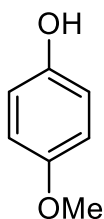


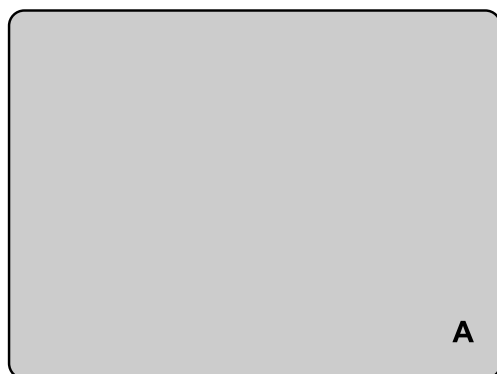
Enantioselective Total Synthesis of (+)-Pedrolide

Marlene Fadel and Erick M. Carreira

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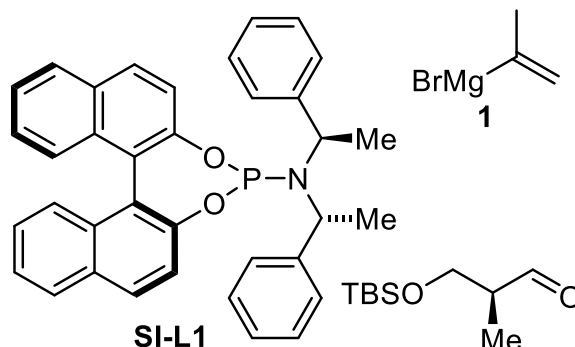


1-7

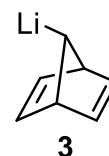


8-13

- 1) $\text{PhI}(\text{OAc})_2$, MeOH
- 2) $\text{Cu}(\text{OTf})_2$, **SI-L1**, then Me_2Zn
- 3) Me_3SiOTf , Et_3N then *m*CPBA, NaHCO_3 , then TBAF
- 4) **1**, THF
- 5) aq. NH_4Cl
- 6) Et_3SiOTf (3 eq.), 2,6-lutidine
- 7) $\text{Fe}(\text{acac})_3$, PhSiH_3



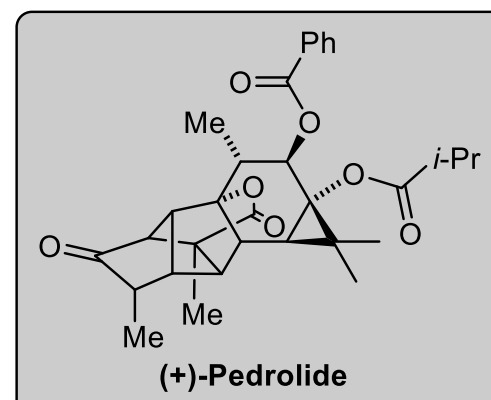
- 8) LDA, THF, $-78\text{ }^\circ\text{C}$ then TMS-Cl
- 9) MeLi, then **2**, then Me_3SiOTf , Et_3N ,
- 10) **3**
- 11) TBAF (2 eq.)
- 12) $\text{PhI}(\text{OAc})_2$, TEMPO
- 13) MeSO_2Cl , Et_3N , DMAP, $40\text{ }^\circ\text{C}$

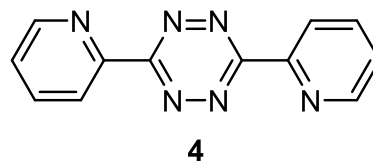
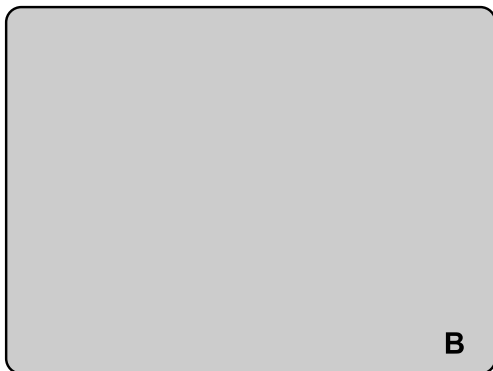


3) Name of the reaction.

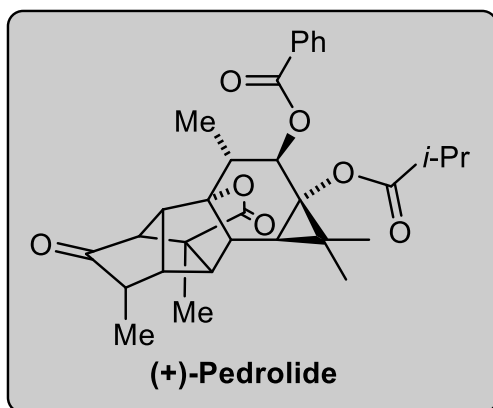
9) From which chiral pool building block is **2** derived from

12) Hint: A new ring is formed. Structure of TEMPO and show a mechanism for the oxidation





14-20



- 14) **4**, MeOH, 0°C
- 15) *m*CPBA, NaHCO₃
- 16) Me₂CuLi
- 17) DMP
- 18) HF·pyridine
- 19) *i*-PrCOCl, Et₃N
- 20) (PhCO)₂O, pyridine, DMAP

14) Please show the mechanism