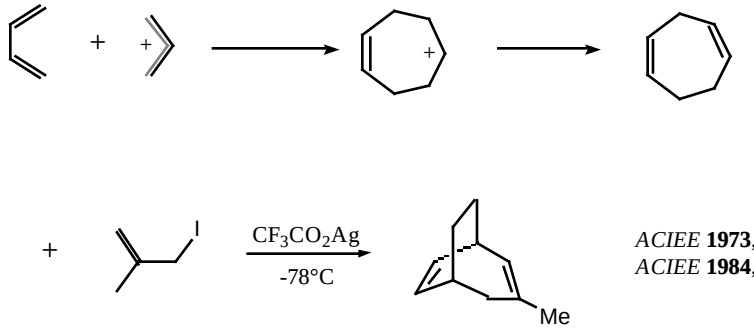
Medium Sized Rings

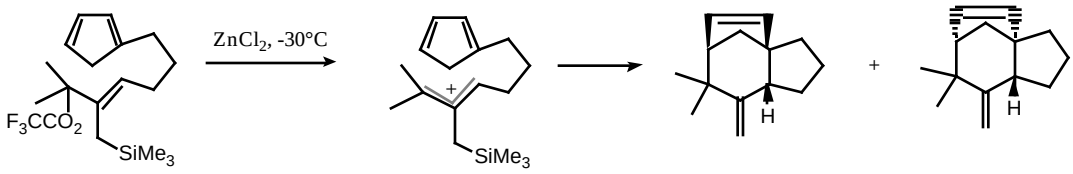
7-Membered Rings

[4+2] cycloadditions

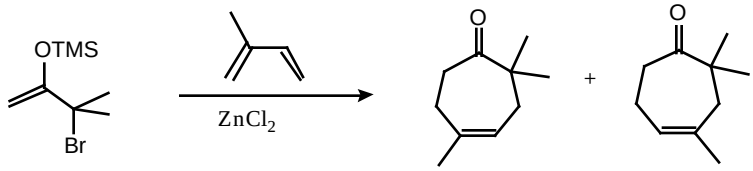
- [4+2] cycloadditions between dienes and allylcations leads to cycloheptadienes
  review: *ACIEE* **1984**, *23* , 1; *ACIEE* **1973**, *12* , 819



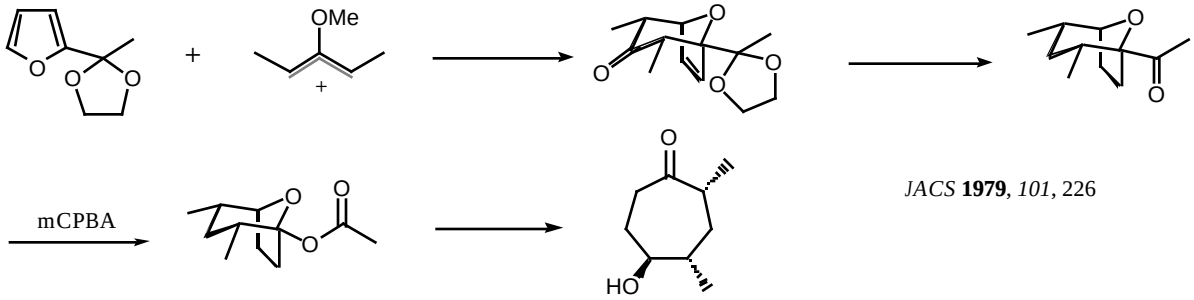
ACIEE **1973**, *12*, 819
ACIEE **1984**, *23*, 1



ACIEE **1982**, *21*, 442

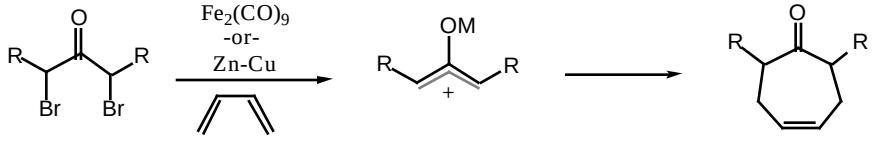


JACS **1982**, *104* , 1330

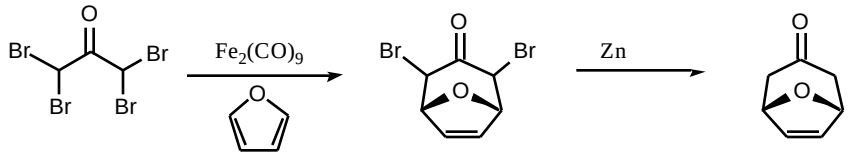


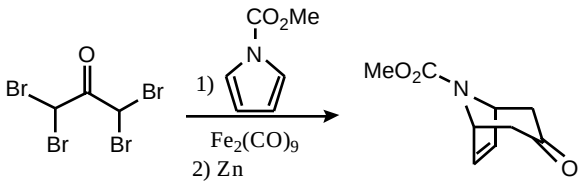
JACS **1979**, *101*, 226

- Noyori [4+2] cycloaddition of α,α'-dibromoketones and dienes
  review: *ACR* **1979**, *12* , 61

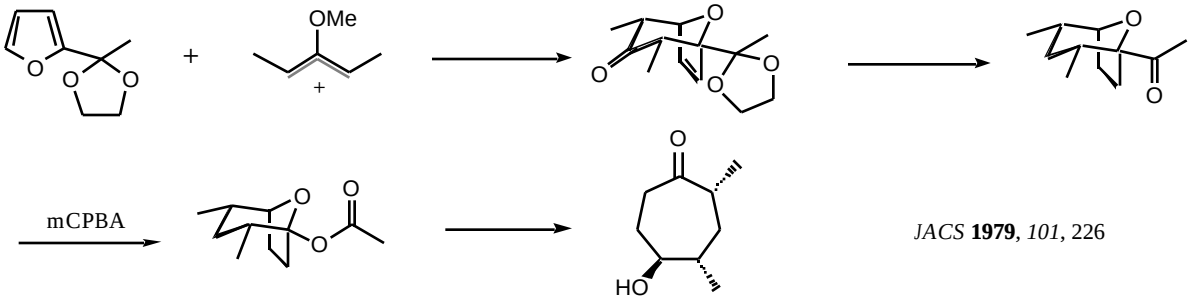


ACR **1979**, 61
Organic Reactions **1983**, *29*, 163

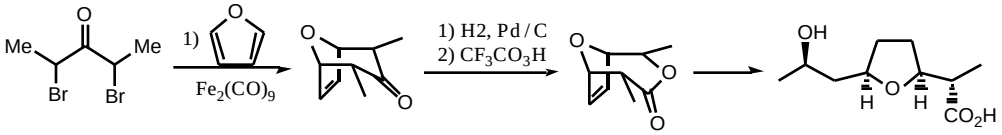




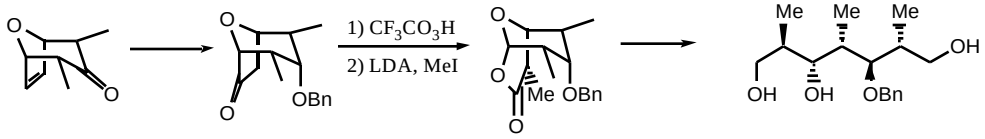
JACS **1978**, *100* , 1786
Tetrahedron **1985**, *41*, 5879



JACS **1979**, *101*, 226

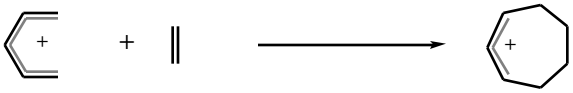


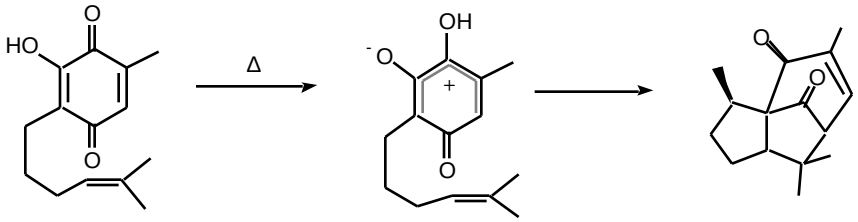
JACS **1972**, *94*, 3940
JOC **1976**, *41*, 2075



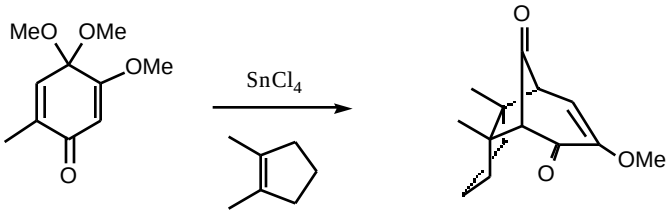
JCSCC **1985**, 55

- [4+2] cycloaddition between pentadienyl cations and olefins



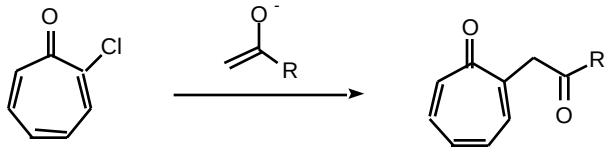


Tetrahedron **1966**, *22*, 2387
JOC **1987**, *52*, 759



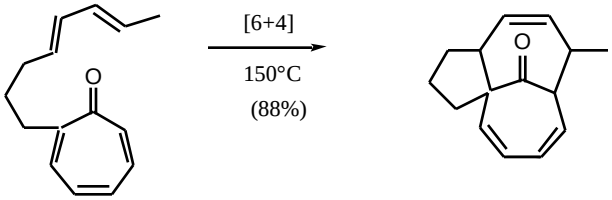
JACS **1977**, *99*, 8073
JACS **1979**, *101*, 6767
JACS **1981**, *103*, 2718

Seven-Membered Rings from Funnctionalization of Tropone
Organic Reactions **1997**, *49*, 331-425

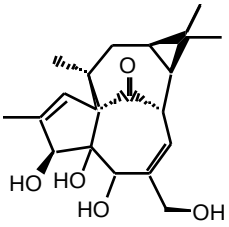


JOC **1988**, *53*, 4596
JACS **1987**, *109*, 3147

- [6+4] cycloadditions of tropones with dienes

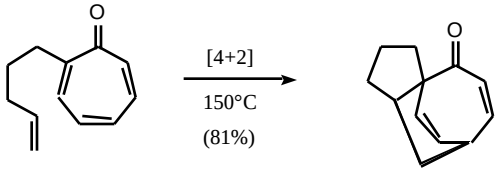


JACS **1986**, *108*, 4655
JOC **1986**, *51*, 2400



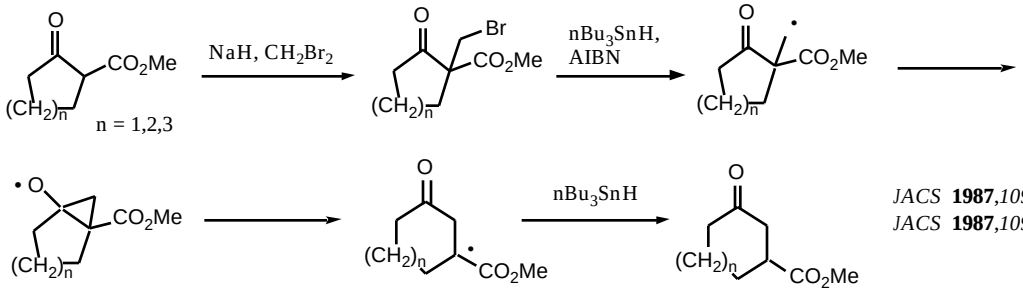
Ingenol

- [4+2] cycloaddition between tropone and olefins

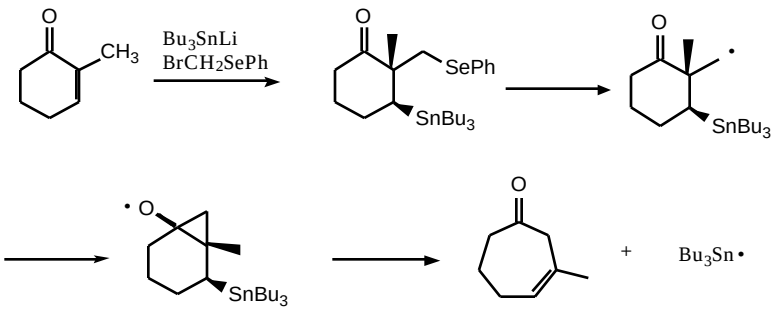


Radical Ring Expansion Reactions

- one carbon ring expansions

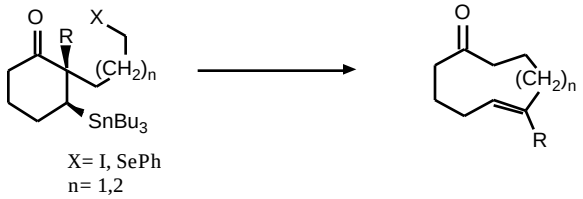


JACS **1987**,*109*, 3493
JACS **1987**,*109* , 6548



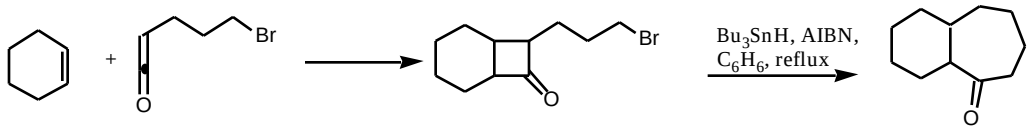
Tetrahedron **1989**, *45*, 909
Tetrahedron **1991**, *47*, *6795*

- more than one carbon expansion



X= I, SePh
n= 1,2

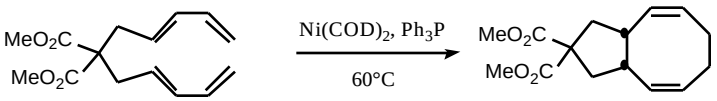
Tetrahedron **1989**, *45*, 909
Tetrahedron **1991**, *47*, *6795*



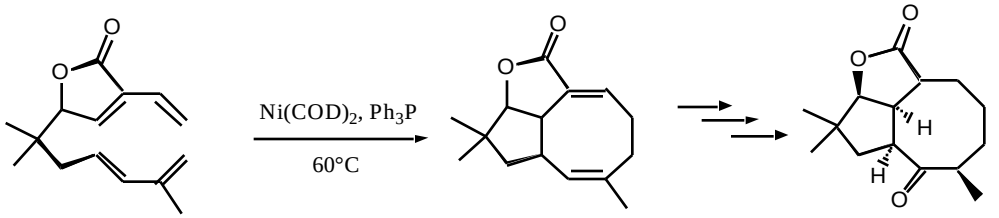
JOC **1992**, 57, *7163*

Eight-Membered Rings review:*Tetrahedron* **1992**, *48* , 5757.

[4+4] Cycloaddition of Dienes



JACS **1986**, *108* , 4678

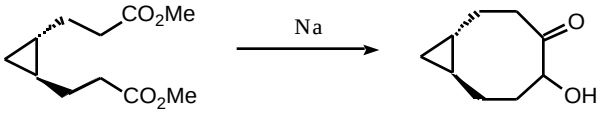


Asteriscanolide

JACS **1988**, *110* , 5904

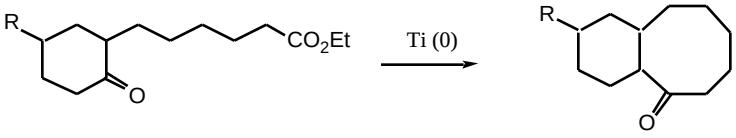
Carbonyl Coupling Reactions

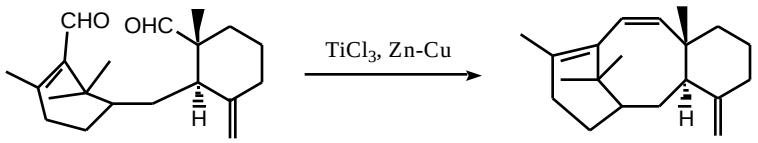
- Acyloin Reaction



JACS **1971**, *93* , 1673

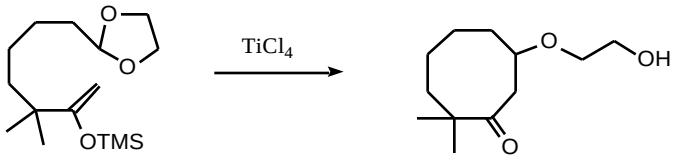
- McMurry Reaction



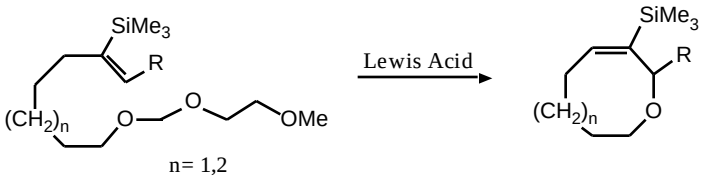


JACS **1986**, *108* , 3513

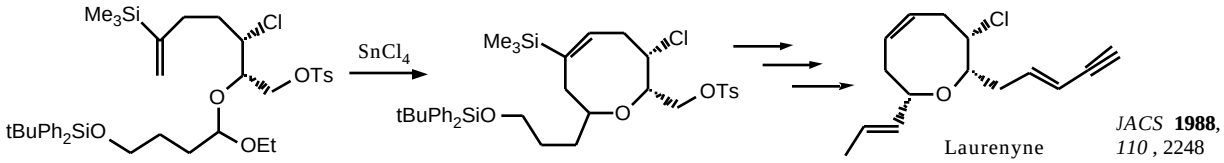
Aldol-like Condensations



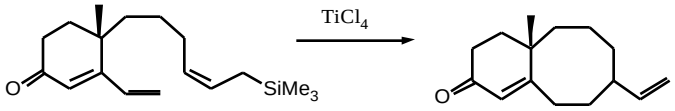
JCSCC **1983**, 703



JACS **1986**, *108* , 3516

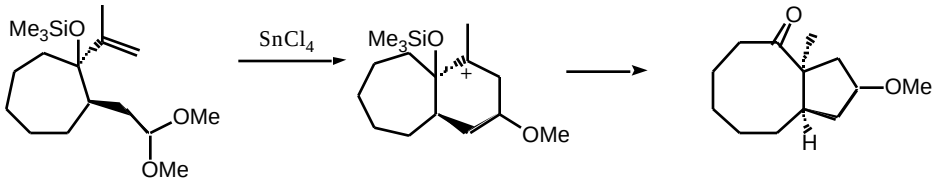


JACS **1988**, *110* , 2248



JOC **1988**, *53* , 50

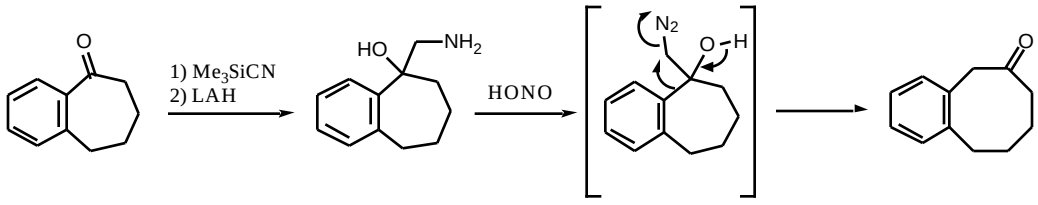
Pinocol Rearrangement



JACS **1989**, *111* , 1514

Tiffeneu-Demyanov Ring Expansion

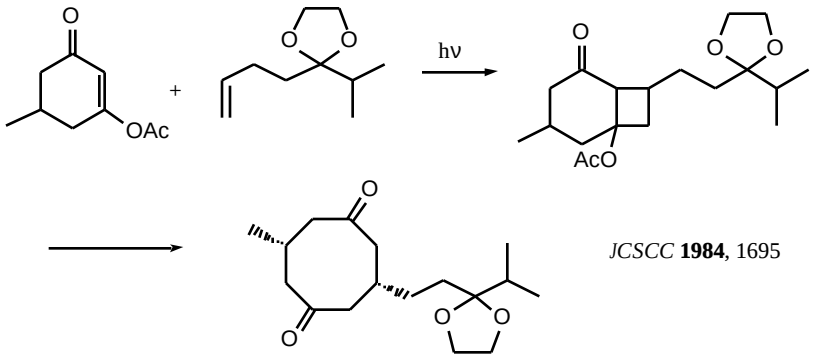
- one carbon ring expansion for virtually any size ring



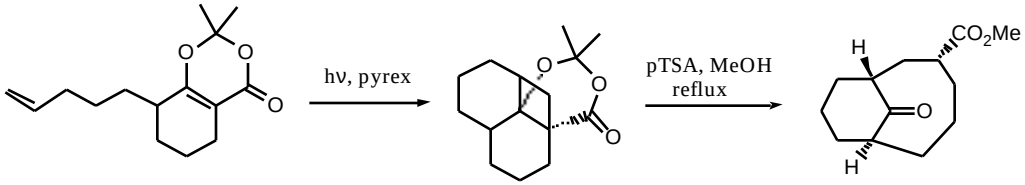
JOC **1980**, *45* , 185

- also see Beckman and Schmidt rearrangements as a one atom ring expansion for the conversion of cyclic ketones to lactams.

DeMayo Reaction



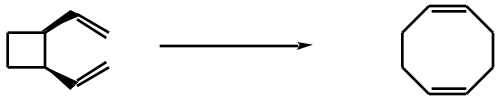
JCSCC **1984**, 1695

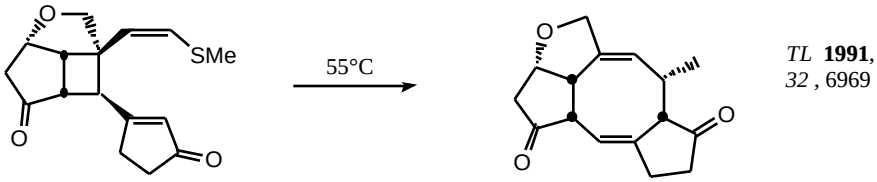


JACS **1986**, *108* , 6425

Ring Expansion/Contraction via Sigmatropic Rearrangements

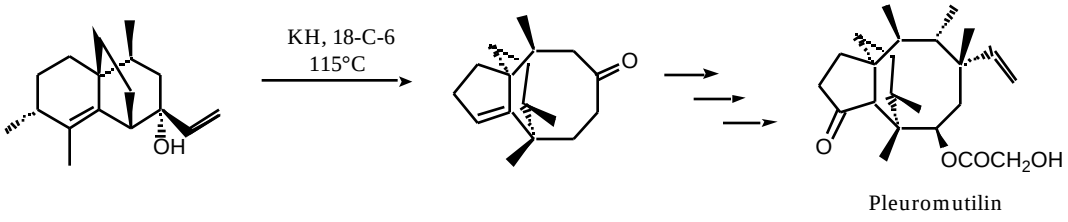
- Cope Rearrangement





TL **1991**, *32* , 6969

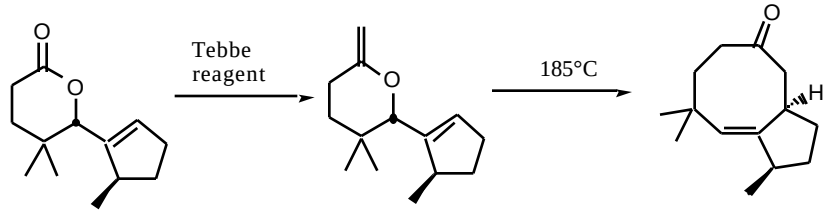
- Anion Accelerated Cope



JACS **1989**, *111*, 8284

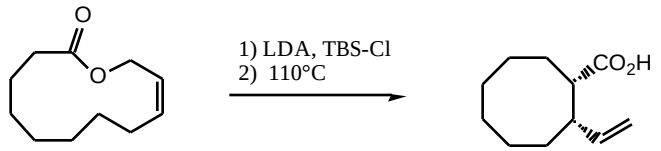
Pleuromutilin

- Claisen Rearrangement

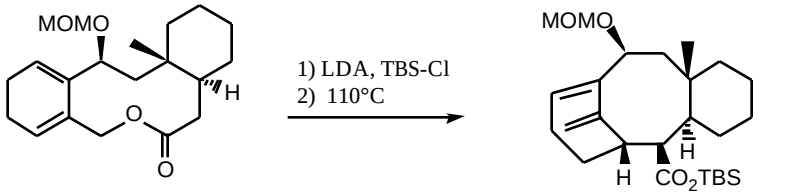


TL **1990**, *31* , 6799

- Ester Enolate Claisen- 4 carbon ring contractions



JACS **1982**, ***104*** , 4030
Tetrahedron **1986**, *42* , 2831



JOC **1988**, *53* , 4141