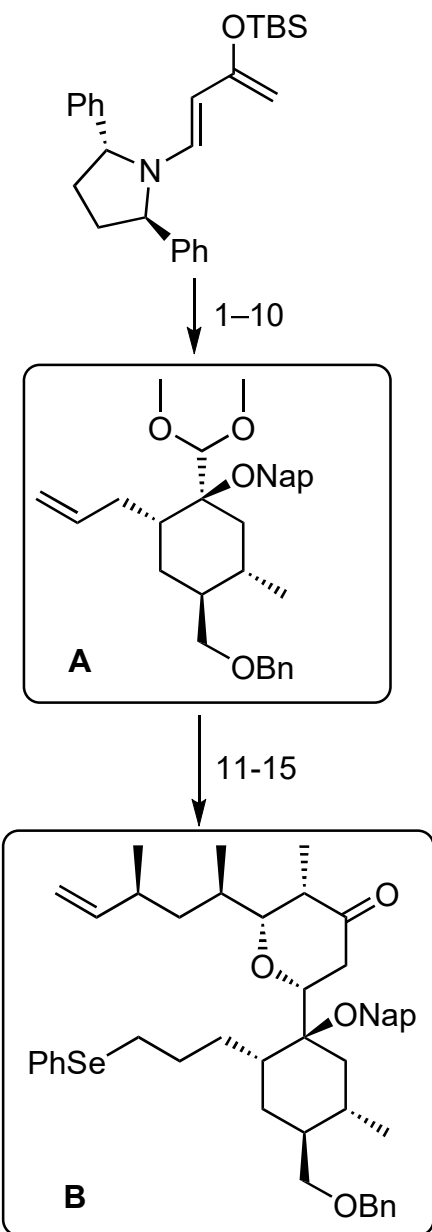
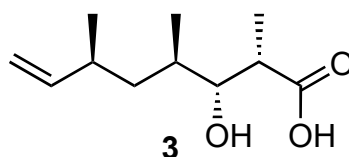
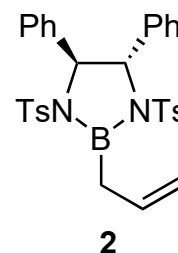
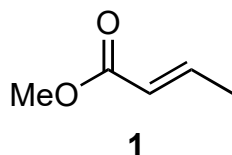


Total Synthesis of (-)-Okilactomycin

A. B. Smith, K. Basu, T. Bosanac, *J. Am. Chem. Soc.* **2007**, *129*, 14872–14874.

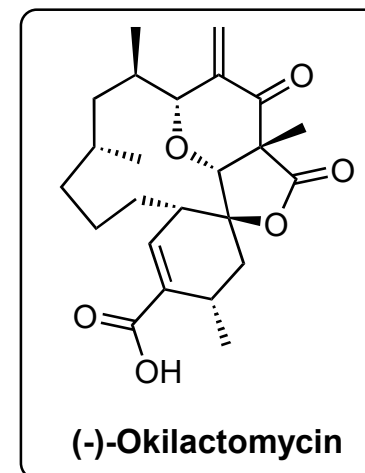


- 1) **1**, PhMe
- 2) LiAlH_4
- 3) NaHMDS, BnBr, TBAI
- 4) 10% HF-MeCN
- 5) L-Selectride, *then* PhNTf₂
- 6) $\text{Pd}(\text{PPh}_3)_4$, LiCl, CO, Bu_3SnH
- 7) **2**
- 8) KH, 18-C-6 *then* Me_2SO_4
- 9) *m*CPBA, MeOH
- 10) NaH, 2-naphthylmethyl bromide



- 11) $\text{Cp}_2\text{Zr}(\text{H})\text{Cl}$ *then* NBS
- 12) PhSeH, Cs_2CO_3
- 13) **3**, *i*-PrOTMS, TMSOTf
- 14) Cp_2TiMe_2
- 15) Me_2AlCl

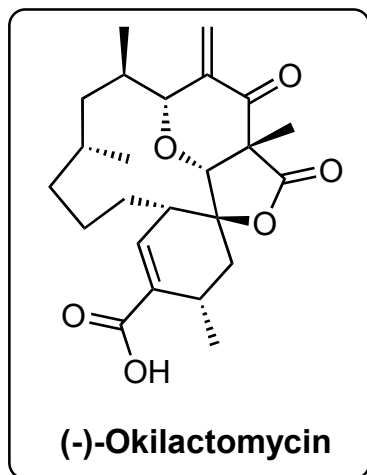
- 8) Name of the reaction?
Oxy-Cope rearrangement
- 9) Hint: note MeOH as solvent
- 11) Name of the reagent?
Schwartz's reagent
- 14-15) Name of the sequence?
Petasis-Ferrier



B

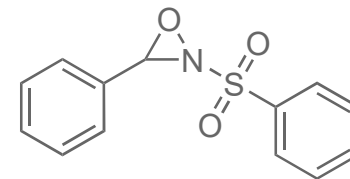


16-29



- 16) Davis oxaziridine, pyridine
- 17) DDQ
- 18) KHMDS, MeOCOCI
- 19) NaOMe
- 20) MeI, K₂CO₃
- 21) HG-II
- 22) H₂, Pd/C
- 23) *o*-NO₂PhSeCN, Bu₃P, pyridine *then* H₂O₂
- 24) SeO₂, *t*-BuOOH
- 25) SOCl₂
- 26) NaHMDS, PhSeCl
- 27) Me₃NO
- 28) NaIO₄
- 29) NaClO₂, NaH₂PO₄, 2-methyl-2-butene

16) Structure of Davis oxaziridine?



18) Hint: excess of each reagent

23) Name of the reaction?

Grieco elimination

27) Name of the reaction?

Ganem oxidation

29) Name of the reaction?

Pinnick oxidation