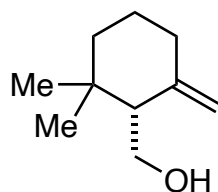
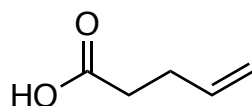
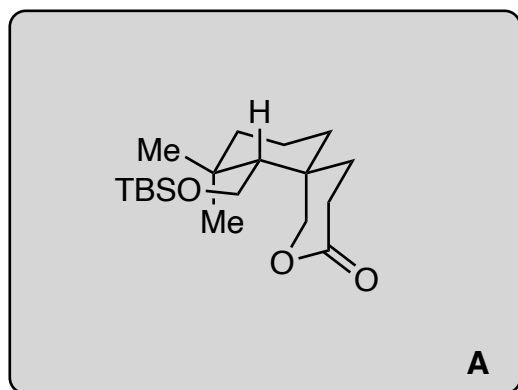


A Concise Total Synthesis of (-)-Maoecrystal Z

Cha, J. Y.; Yeoman, J. T. S.; Reisman, S. E.
J. Am. Chem. Soc. **2011**, *133* (38), 14964-14967.

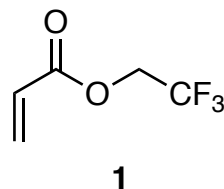


↓ 1-3

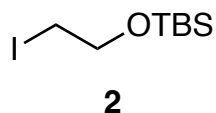


↓ 4-7

- 1) TBSCl, imidazole, CH₂Cl₂
- 2) *m*-CPBA, NaHCO₃, CH₂Cl₂
- 3) **1**, Cp₂TiCl₂, Zn⁰, 2,4,6-collidine·HCl, THF, rt

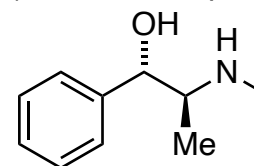


- 4) PivCl, Et₃N, THF, *then* (*S,S*)-pseudoephedrine
- 5) **2**, LDA, LiCl, THF
- 6) BH₃·NH₃, LDA, THF
- 7) I₂, PPh₃, imidazole, CH₂Cl₂



- 1) How would you make the starting material?
- 3) Hint: Loss of trifluoroethanol

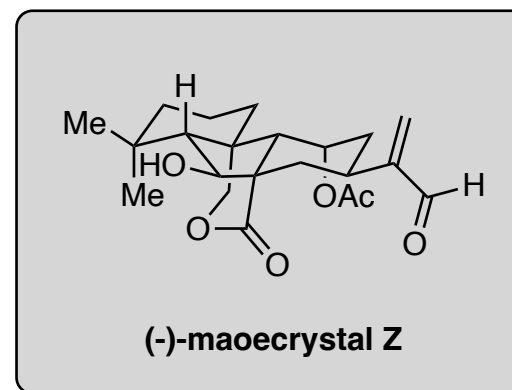
- 4) Structure of pseudoephedrine?

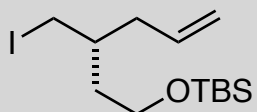


(*S,S*)-pseudoephedrine

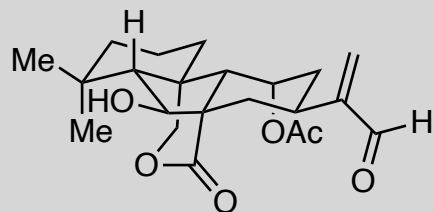
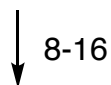
- 7) Name of reaction?

Appel reaction





B



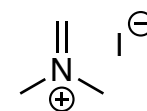
(-)-maoecrystal Z

- 8) **A**, LiHMDS, *then* **B**, 4:1 THF/HMPA, 0 to 23 °C
- 9) KHMDS, PhSeBr, -78 °C, *then* H₂O₂
- 10) H₂SiF₆, CH₃CN
- 11) DMP, CH₂Cl₂
- 12) Sml₂, LiBr, *t*-BuOH, THF, -78 °C
- 13) Ac₂O, TMSOTf, CH₂Cl₂
- 14) O₃, Et₃N, CH₂Cl₂
- 15) Eschenmoser's salt, Et₃N, CH₂Cl₂
- 16) 1M NaOH, 1:1 MeOH/H₂O

10) Hint: 3.7 eq H₂SiF₆

12) Hint: two rings formed

15) Structure of Eschenmoser's salt?



Eschenmoser's salt