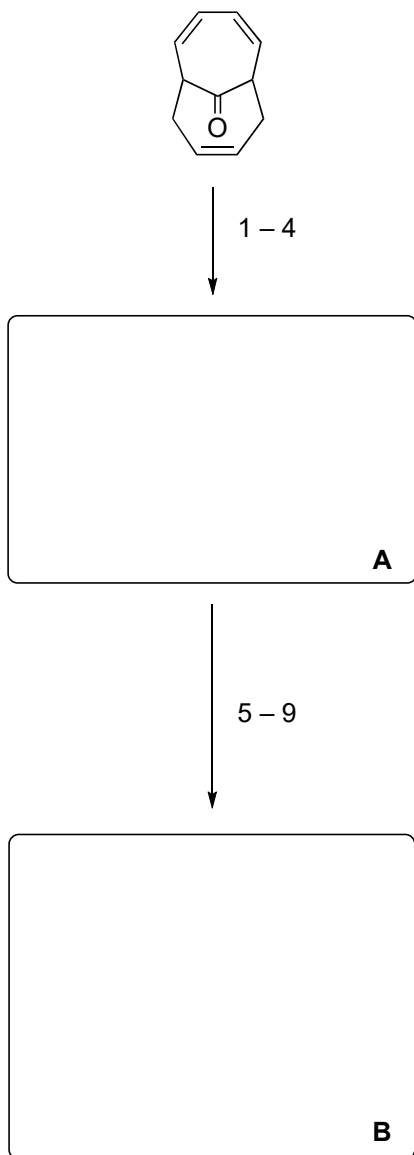
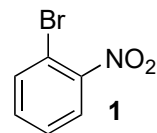


Total Synthesis of Actinophyllic Acid
Y. Yoshii, H. Tokuyama, D. Y.-K. Chen
Angew. Chem. Int. Ed. 2017, 56, 12277 – 12281.



- 1) ethylene glycol, *p*TsOH
- 2) OsO₄, NMO
- 3) Pb(OAc)₄, then NaBH(OAc)₃, PMBNH₂
- 4) TeocCl

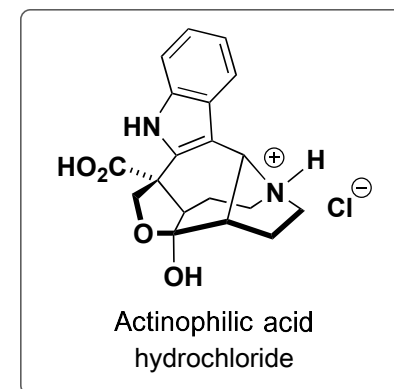
-
- 5) KHCO₃, Br-C(=N-OH)-Br
 - 6) MeOLi
 - 7) DDQ
 - 8) TFA, concentration
 - 9) Pd(OAc)₂, P(2-furyl)₃, Cs₂CO₃, **1**



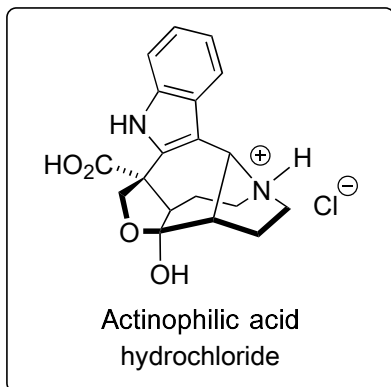
How would you prepare the starting material?

How would you prepare TeocCl?

Please explain the reaction mechanism of step 9.



10 – 12



- 10) HCl, MeOH
- 11) PdCl₂, H₂
- 12) LDA, CH₂O, then TFA, then 4M aq. HCl