

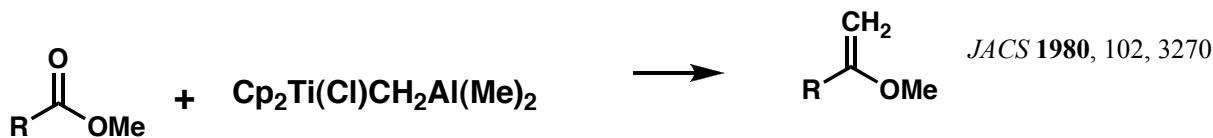
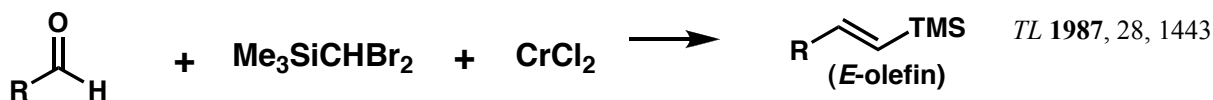
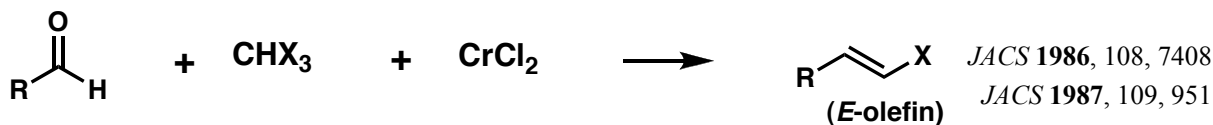
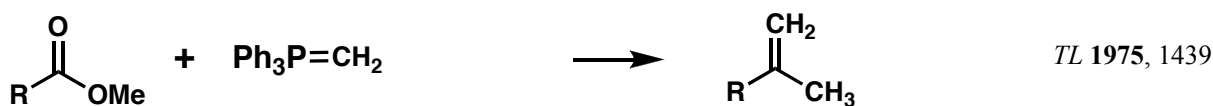
CHEM 6352 Organic Reactions & Synthesis

Olefin Synthesis

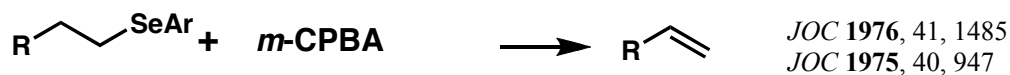
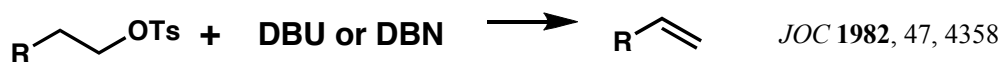
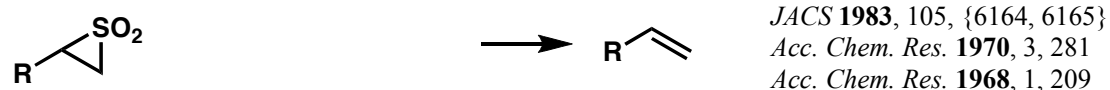
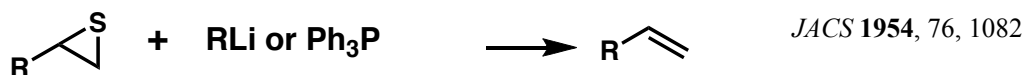
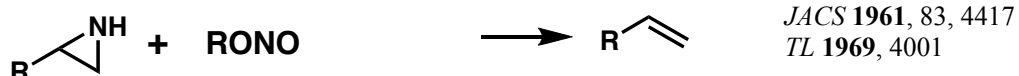
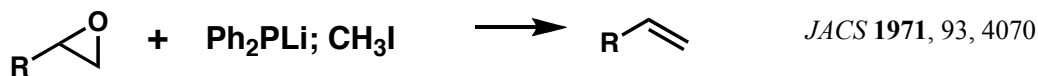
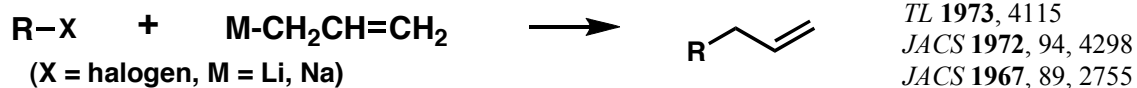
A. Terminal Olefin Synthesis:

I. Synthesis from R₂CO

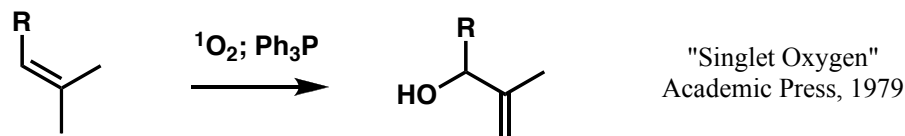
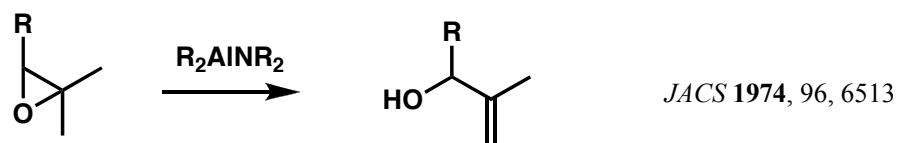
Ph ₃ P=CH ₂	<i>ACIEE</i> 1965 , 4, 830 <i>Org. Reactions</i> 1965 , 14, 270
CH ₂ I ₂ + Mg	<i>TL</i> 1967 , 5153
CH ₂ I ₂ /Zn/TiCl ₄	<i>TL</i> 1985 , 26, 5579 & 5581 <i>Org. Synth.</i> 1986 , 65, 81
LiCH ₂ PO(NMe ₂) ₂	<i>JACS</i> 1966 , 88, {5662, 5653, 5654}
LiCH ₂ SPh; (PhCOCl; Li/NH ₃)	<i>JACS</i> 1972 , 94, 4758
LiCH ₂ SPh; (RO) ₂ PCl; heat	<i>TL</i> 1972 , 737
LiCH ₂ S(O)Ph; (RO) ₂ PCl; heat	<i>TL</i> 1972 , 737
LiCH ₂ S(O) <i>t</i> -Bu; SO ₂ Cl ₂ -CH ₂ Cl ₂	<i>JACS</i> 1973 , 95, 3420
(CH ₃) ₃ SiCH ₂ MgCl; KH	<i>JOC</i> 1968 , 33, 780



II. Synthesis from Non-carbonyl Compounds

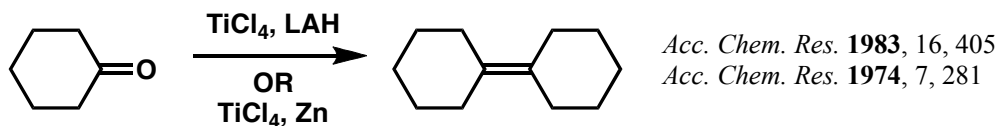


III. Other Methods.

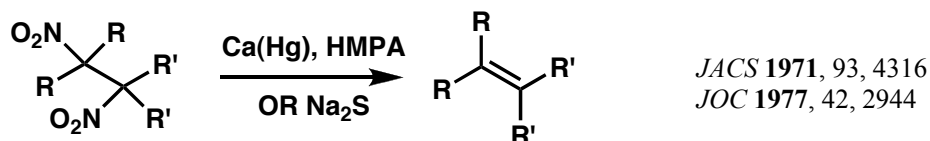
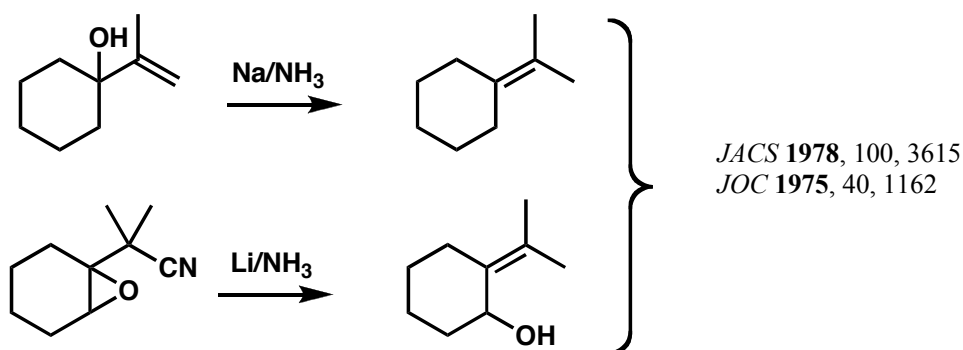


B. Tetra-Substituted Olefins:

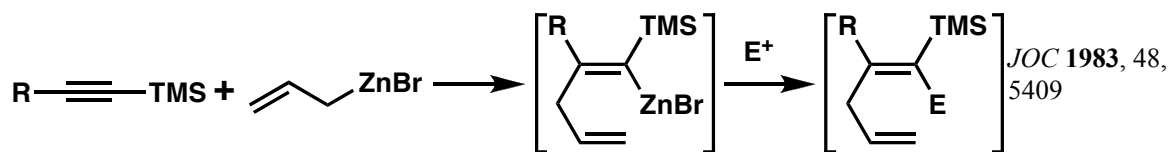
I. Carbonyl-Carbonyl Coupling (McMurry)



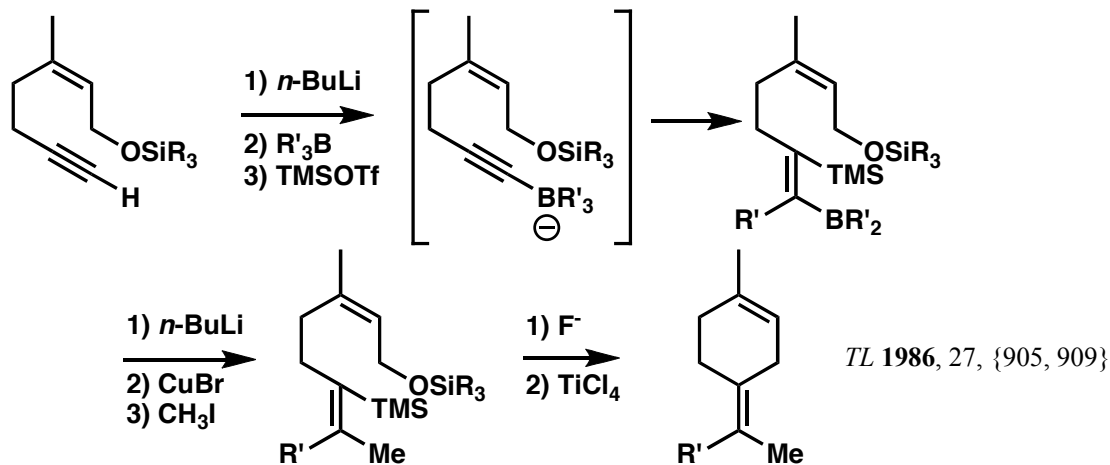
II. Reductive Cleavage Methods



III. Allyl-Zincation of Acetylene



IV. Other Methods



C. Olefin Synthesis (General References):

I. Nomenclature (*E/Z*)

JACS 1968, 90, 509

II. General Reviews

Quat. Rev. Chem. Soc. 1971, 25, 135

Synthesis 1971, 175

Tetrahedron 1978, 34, 1049

III. Reviews of Wittig Reaction

Chem. Rev. 1989, 89, 863

Pure and Appl. Chem. 1980, 52, 771

Org. React. 1965, 14, 270

ACIEE 1965, 4, {583, 645, 830}

JACS 1982, 104, 5821 (*Z*-selective, salt free)

JACS 1981, 103, 2823 (Mechanism)

IV. Olefins from Acetylenes

Russ. Chem. Rev. 1966, 35, 733

ACIEE 1966, 5, 126

JACS 1971, 93, 6309

V. *E*-Olefin Synthesis

Acc. Chem. Res. 1977, 10, 227

Synthesis 1977, 589

JOC 1975, 40, 2265

TL 1976, 4705

JACS 1972, 94, {4013, 6560}

JACS 1971, 93, 6309