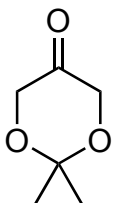


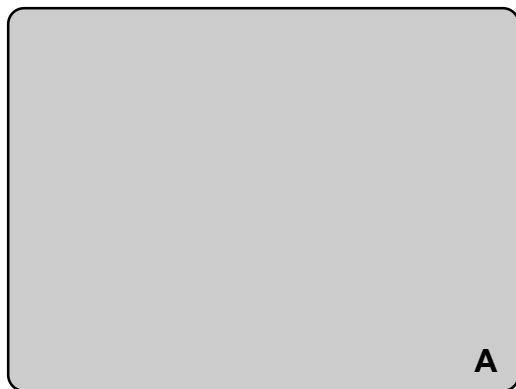
Total Synthesis of (±)-Isophellibiline

Raymond L. Funk, Johannes Belmar

Tetrahedron Lett. **2012**, 53, 176–178.



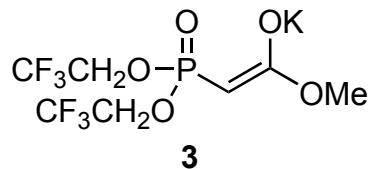
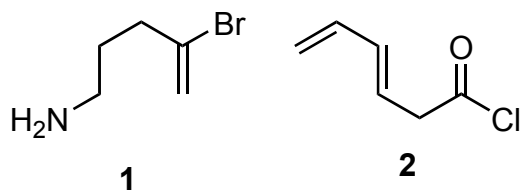
1-2



3-6



- 1) **1**, Na₂SO₄ then **2**, PhNEt₂
2) PhMe, 110 °C



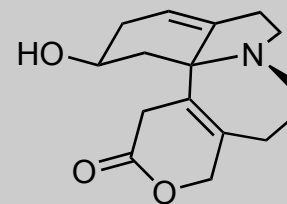
- 3) **3**, 18-Crown-6
4) Hermann's cat, NaOCOH, DIPEA, reflux
5) LiOH
6) PhMe, 110 °C

2) Classify the reaction

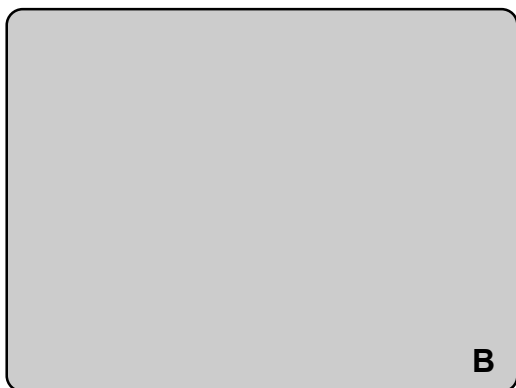
3) Please name the reaction

4) Please name the reaction

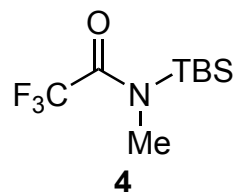
6) Classify the reaction



Isophellibiline



7-16



- 7) $\text{CH}(\text{OMe})_3$, $\text{HOCH}_2\text{CH}_2\text{OH}$, CSA
- 8) $n\text{-BuLi}$, PhSeSePH then H_2O_2 , pyridine
- 9) LDA, HMPA
- 10) $^1\text{O}_2$, rose bengal, $h\nu$ then NH_2CSNH_2
- 11) **4**
- 12) Ac_2O , Et_3N , DMAP
- 13) DBU, C_6H_6 , reflux
- 14) L-seletride then AcOH
- 15) $\text{AlH}_3 \cdot \text{NEt}(\text{Me})_2$
- 16) HCl, H_2O

9) *hint: a rearrangement of diene happens*

11) *hint: only one alcohol is protected*