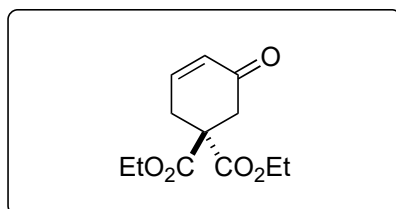


Asymmetric Total Syntheses of (+)-Davisinol and (+)-18-Benzoyldavisinol: A HAT-Initiated Transannular Redox Radical Approach

Kuan Yu, Fengjie Yao, Qingrui Zeng, Hujun Xie, Hanfeng Ding

J. Am. Chem. Soc. **2021**, *143*, 10576–10581.



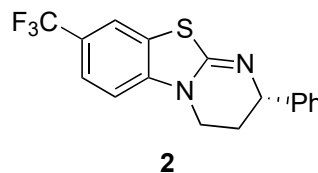
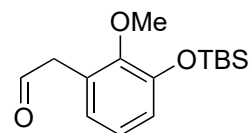
1–6



7–11



- 1) LDA, DIBAL
- 2) 2,2-DMP, PPTS, acetone
- 3) LDA, LiBr, **1**
- 4) Ac₂O, DIPEA, **2**
- 5) L-Selectride, PhNTf₂
- 6) [Pd(PPh)₃]₄, LiCl, CO, Sn(C₂H₃)₄; TBAF



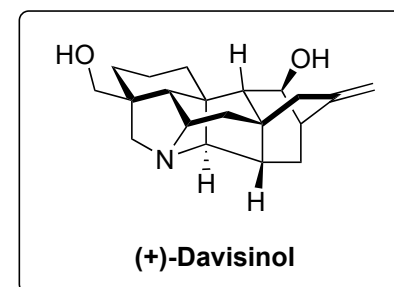
- 7) PhI(OAc)₂, MeOH
- 8) Co(acac)₂, TMDSO, O₂, *i*-PrOH
- 9) Sml₂, MeOH
- 10) MePPh₃Br, *t*-BuOK; acidic work-up
- 11) BzCN, DMAP

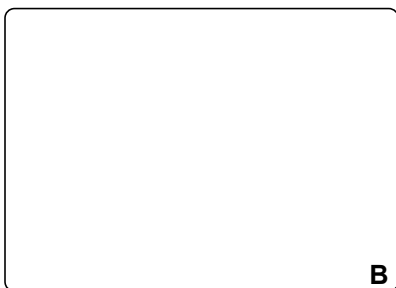
4) Classify the reaction.

5) Give the structure of L-Selectride.

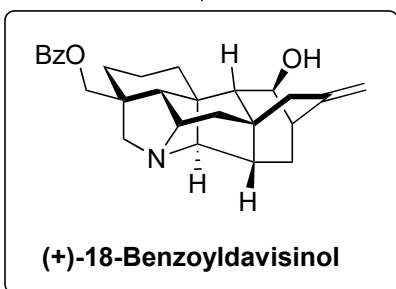
6) Name the reaction.

8) Propose a mechanism.

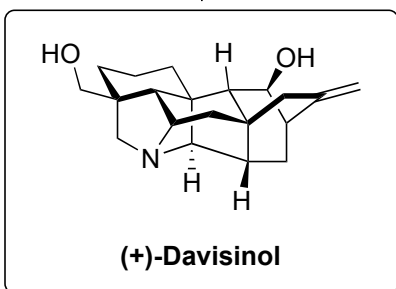




12-16



17



- 12) TEMPO, NCS
- 13) PMBNH₂, AcOH; NaBH₄, NaHCO₃
- 14) TBSOTf, NEt₃; DDQ
- 15) TCDI, DMAP
- 16) AIBN, *n*-Bu₃SnH; TFA

15) Name the newly formed functional group.

- 17) K₂CO₃, MeOH

