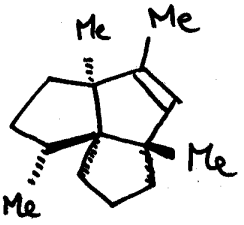
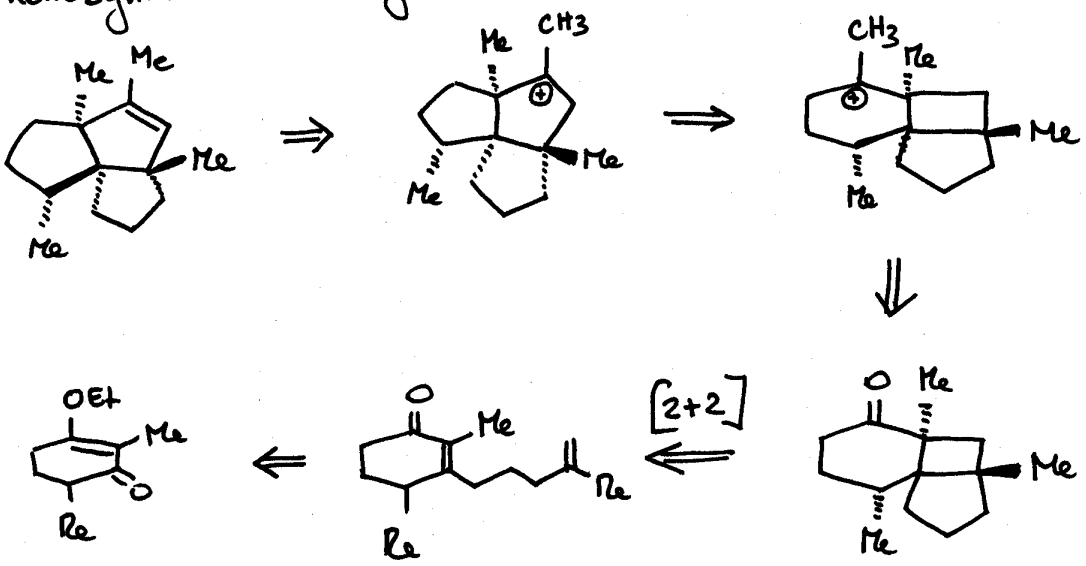
① Isocomen



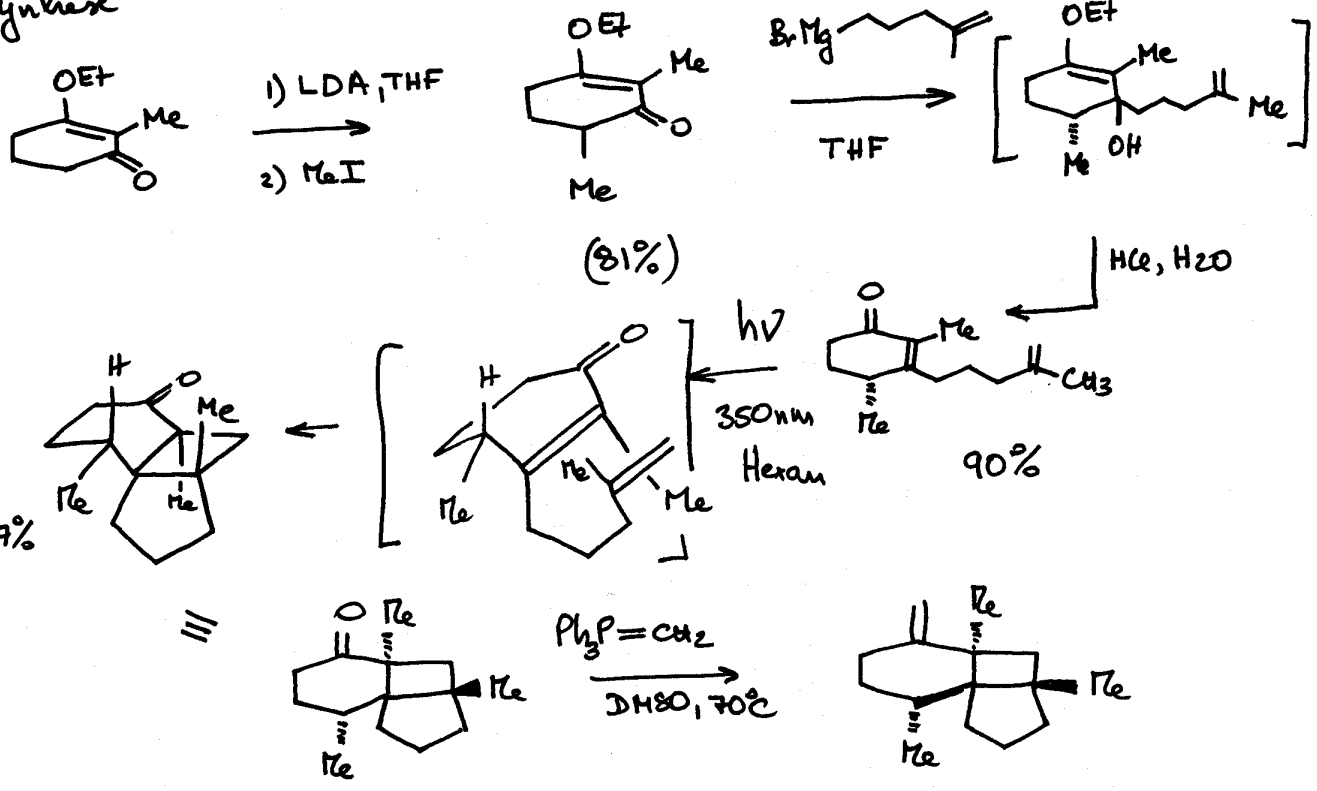
M.C. Pirrung (1979)

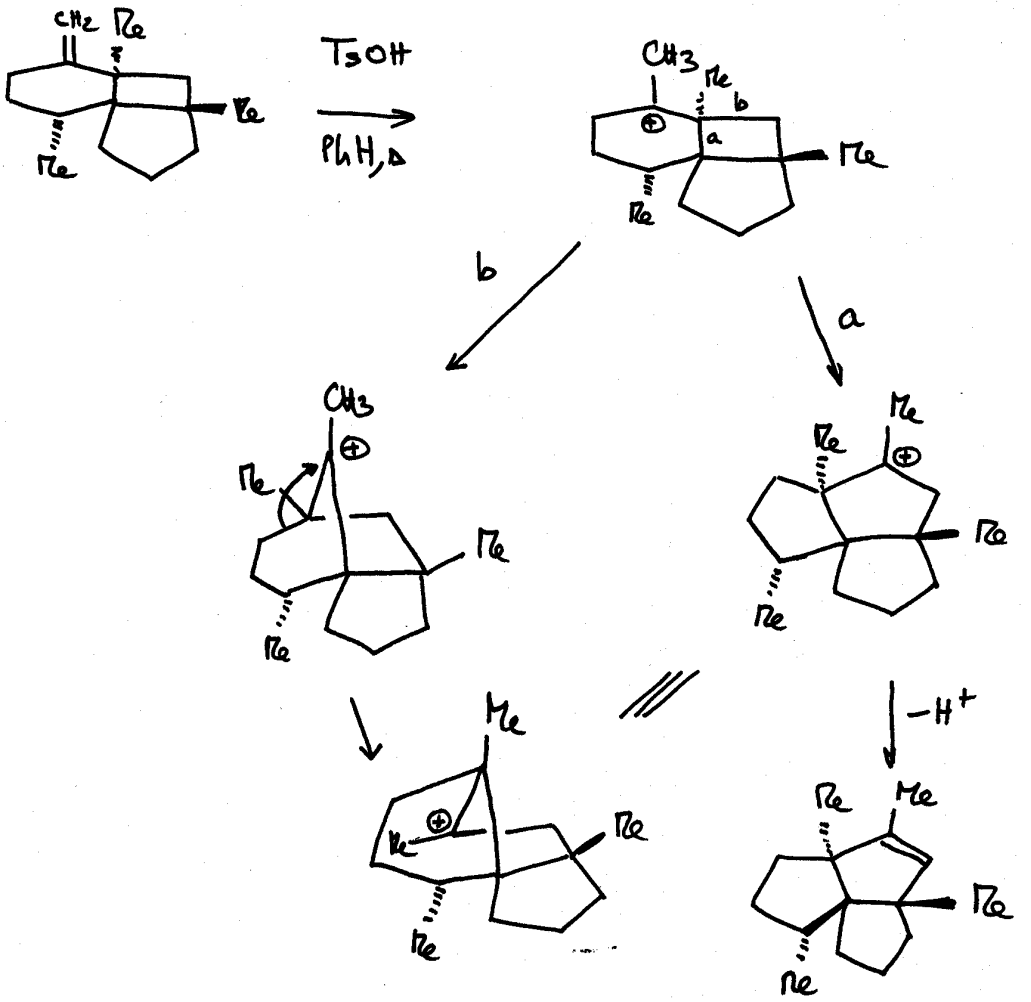
J. Am. Chem. Soc. 1979, 101, 7130
" " " " 1981, 103, 82

Retrosynthetische Analyse:



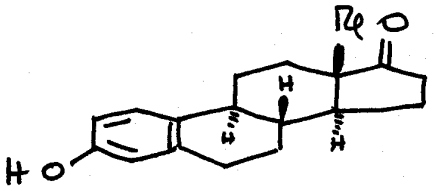
Synthese





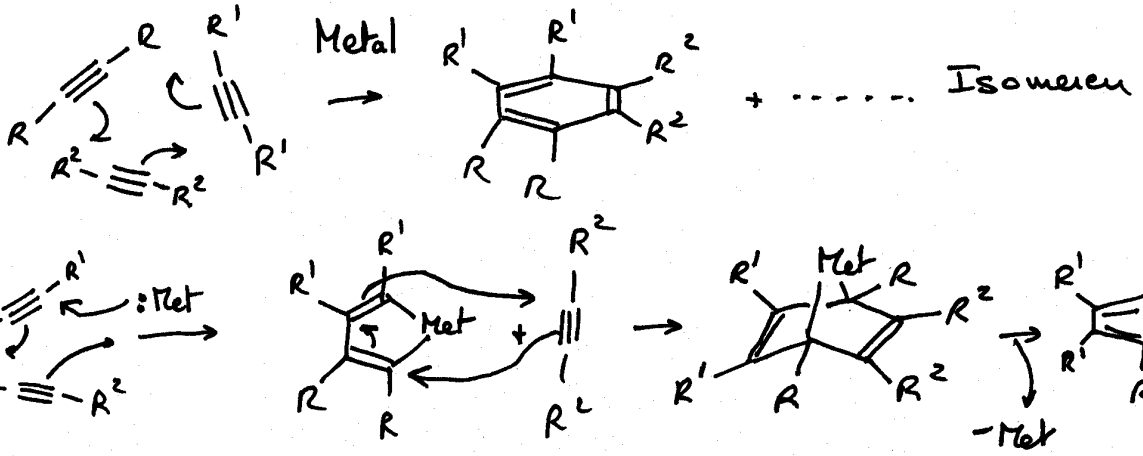
(±)-Isocomen

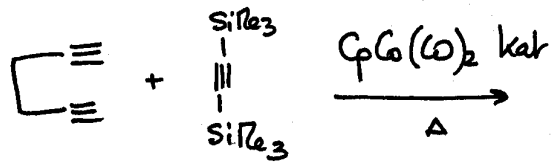
(2) Estron - Synthese

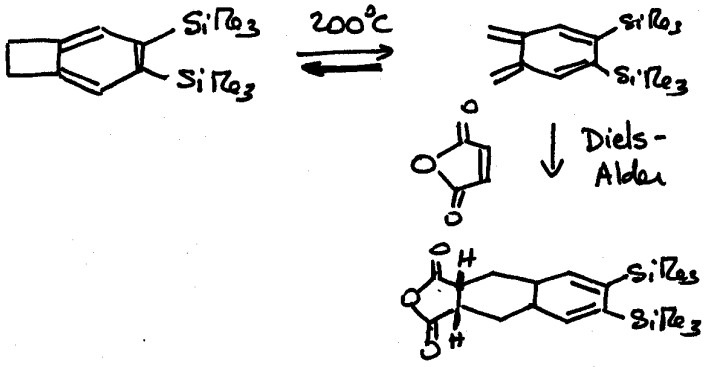


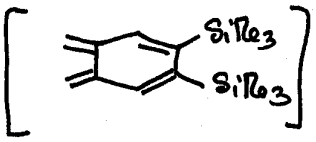
K.P.C. Vollhardt

Reppe - Synthese





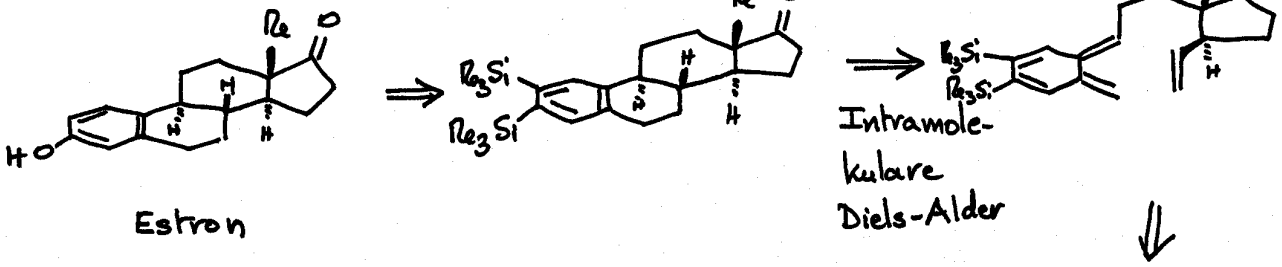




o-quinodimethan

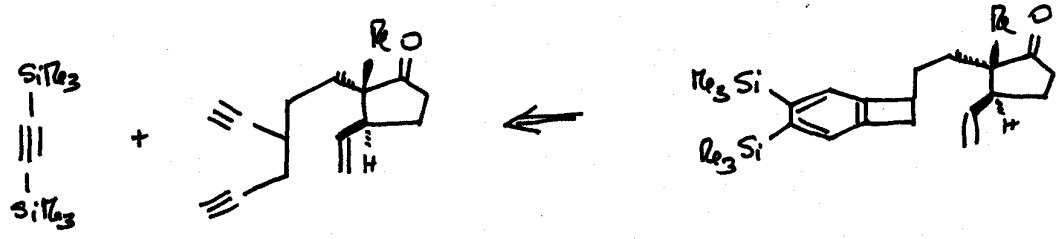
> 60%

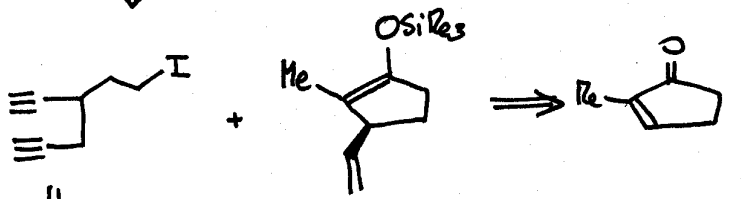
Retrosynthese



Estron

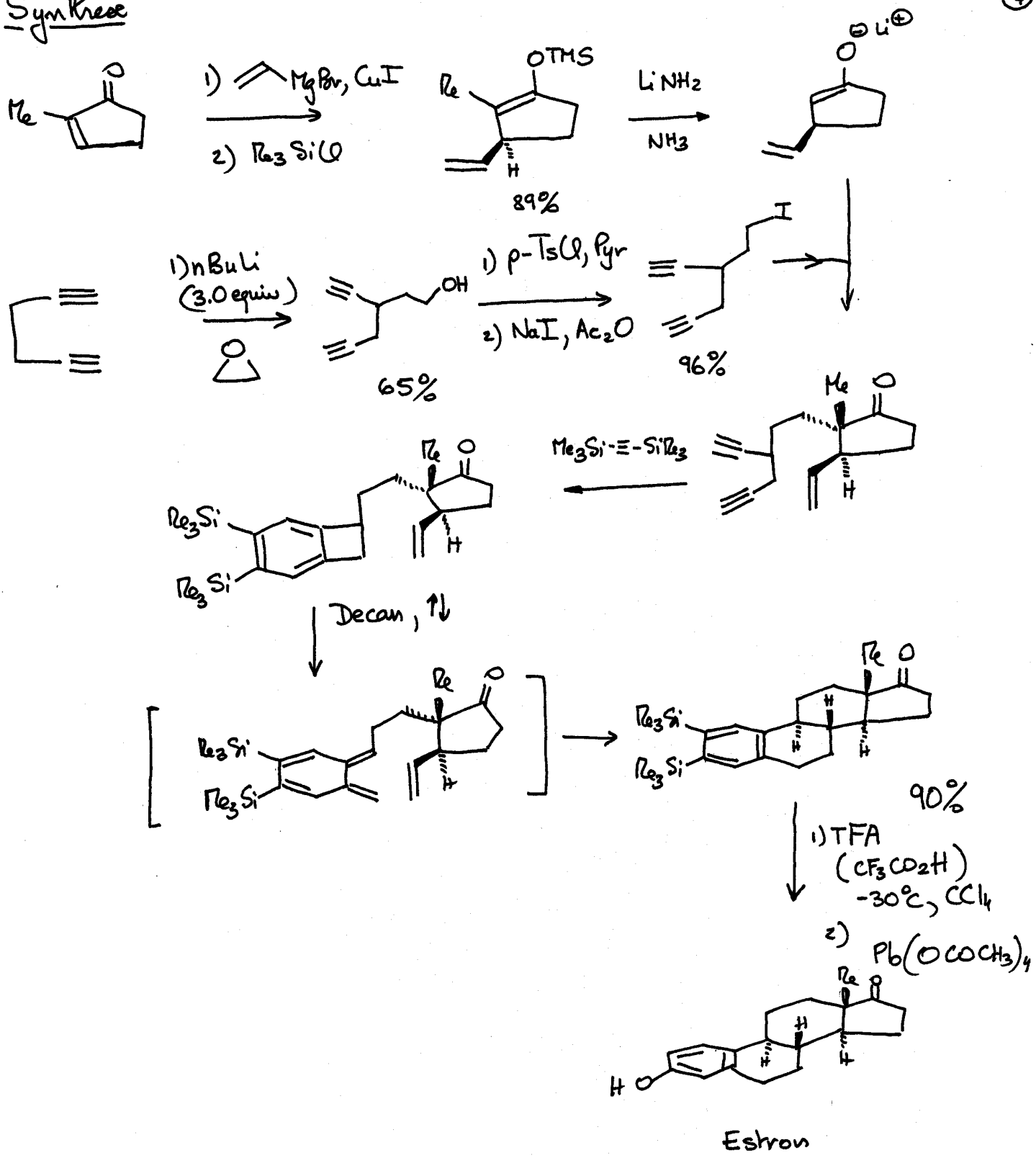
Intramolekulare Diels-Alder





1,5-Hexdiyn

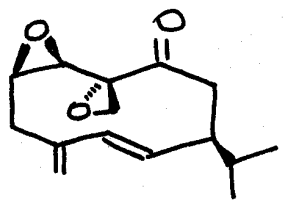
Synthese

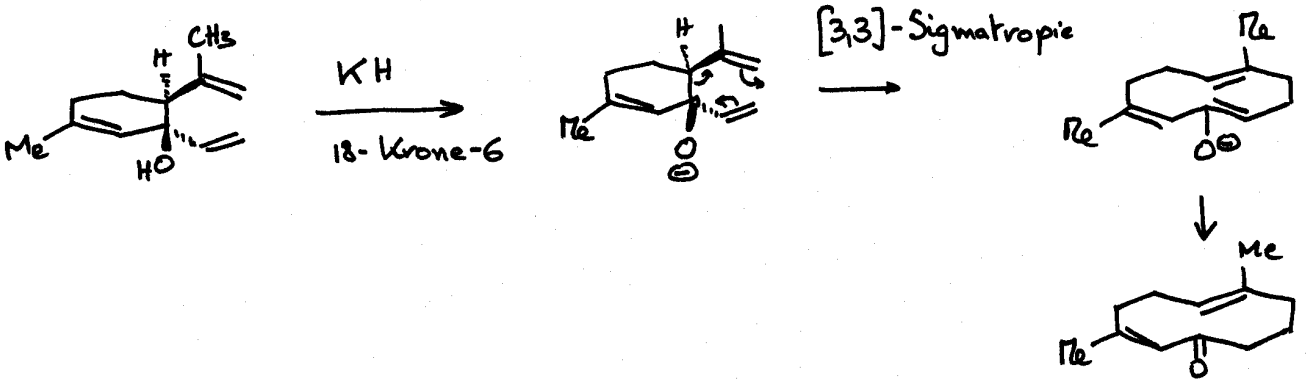


Estron

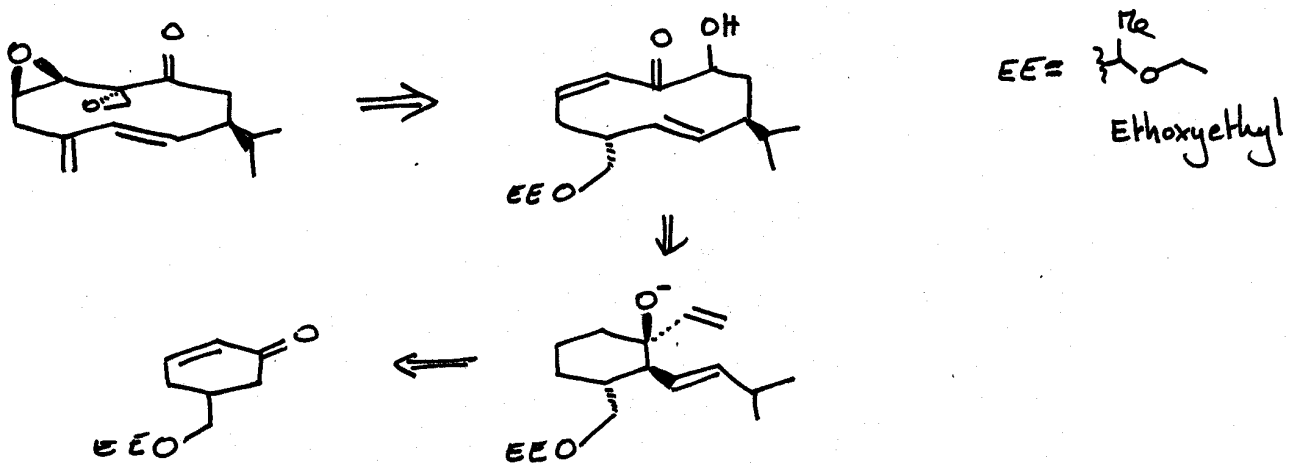
(3) Periplanon B

W.C. Still
J. Am. Chem. Soc. 1979, 101, 2493

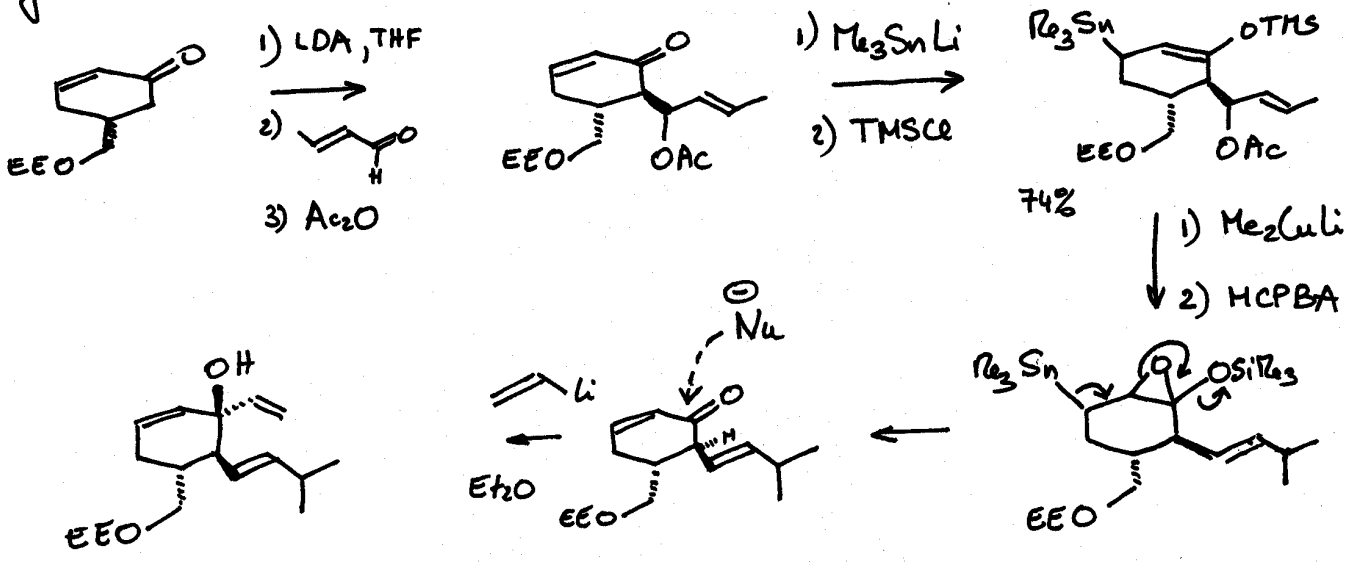


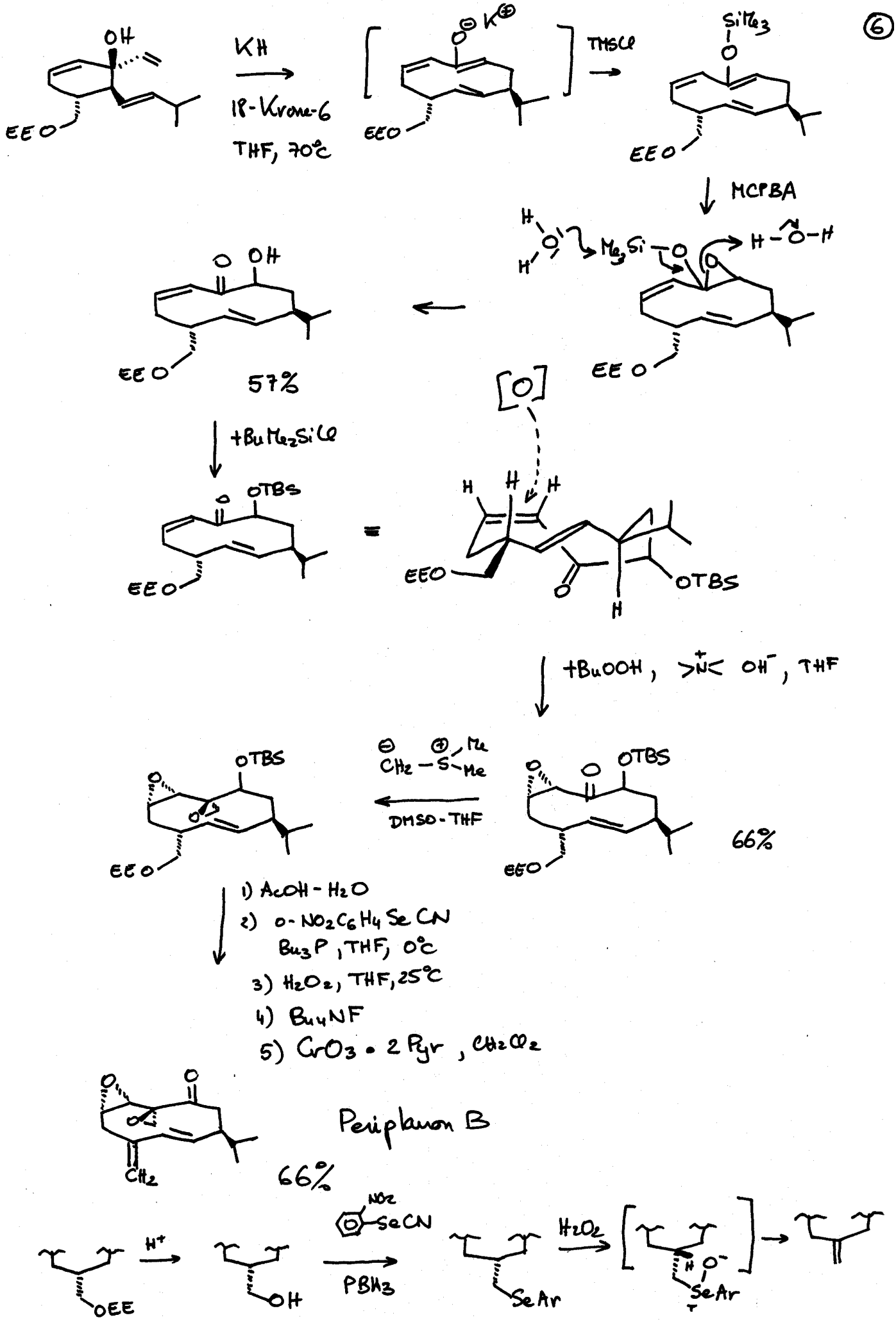


Retrosynthese



Synthese




KH
18-Krone-6
THF, 70°C
THSCl
MCPBA
57%
+BuMe2SiCl
[O]
+BuOOH, >N< OH⁻, THF
DMSO-THF
66%
1) AcOH - H2O
2) o-NO2C6H4SeCN
Bu3P, THF, 0°C
3) H2O2, THF, 25°C
4) Bu4NF
5) CrO3 • 2 Pyr, CH2Cl2
Periplanon B
66%
H+
PBH3
H2O2