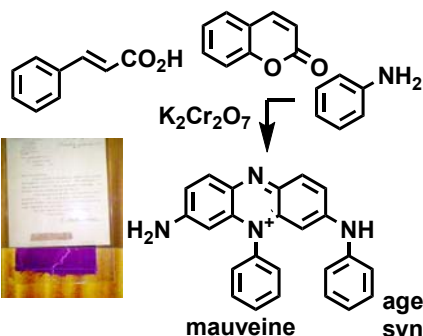


Journal of Chemical Society, Perkin Transaction 1

For History, see: Gu's GM: *J. Chem. Soc., Perkin Trans 1*: 1985-1989 name honours Arthur George Perkin.

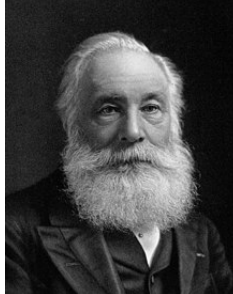
Biography of Arthur George Perkin

- Born in Dec 13th, 1861, Sudbury, England.
- His father, Sir William Henry Perkin, one of founders in British dye industry, discovered mauveine (1856, making from aniline), as well as Perkin reaction.

Selected Works of Sir William Henry Perkin

young William

age 18, was quizzed to synthesize quinone

**Statistics of This Journal (1975-1979)**

- Total papers: 3016

- Most prolific authors:

- 1) D. H. R. Barton (50)
- 2) A. R. Katritzky (38)
- 3) J. R. Hanson (32)



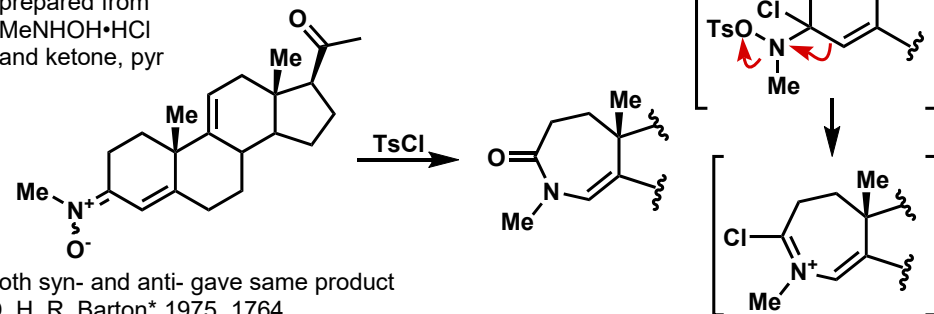
- Most cited papers:

- 1) New method for the deoxygenation of secondary alcohols, 1975 (by D. H. R. Barton, 916 citations)
- 2) Reactions of phosphines with acetylenes. Part 18, 1979 (by J. C. Tebby, 755 citations)
- 3) Reactions of phosphines with acetylenes. Part 17, 1979 (by J. C. Tebby, 727 citations)

Carbocation and Carboanion Chemistry

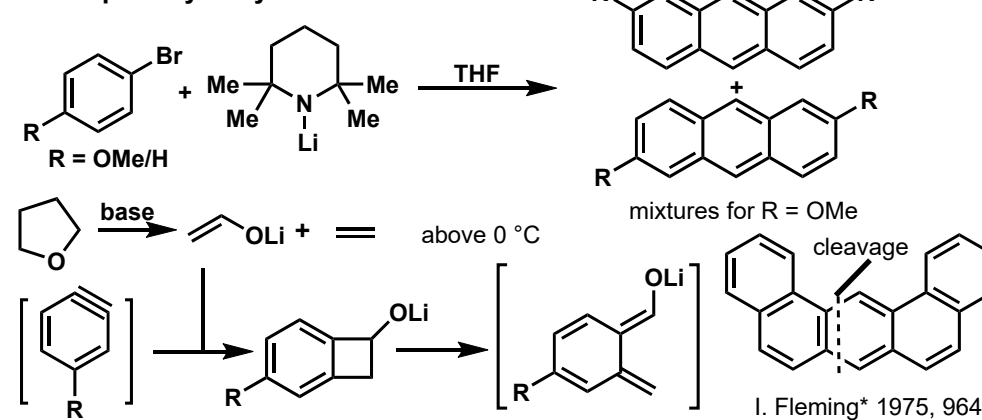
- Ketonic nitrones rearrangement

prepared from MeNH₂·HCl and ketone, pyr



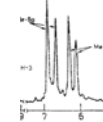
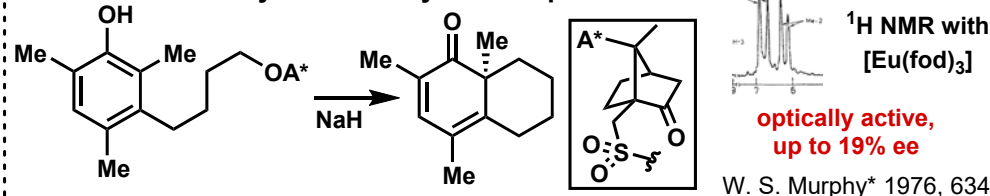
both syn- and anti- gave same product
D. H. R. Barton* 1975, 1764

- A simple way to synthesize anthracenes



I. Fleming* 1975, 964

- Intramolecular asymmetric alkylation of phenols

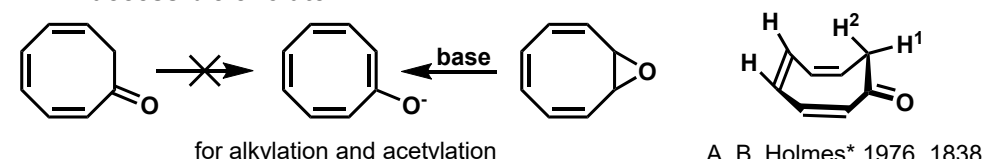


¹H NMR with [Eu(fod)₃]

optically active, up to 19% ee

W. S. Murphy* 1976, 634

- An inaccessible enolate

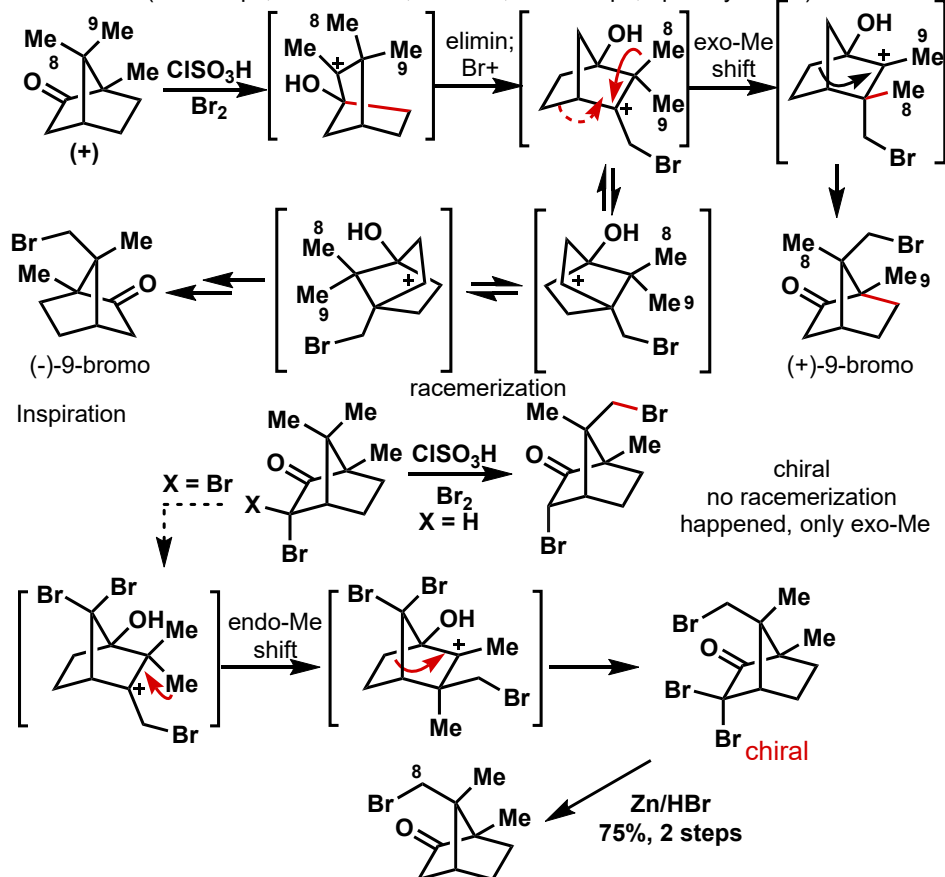


for alkylation and acetylation

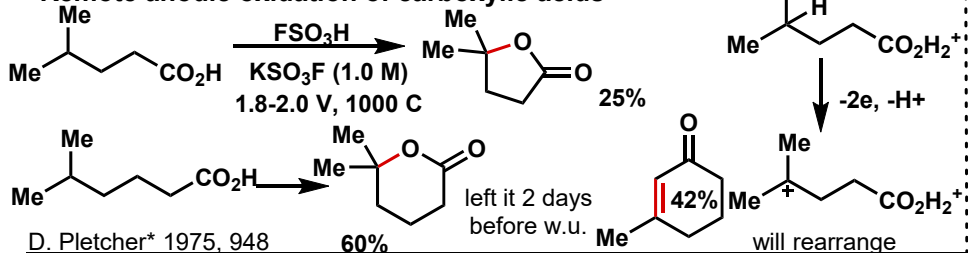
A. B. Holmes* 1976, 1838

Carbocation and Carboanion Chemistry**- A modified synthesis of 8-bromocamphor**

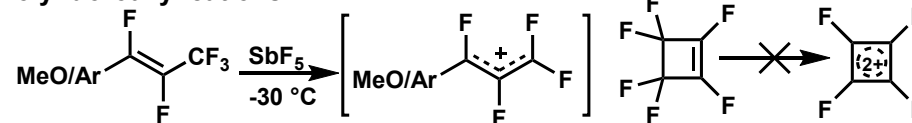
Old method (8-11 steps, via 9-bromo, racemic; or 12 steps, optically active)



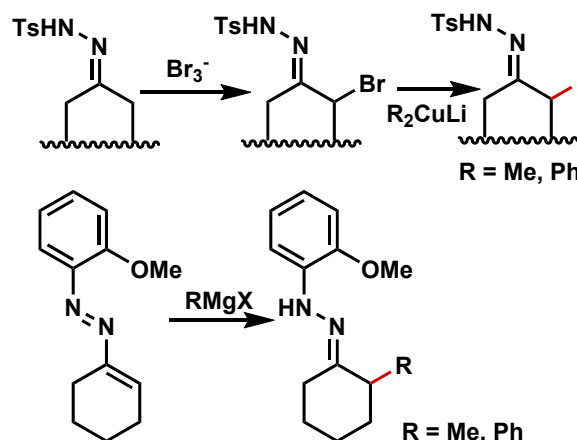
T. Money* 1975, 251

- Remote anodic oxidation of carboxylic acids

D. Pletcher* 1975, 948

- Polyfluoroallyl cations

Richard D. Chambers* 1976, 2107

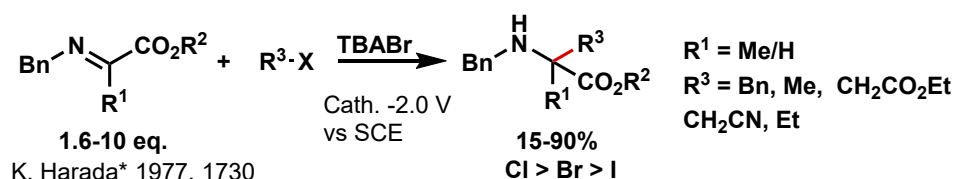
- α-alkylation of ketone

A. Risaliti* 1977, 1377

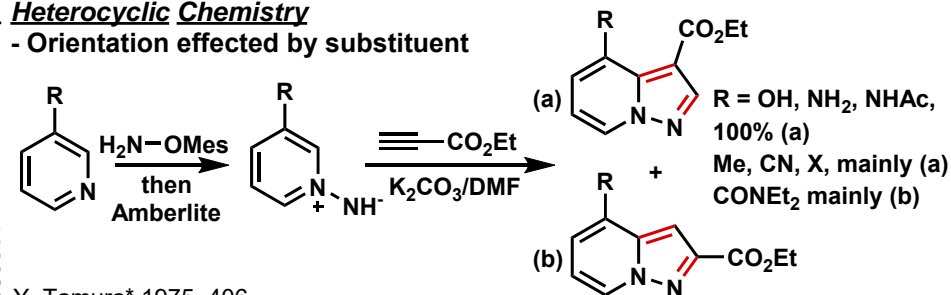
S. Cacchi* 1977, 1260

for modern:

Chem. Rev.118, 11324, D. H. R. Barton* 1979, 2030

- Synthesis of amino acids - with electroreductive coupling

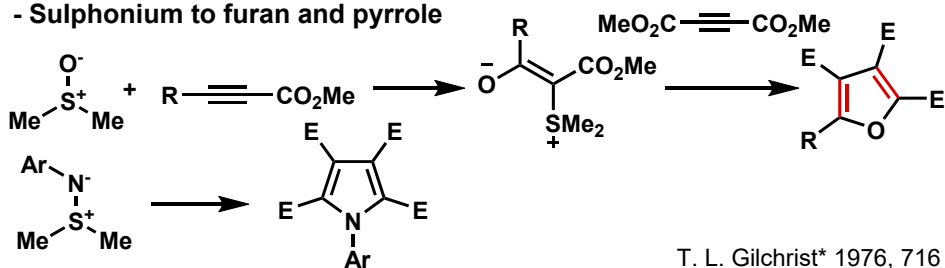
K. Harada* 1977, 1730

Heterocyclic Chemistry**- Orientation effected by substituent**

Y. Tamura* 1975, 406

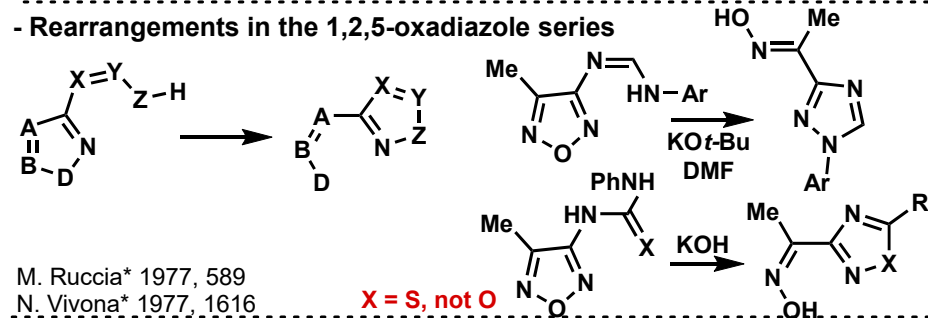
Heterocyclic Chemistry

- Sulphonium to furan and pyrrole



T. L. Gilchrist* 1976, 716 L. Crombie* 1979, 2136

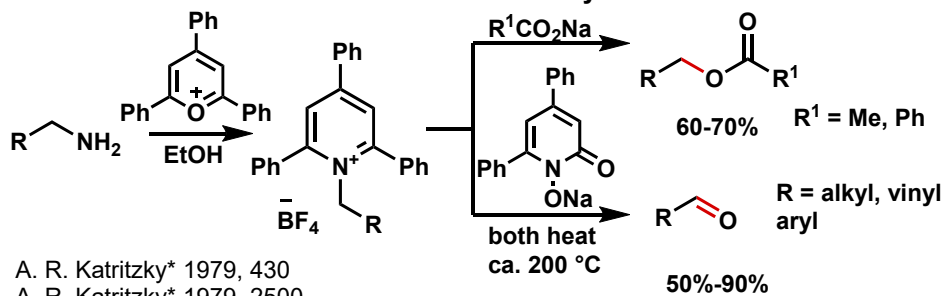
- Rearrangements in the 1,2,5-oxadiazole series



M. Ruccia* 1977, 589
N. Vivona* 1977, 1616

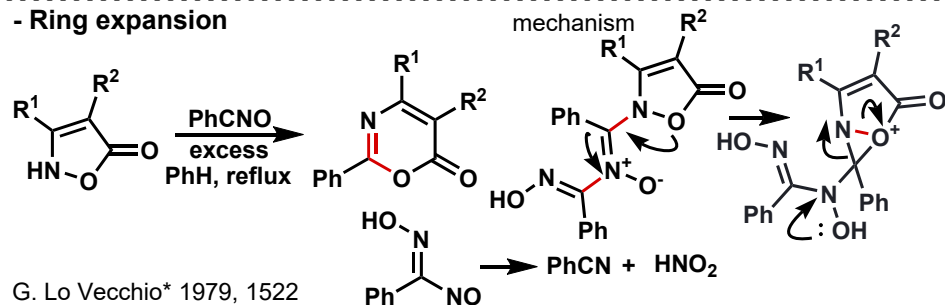
X = S, not O

- Conversion of amines into esters and aldehyde



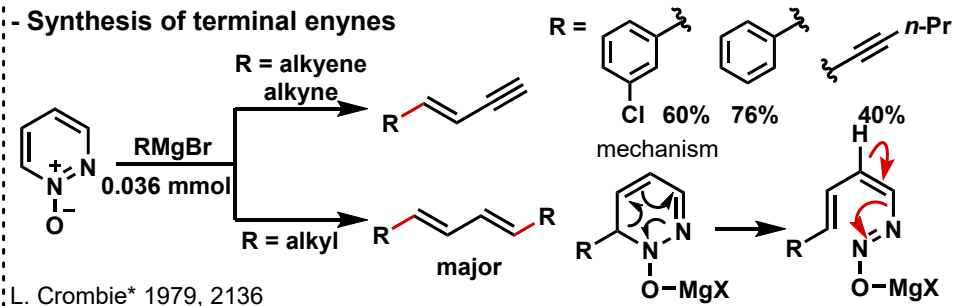
A. R. Katritzky* 1979, 430
A. R. Katritzky* 1979, 2500

- Ring expansion

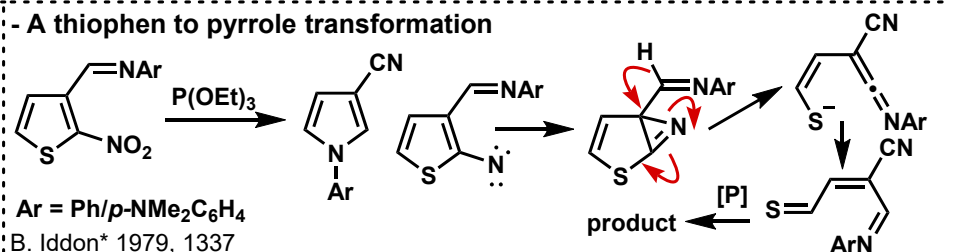


G. Lo Vecchio* 1979, 1522

- Synthesis of terminal enynes

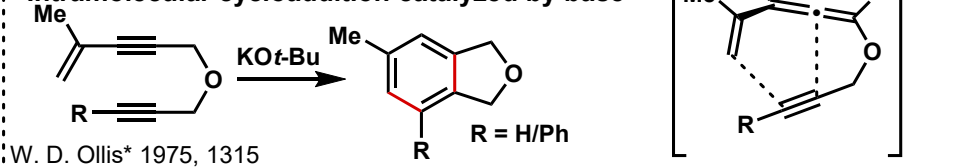


- A thiophene to pyrrole transformation



"Concerted" Reaction

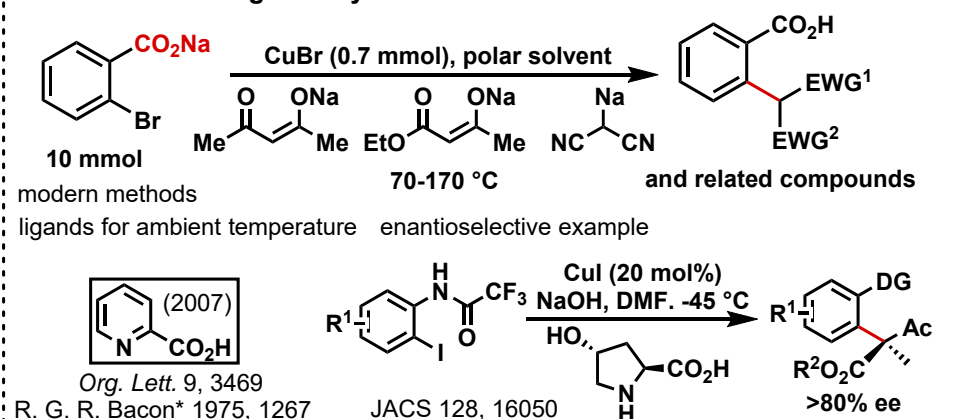
- Intramolecular cycloaddition catalyzed by base



W. D. Ollis* 1975, 1315

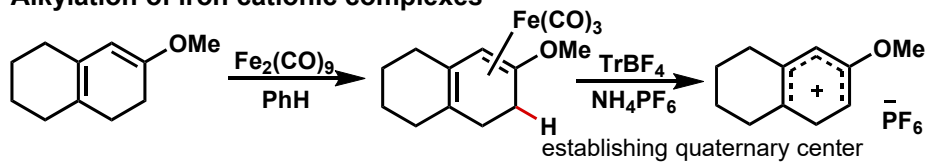
Organometallic Chemistry

- Ullmann-Goldberg-Hurtley reaction

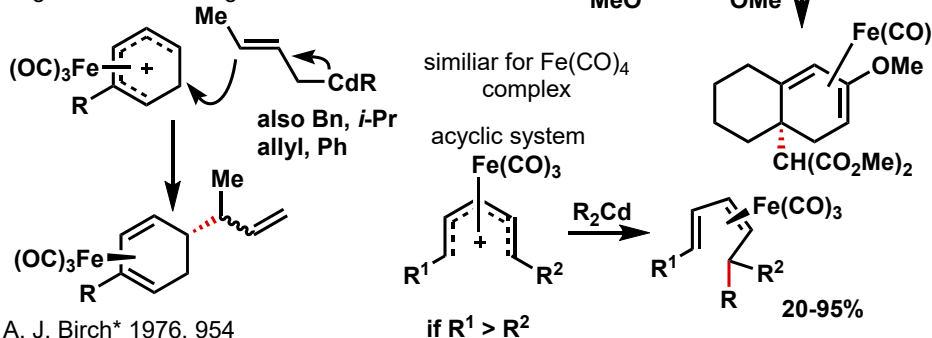


R. G. R. Bacon* 1975, 1267

JACS 128, 16050

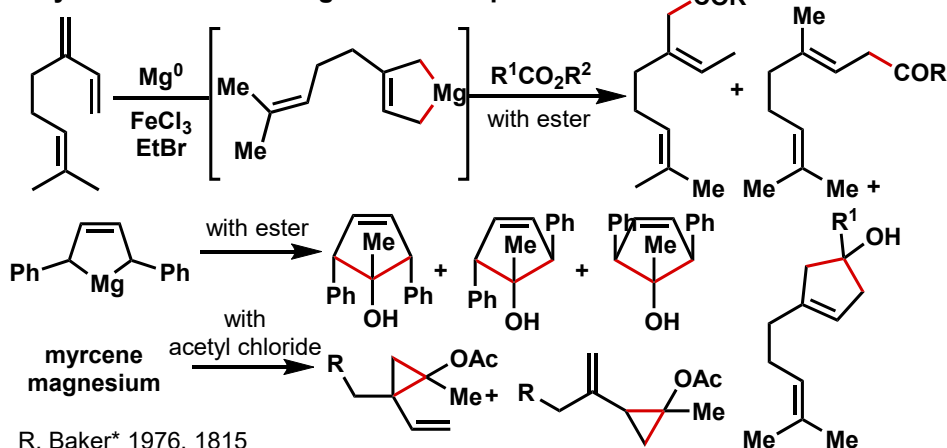
Organometallic Chemistry**- Alkylation of iron cationic complexes**

organocadmium reagents

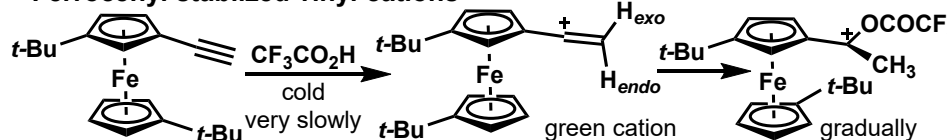
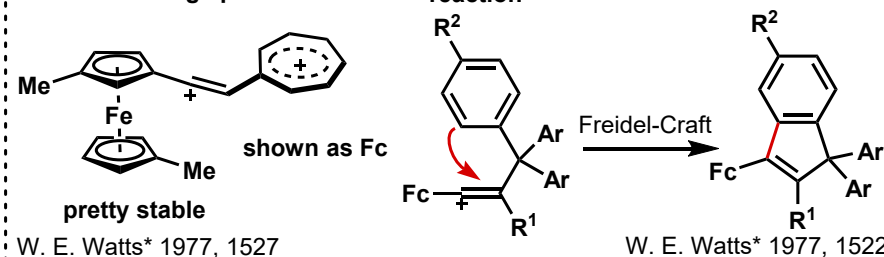
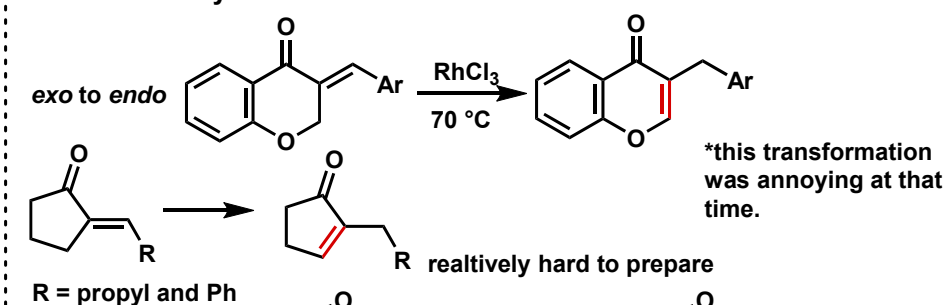
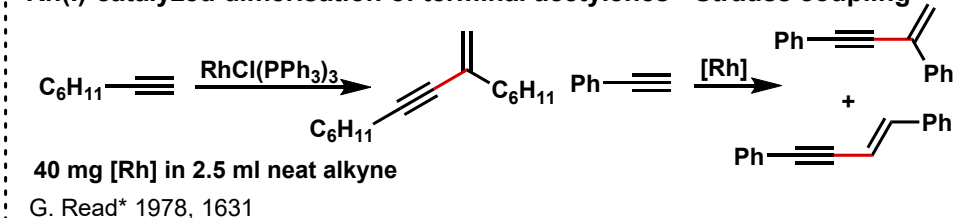
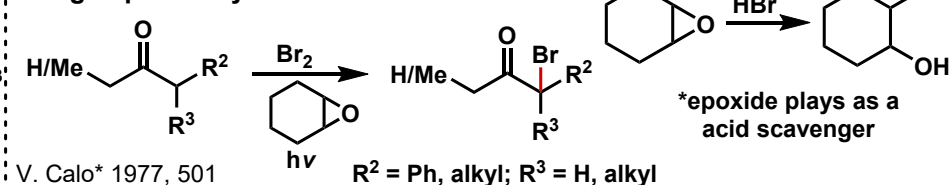


A. J. Birch* 1976, 954

A. J. Pearson* 1977, 2069

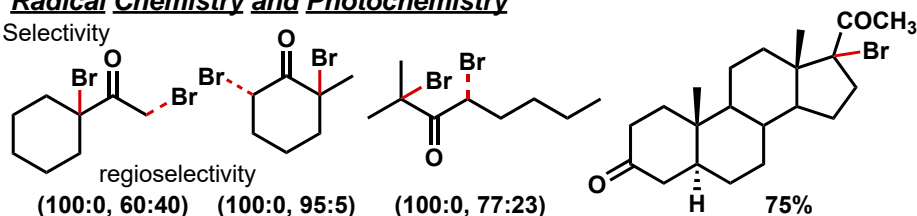
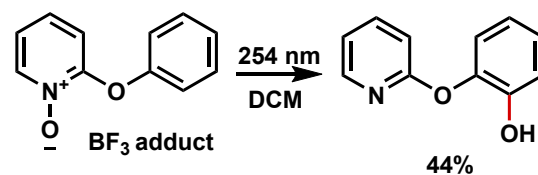
- Myrcene and diene magnesium complex

R. Baker* 1976, 1815

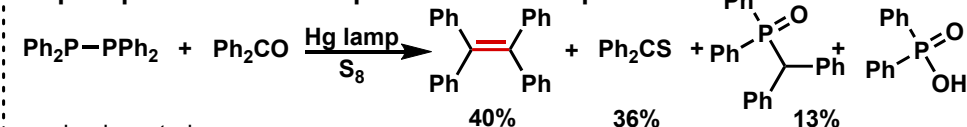
- Ferrocenyl stabilized vinyl cations**other interesting species****- Rhodium-catalysed isomerisation of double bond****terminal to internal****- Rh(I)-catalyzed dimerisation of terminal acetylenes - Strauss coupling****Radical Chemistry and Photochemistry****- Regiospecific synthesis of bromo-ketones**

Radical Chemistry and Photochemistry

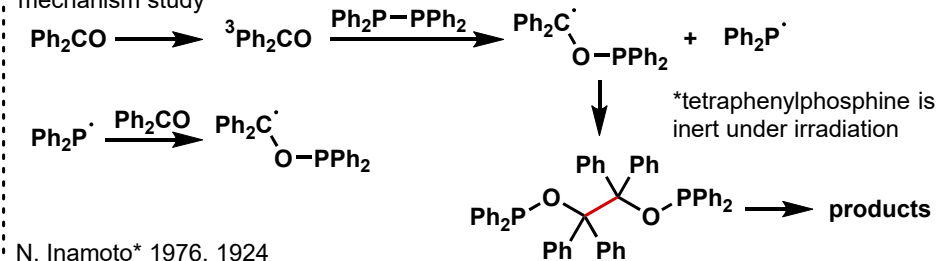
Selectivity

**- Intramolecular aromatic hydroxylation via irradiation**isotopic labelling
indicates a intramolecular
process

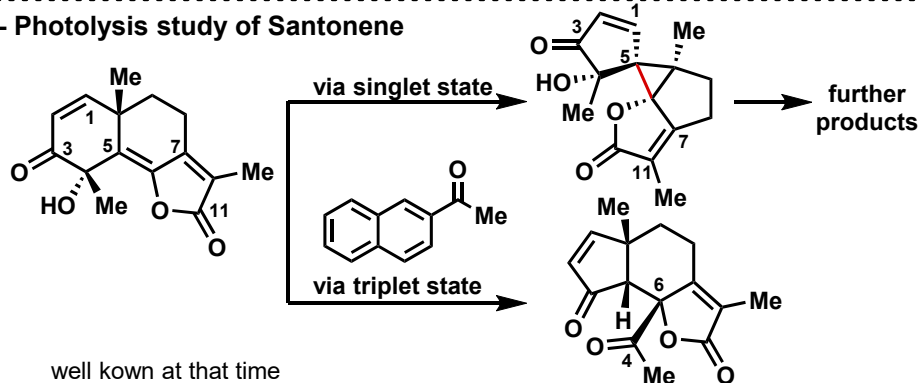
P. G. Sammes* 1978, 853

Organophosphorous Chemistry**- Diphosphines with benzophenone - radical process**

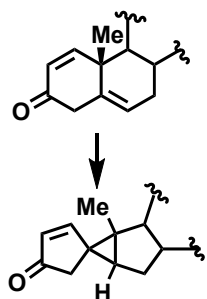
mechanism study



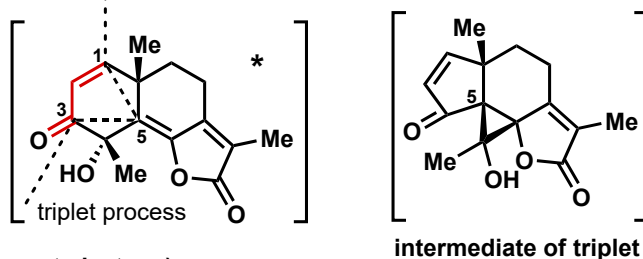
N. Inamoto* 1976, 1924

- Photolysis study of Santonene

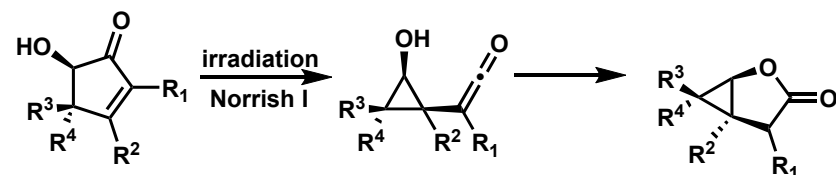
well known at that time



singlet process

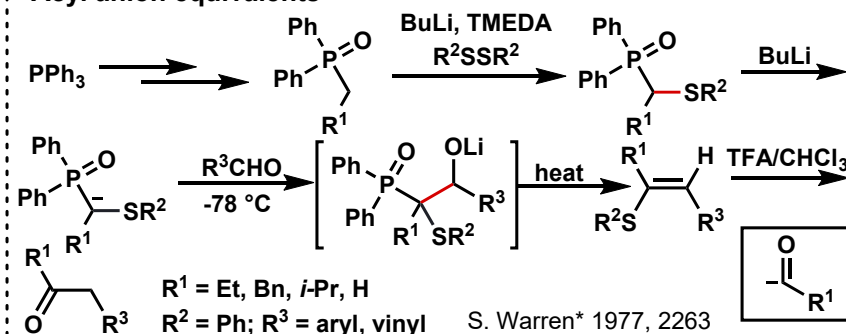


further transformation (from enone to lactone)



T. B. H. McMurry* 1979, 274

T. B. H. McMurry* 1976, 433

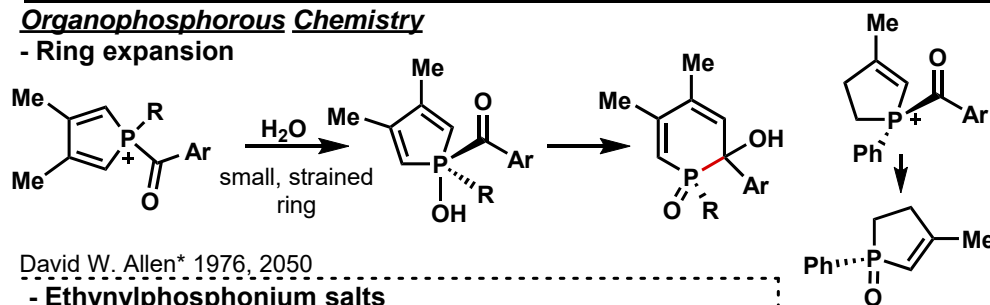
- Acyl anion equivalents**- Anodic alkylamination of triphenylphosphine**

M. Masui* 1978, 1333

Junchen Tang

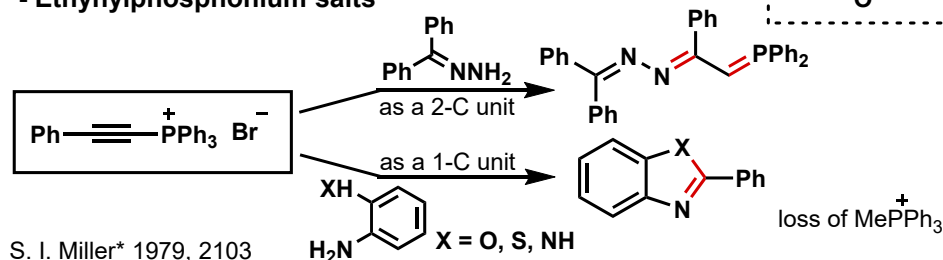
Organophosphorous Chemistry

- Ring expansion



David W. Allen* 1976, 2050

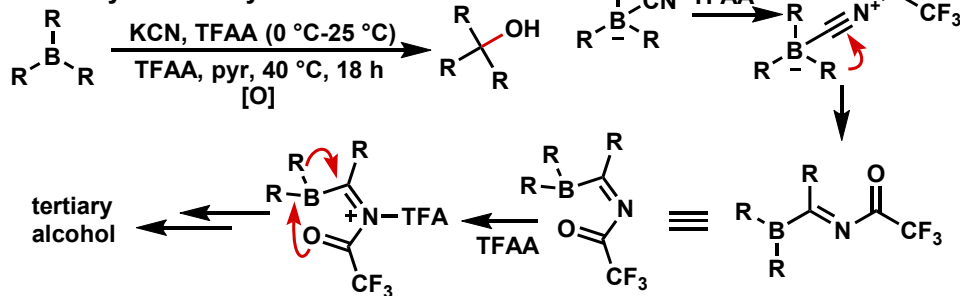
- Ethynylphosphonium salts



S. I. Miller* 1979, 2103

Organoboronic Chemistry

- Tertiary alcohol synthesis

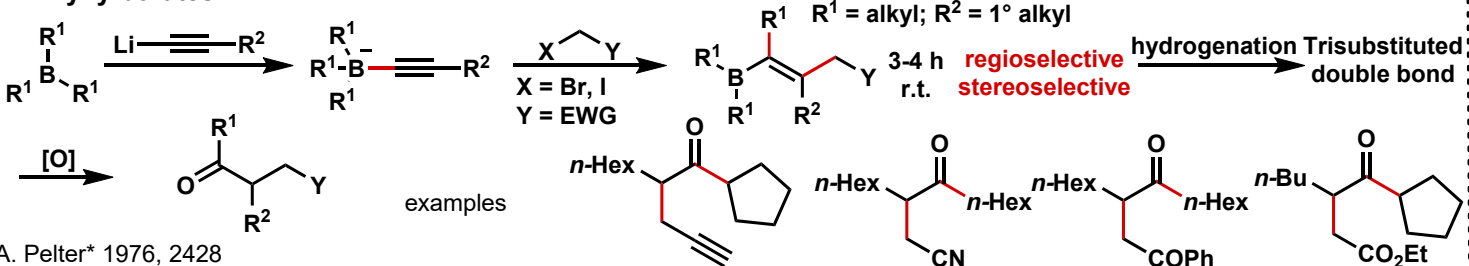


A. Pelter* 1975, 129

A. Pelter* 1975, 138

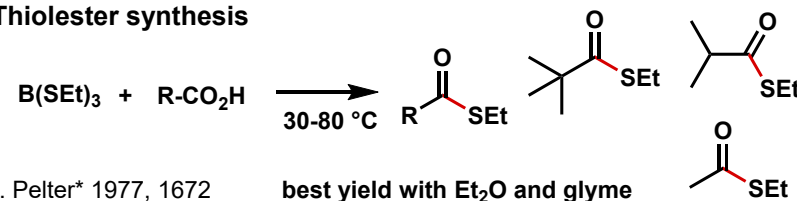
R = *n*-Hex, *n*-Oct, *n*-Butyl, solvent is important for migration

- Alkynylborates



A. Pelter* 1976, 2428

- Thiolester synthesis

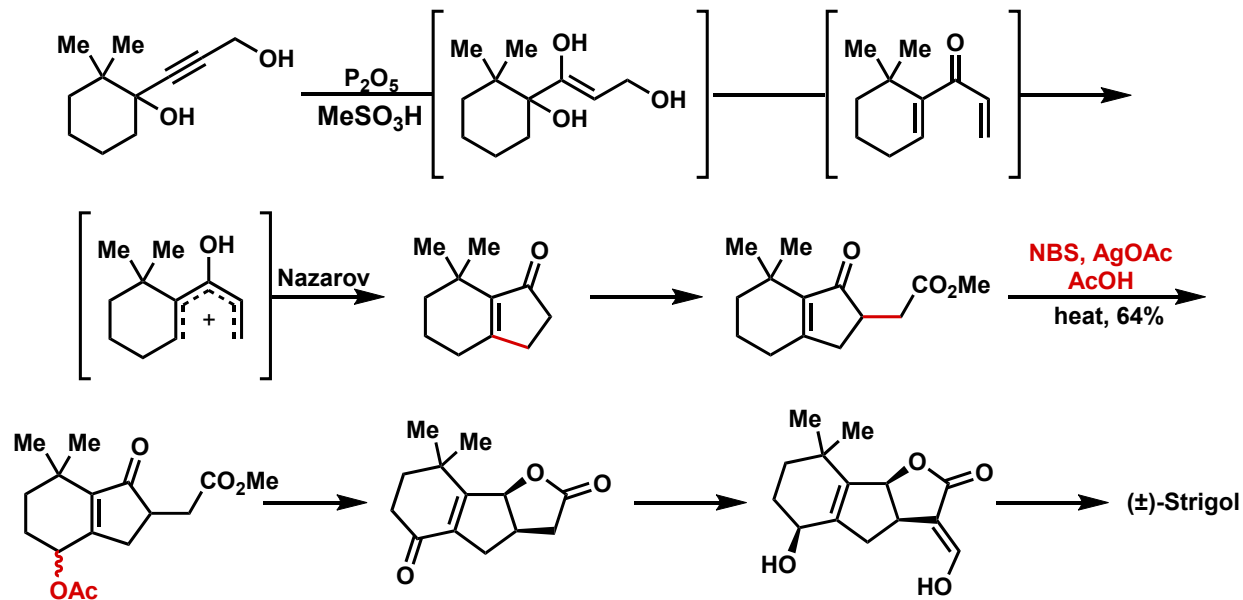
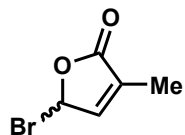
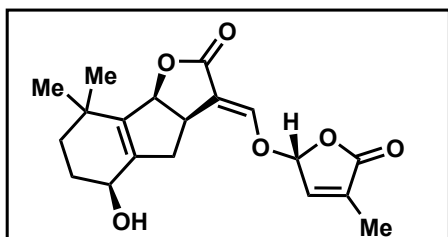


A. Pelter* 1977, 1672

intentionally left blank

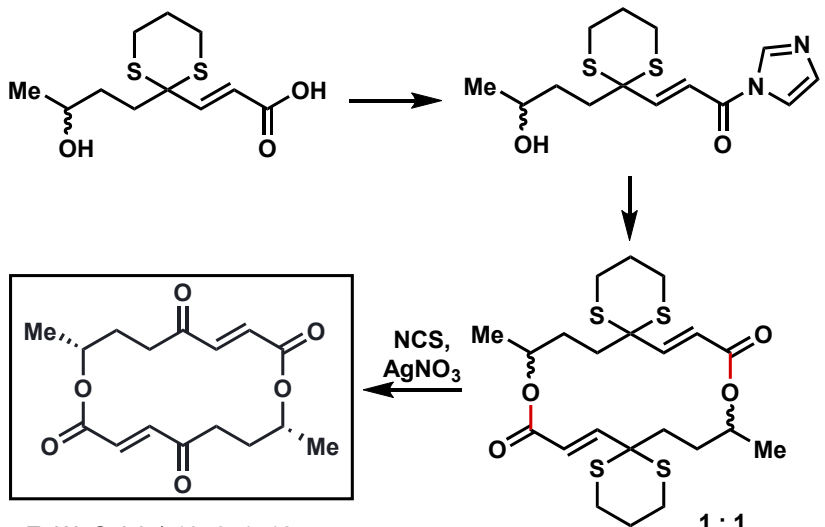
Total Synthesis

- (±)-Strigol



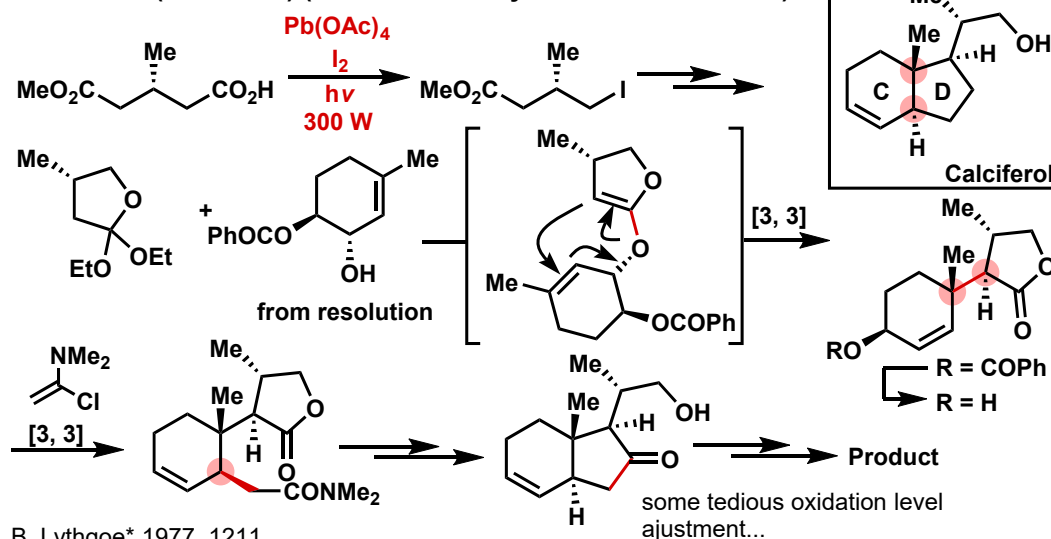
R. A. Raphael* 1976, 410

- (±)-Pyrenophorin



E. W. Colvin* 1976, 1718

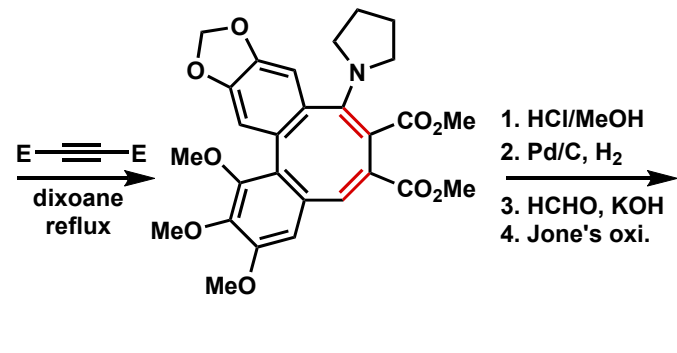
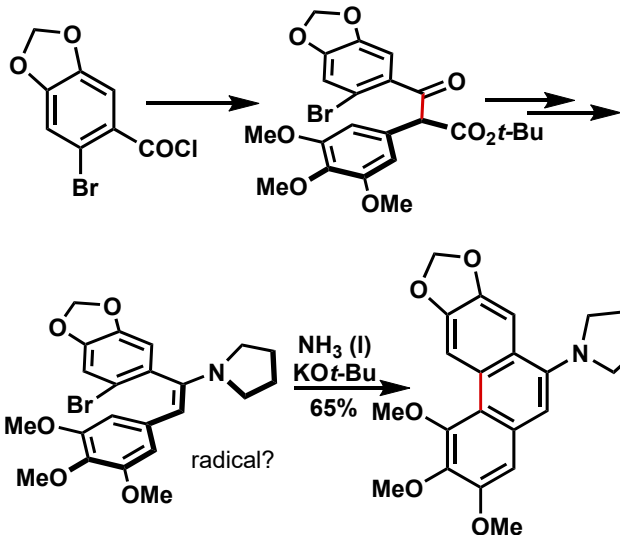
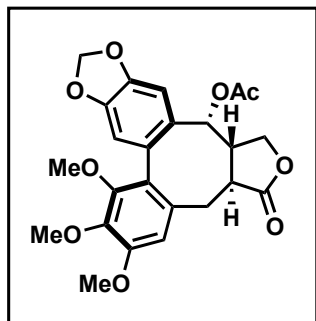
- Calciferol (Vitamin D) (See Gu's GM: Synthesis of Vitamin D)



B. Lythgoe* 1977, 1211

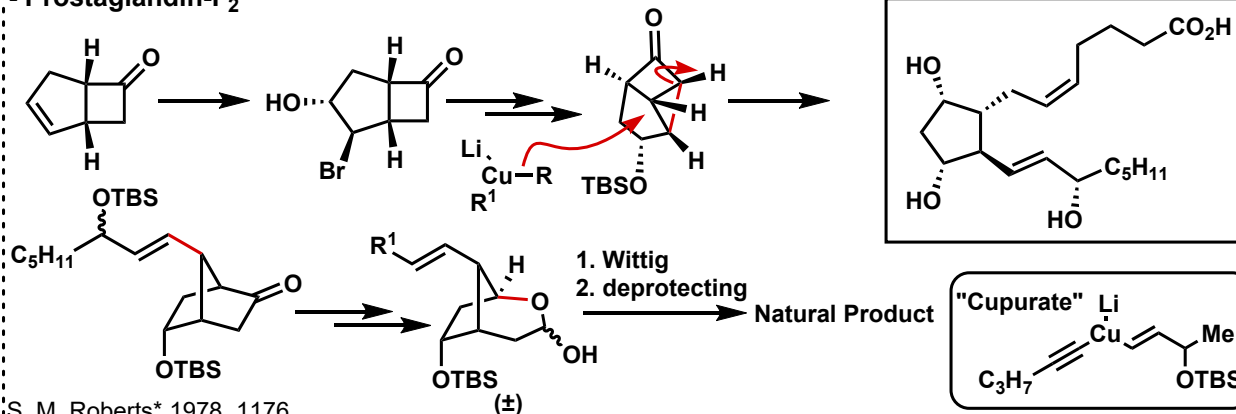
- (±)-Steganacin

- antileukaemic activity
- X-ray structure available
- Total synthesis in pre-cross coupling era



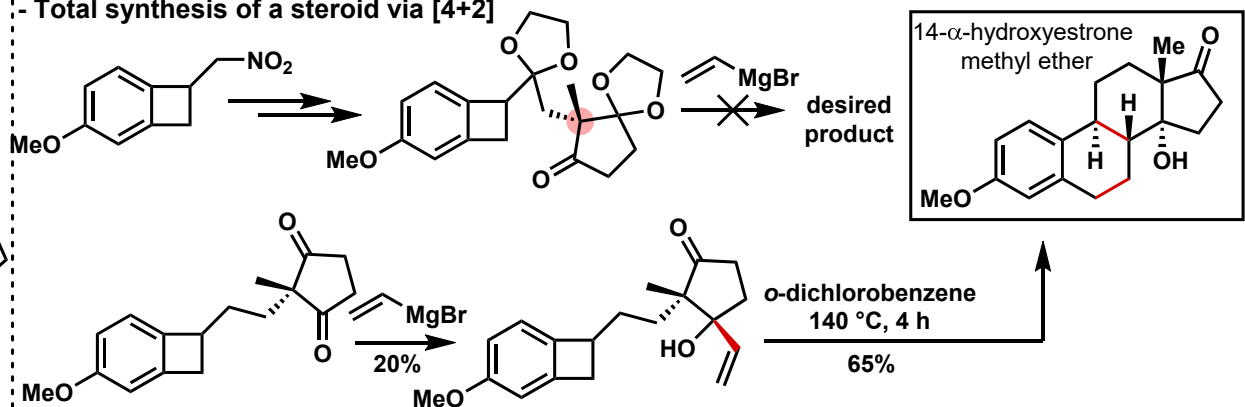
R. A. Raphael* 1977, 1674

- Prostaglandin-F₂

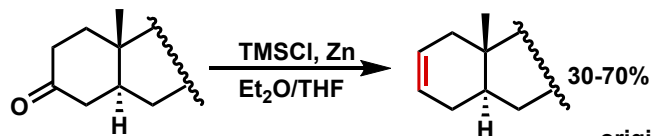


S. M. Roberts* 1978, 1176

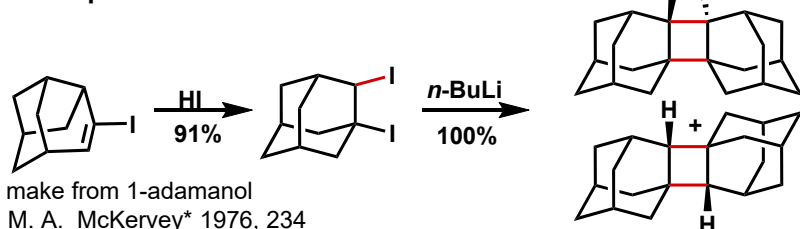
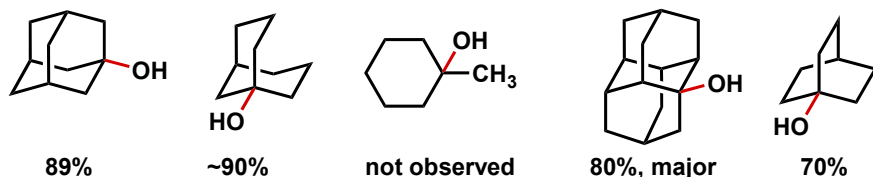
- Total synthesis of a steroid via [4+2]



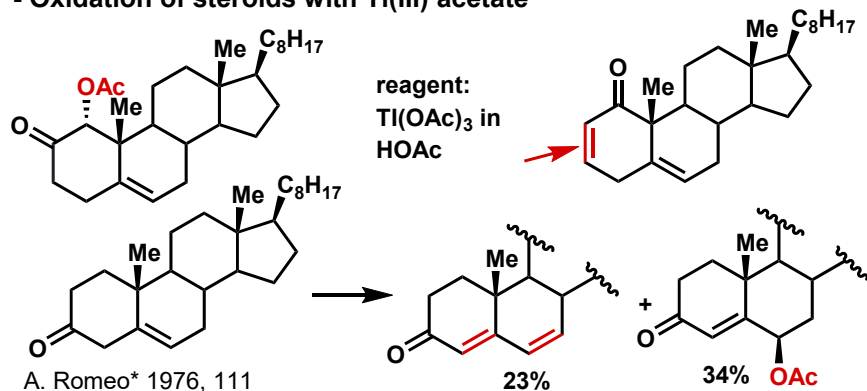
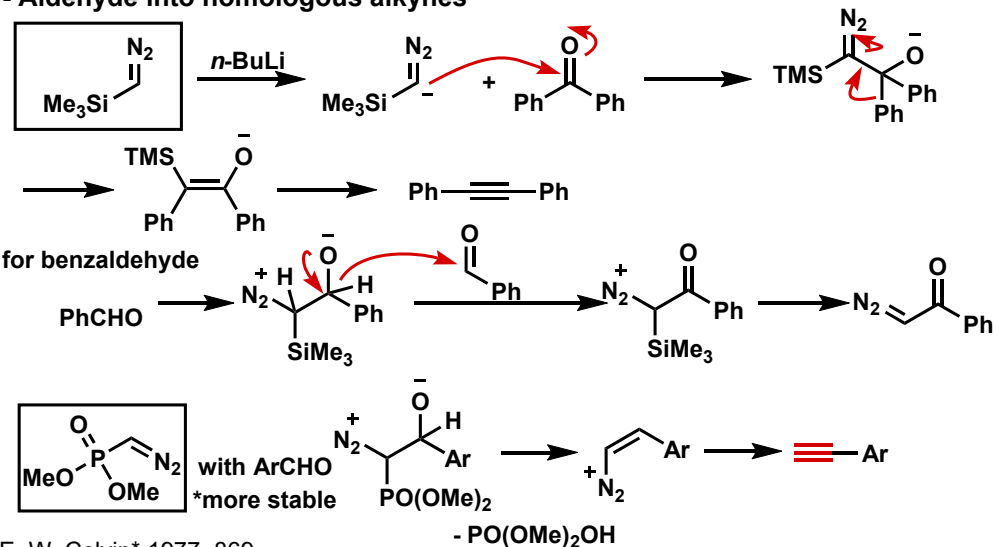
T. Kametani* 1979, 2830

Miscellaneous**- Deoxygenation with TMSCl and zinc**

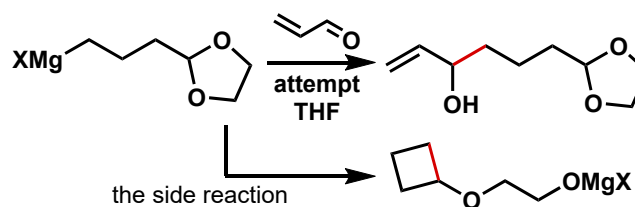
P. Hodge* 1975, 809

original method:
J.C.S. Chem. Commun., 1973, 935**- Non-coplanar double bonds - adamantene****- Bridgehead functionalisation of saturated hydrocarbons**General condition: Pb(OAc)₄/TFA, DCM, LiCl (0.1 M), 24 h in dark

J. M. Mellor* 1976, 2576

- Oxidation of steroids with Ti(III) acetate**- Aldehyde into homologous alkynes**

E. W. Colvin* 1977, 869

- An improved method for special Grignard reagents

cause lower concentration

Initial attempts:

- 1-2 M in THF
- refluxing for preparation
- ca. 60 °C for reaction, 30%

C. P. Forbes* 1977, 2353

Improved technical:

- up to 5 M, 2.8 eq. of Mg
- preparation below 30 °C
- -70 °C for reaction, 85%

Not included

- Hundreds of isolation and characterization works of natural products...
- Hundreds of biosynthesis studies by isotope labelling...
- Very very famous reaction...
- Degradation and semisynthesis of natural products...