doing
science
for better
health!



...doing
science
for better
health!



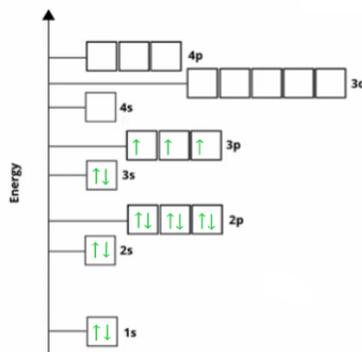
[Ne] 3s² 3p³

Electron Configuration vs Orbital diagram for Phosphorus

Phosphorus (P):

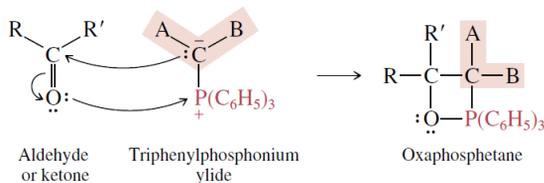
15 electrons

1s² 2s² 2p⁶ 3s² 3p³

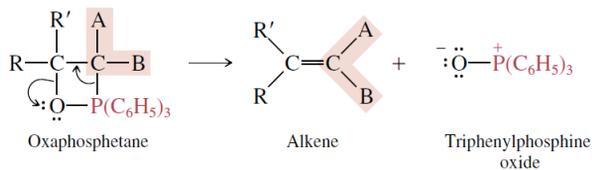


Como planejar a síntese de alcenos via reação de Wittig

Step 1: The ylide and the aldehyde or ketone combine to form an oxaphosphetane.

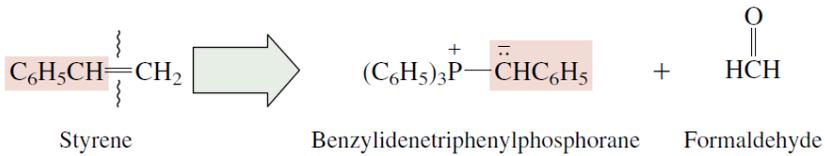
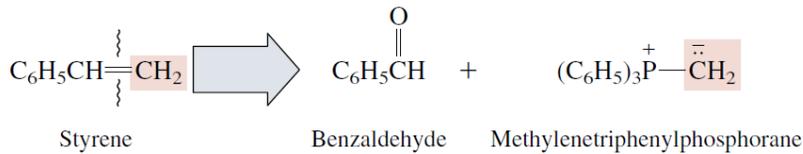


Step 2: The oxaphosphetane dissociates to an alkene and triphenylphosphine oxide.

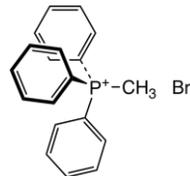
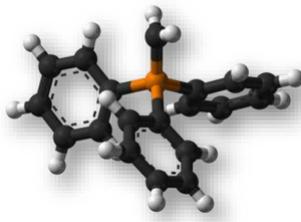
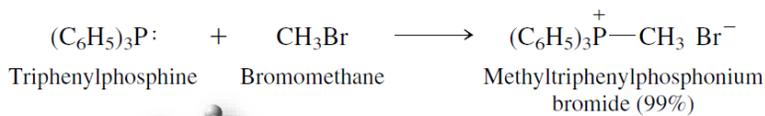
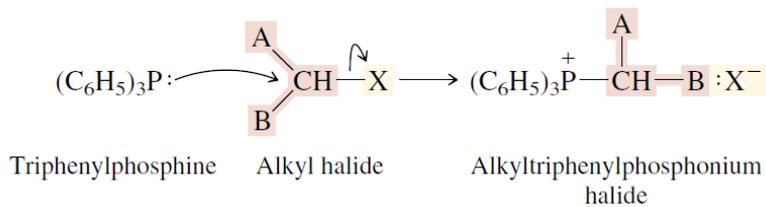




Síntese do Estireno

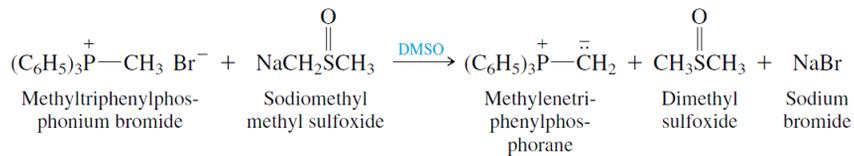
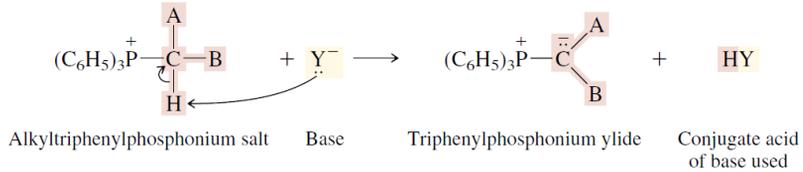


Preparação da Irida de Fósforo

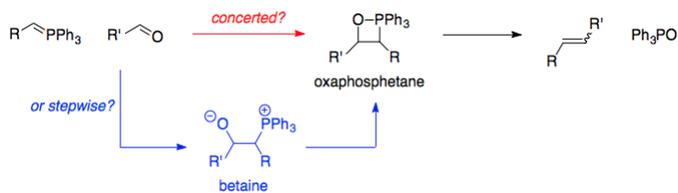
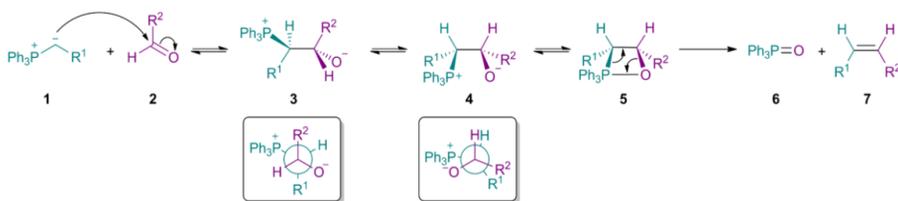




Conversão para a Iida desejada via desprotonação com base forte

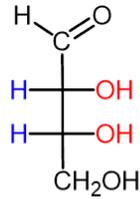


Mecanismo da reação: clássico





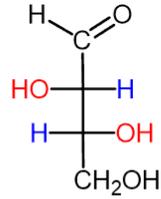
Estereoquímica de sacarídeos: éritro e três



Erythrose

Two H's on the same side

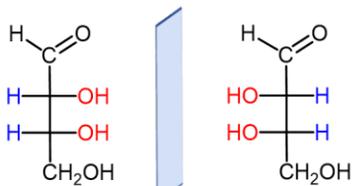
Two OH's on the same side



Threose

Two H's on opposite sides

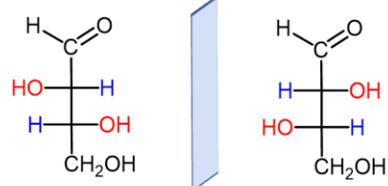
Two OH's on opposite sides



D-erythrose

L-erythrose

enantiomers



D-threose

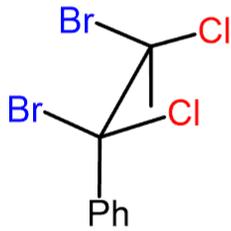
L-threose

enantiomers

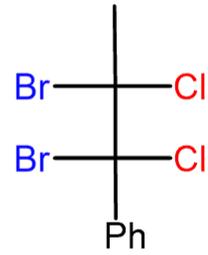
Nomenclatura (R,S)?



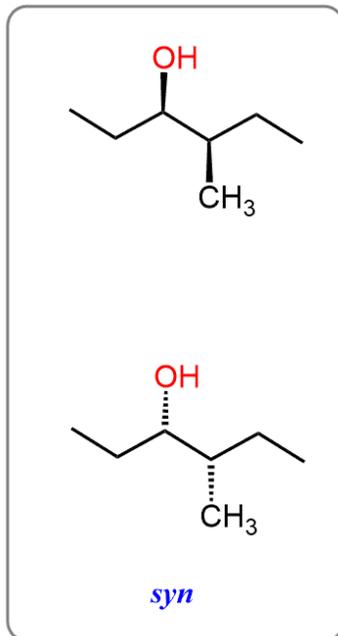
Sawhorse



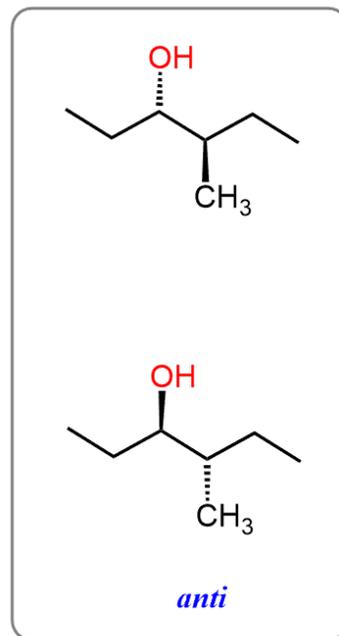
Fischer



An erythro isomer



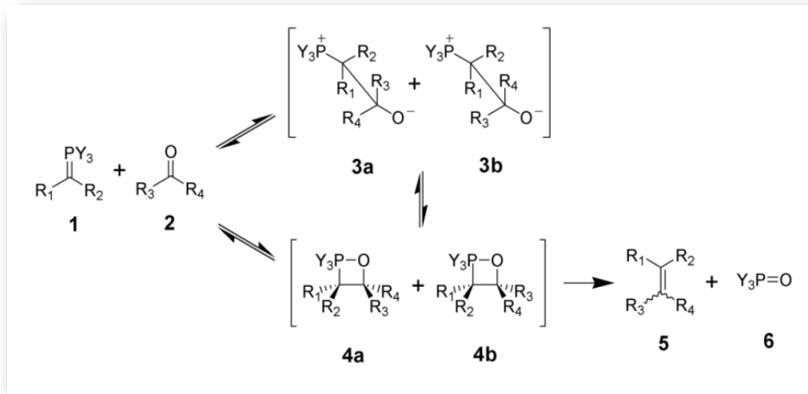
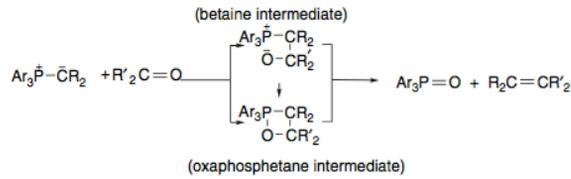
on the same side of the plane



on opposite sides of the plane



Betaína ou Oxafosfoetano?



Modificação de Schlosser

