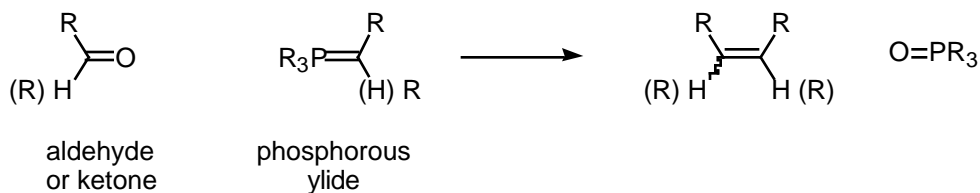


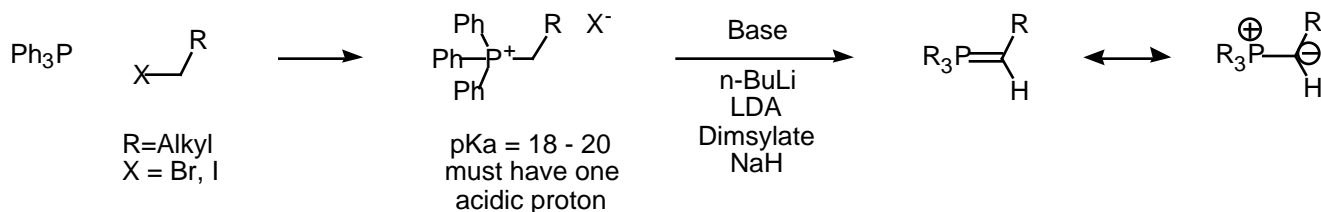
Olefin Synthesis The Wittig Reaction

general reaction :



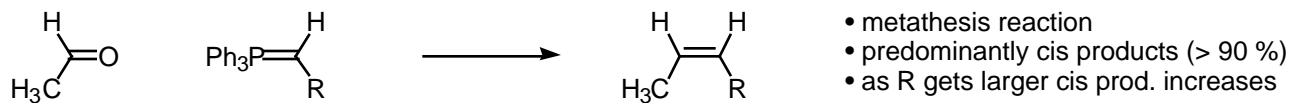
- Topics in Current Chemistry 1983, vol 109.
- Organic Reactions 1965, vol 14.
- Chem. Rev. 1989, 51, 863.

A. Generation of ylides



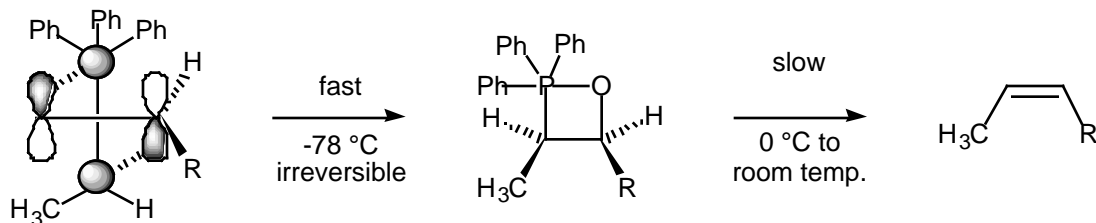
- Phosphonium salts are stable and have reasonable shelf - lives.
- Ylides are O₂ and H₂O sensitive and are generated fresh.

Reactions with Aldehydes



currently accepted mechanism :

$2_a + 2_s$ cycloaddition
antarafacial suprafacial



orientation is so that R and
CH₃ are as far apart as possible

J. Am. Chem. Soc. **1973**, 95, 5778.