

Chemistry 144
Organic Synthesis
M. E. Jung

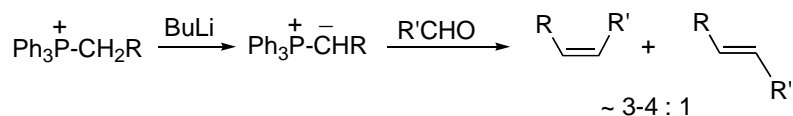
Olefination Reactions - Stereoselectivity

1) Wittig and Wittig-Like reactions

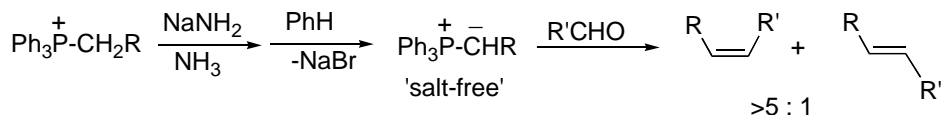
Review: *Topics Stereochem.* **1994**, 21, 1

1) Unstabilized Ylides

Normal Conditions give Z Disubstituted Alkenes

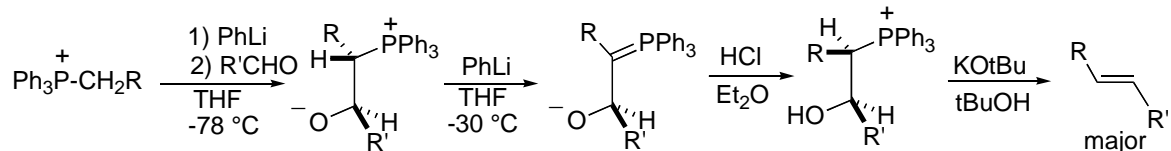


Better Selectivity of Z Disubstituted Alkenes with Salt-Free Conditions (*JACS* **1982**, 104, 5821)

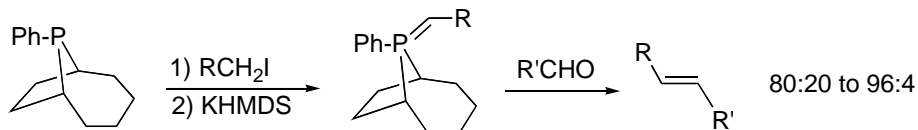


For E-Selective Wittigs:

a) Schlosser Modification (*Annalen* **1967**, 708, 1; *JACS* **1970**, 92, 226)

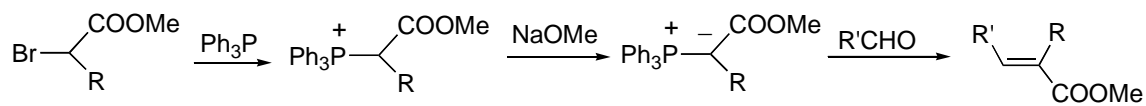


b) Cyclic Phosphines (*Vedejs J. Org. Chem.* **1993**, 58, 1985, 6509)

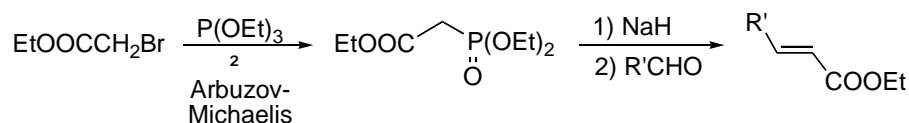


2) Stabilized Ylides

Normal Conditions give E Di- and Trisubstituted Alkenes



Wadsworth-Horner-Emmons



R = H, Me, etc.

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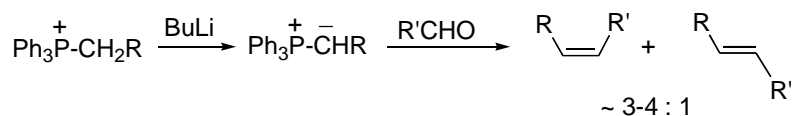
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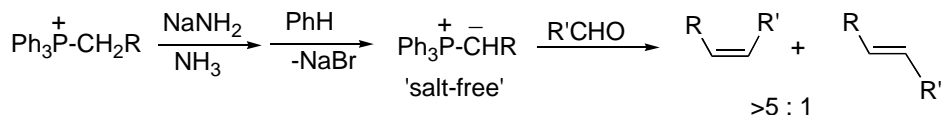
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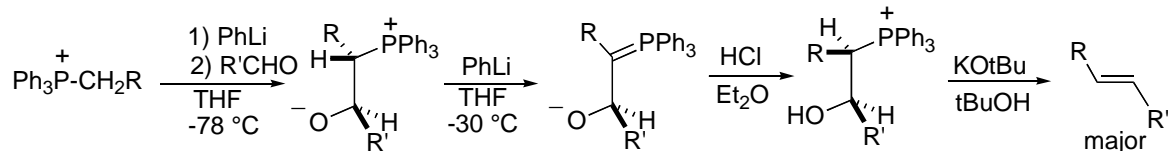


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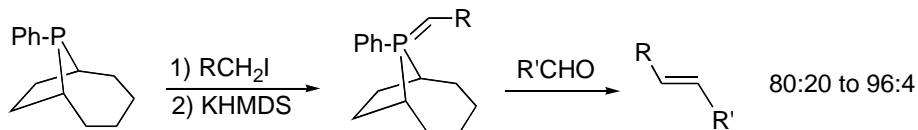


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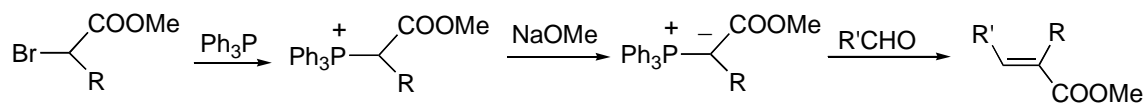


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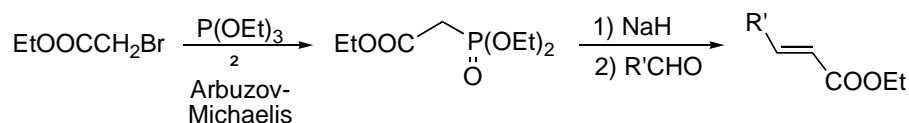


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