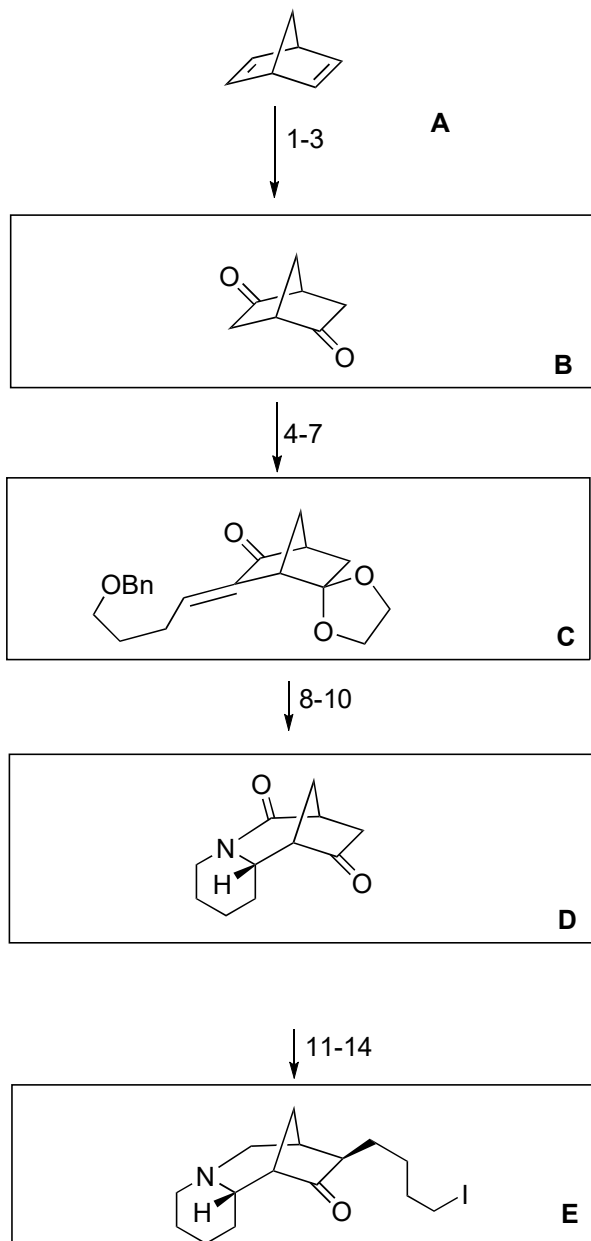


Synthesis Challenge 93

First Asymmetric Total Synthesis of (+)-Spaereine, B. T. Smith, J. A. Wendt, J Aubé, *Org. Lett.* **2002**, 4, 2577.

18.02.2021

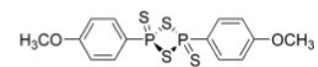


- 1) HSiCl_3 , $[(\text{Allyl})\text{PdCl}]_2$, (-)-S-MOP
- 2) H_2O_2
- 3) Swern

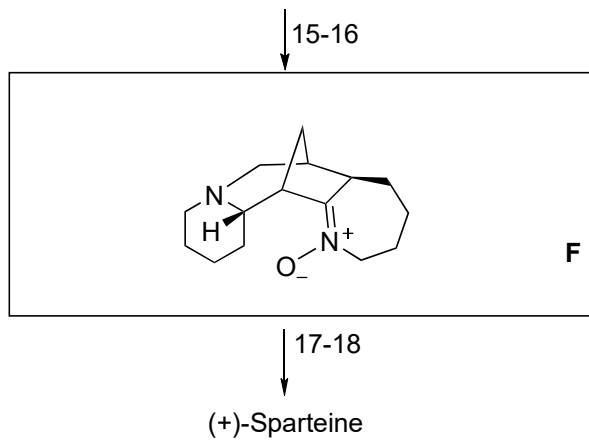
- 4) Ethylene glycol, TsOH
- 5) LDA, $\text{BnO}(\text{CH}_2)_3\text{CHO}$
- 6) MsCl
- 7) DBU

- 8) H_2 , Pd/C, $\text{Pd}(\text{OH})_2$
- 9) $\text{Zn}(\text{N}_3)_2 \times 2 \text{ pyr}$, DEAD, PPh_3
- 10) TiCl_4

Step 10) Schmidt reaction

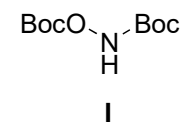


- 11) Lawesson's reagent
- 12) Raney Ni
- 13) LDA, $\text{I}(\text{CH}_2)_4\text{Cl}$
- 14) NaI, acetone



15) I, K₂CO₃, DMF
16) TFA, 4Å MS; then NaHCO₃

17) hν (254 nm), benzene
18) LAH, THF, reflux



Please, provide a beautiful 3D drawing of the final product!

