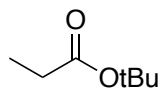


Synthesis Challenge 100

AG Wegner

27.01.2022



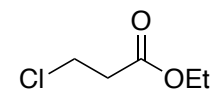
1-3

A

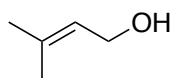


B

- 1) LDA, THF, -78°C , **I**
- 2) acetone, Ac_2O , H_2SO_4 (conc)
- 3) Et_3N , CH_2Cl_2

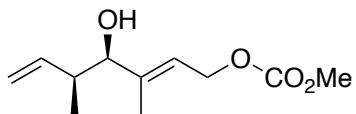


I



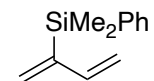
6-8

C



D

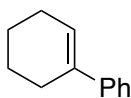
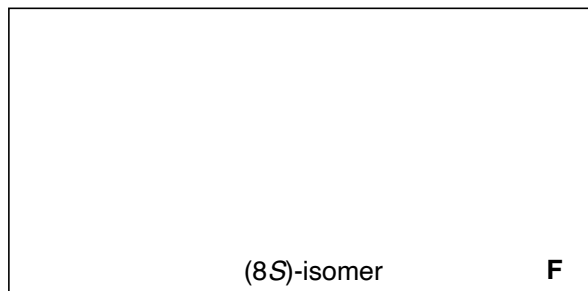
- 4) ClCO_2Me , pyridine, CH_2Cl_2
- 5) SeO_2 , $t\text{BuOOH}$, CH_2Cl_2
- 6) $\text{RuHCl}(\text{CO})\text{PPh}_3$ (5mol%), (R)-SEGPHOS (5mol%), 2-PrOH, **II**, dioxane, then TBAF, DMSO



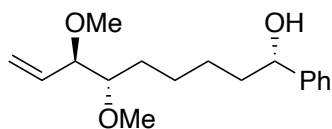
II

B + D

↓ 7-9

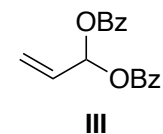
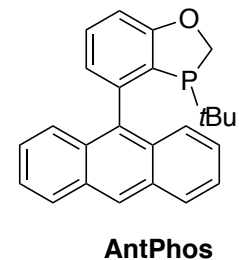


↓ 10-13

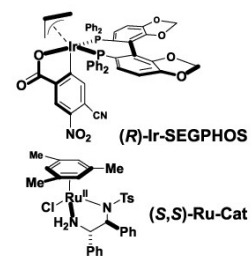


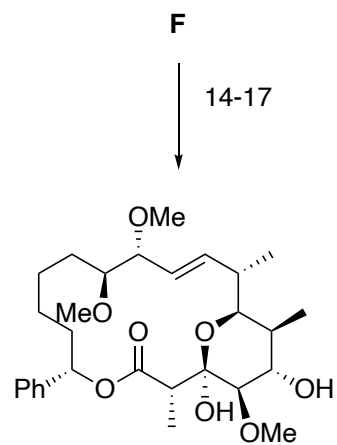
G

7) Hoveyda-Grubbs-II (15mol%), dioxane, 85°C
 8) $\text{K}_2\text{OsO}_2(\text{OH})_4$ (10mol%), $(\text{DHQ})_2\text{PHAL}$ (20mol%), $\text{K}_3\text{Fe}(\text{CN})_6$, MeSO_2NH_2 , K_2CO_3 , NaHCO_3 , $t\text{BuOH-H}_2\text{O}$ (1:1)
 9) $\text{Pd}(\text{OAc})_2$ (5mol%), (R)-AntPhos (5mol%), $\text{HCO}_2\text{H}:\text{Et}_3\text{N}$ (1:2), MeCN



10) O_3 , CH_2Cl_2 , then SMe_2
 11) (R)-Ir-SEGPPOS (5mol%), 2-PrOH, K_3PO_4 , THF, **III**, then MeOH, K_2CO_3
 12) Ag_2O , MeI, CH_2Cl_2 , 4Å MS
 13) (S,S)-Ru-Cat (5Mol%), HCO_2H , Et_3N , MeCN, 4Å MS





- 14) CSA (5mol%), PhCH(OMe)₂, CH₂Cl₂
- 15) Ag₂O, MeI, DCE, 45°C
- 15) **G**, **IV** (20mol%), PhMe, 50°C
- 16) PhMe₃, 140°C
- 17) AcOH (70% in H₂O), 80°C

