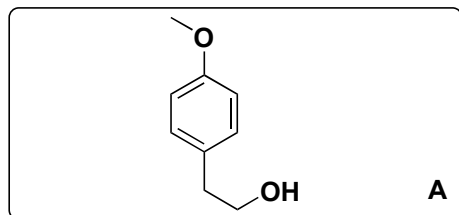
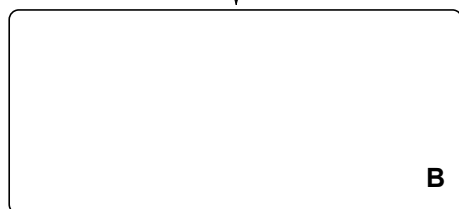


Total Synthesis of (+)-Alstilobanine C

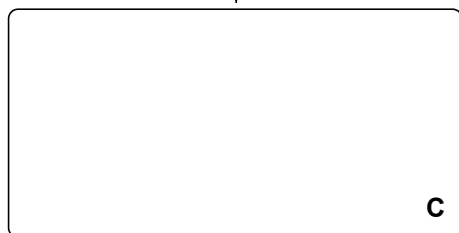
G. Li, N. Gaeng, C. Piemontesi, Q. Wang, J. Zhu, *Angew. Chem., Int. Ed. Eng.* **2021**, 60, 12392.



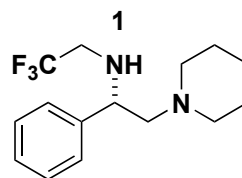
1-6



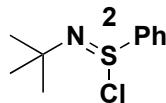
7-13



- 1) Li, NH₃, *t*-BuOH
- 2) H₂SO₄, THF, H₂O
- 3) H₂, Pd/C, EtOAc
- 4) MOMBr, DIPEA, CH₂Cl₂
- 5) **1**, *n*-BuLi, TMSCl, THF, -100 °C
- 6) Pd(OAc)₂, O₂, DMSO



- 7) vinyl magnesium bromide, CuBr • SMe₂, HMPA, *then* Mander's Reagent
- 8) MgBr₂, CH₂Cl₂, reflux
- 9) HOCH₂CH₂OH, TsOH, toluene, reflux
- 10) 9-BBN, NaOMe, I₂, THF
- 11) NaN₃, DMF
- 12) HCl, acetone
- 13) LiHMDS, **2**, THF, -78 °C



- 1) Name of the reaction
Discuss the outcome of the reaction if the substituent was -COOH instead of -OMe

- 5) Name of reagent **1**:

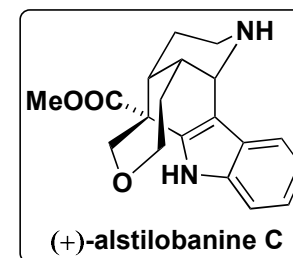
- 6) Name of the reaction

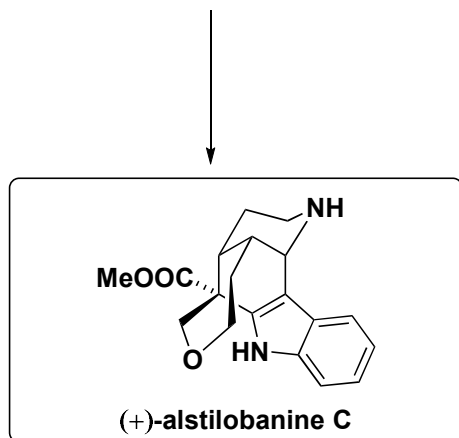
- 7) Discuss the role of HMPA in this step:

- 8) *Hint*: A heterocycle is formed.

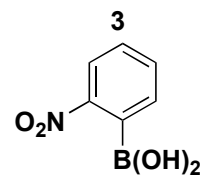
- 8) Name of the ring?

- 13) Name of **2**?





- 14) I₂, DMAP, pyridine
15) **3**, Pd₂(dba)₃, Cs₂CO₃, THF/H₂O
16) Zn, NH₄Cl, MeOH



14) Name of reaction?

