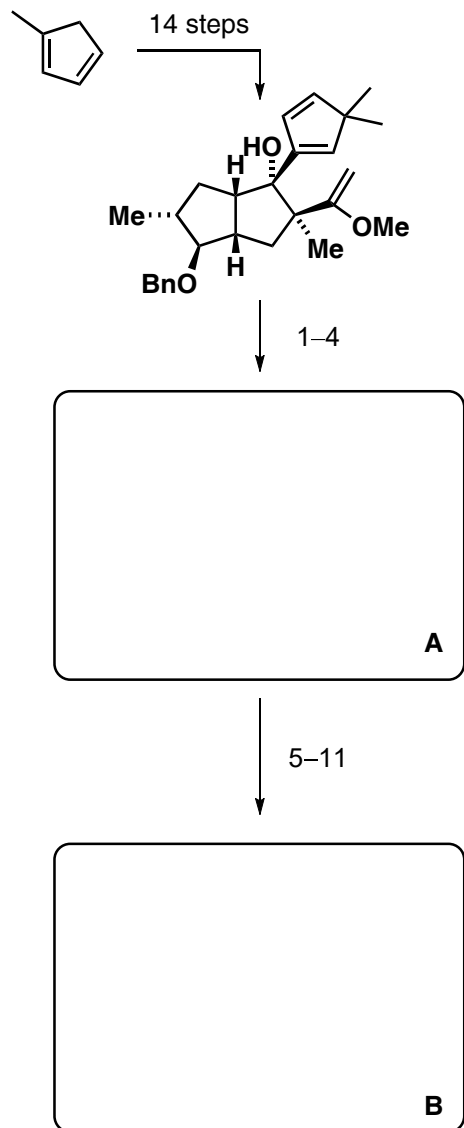


Total Synthesis of Jatrophatrione

L. A. Paquette, S. D. Edmondson, N. Monck, R. D. Rogers, 1999, 64, 3255–3265.

L. A. Paquette, S. Nakatani, T. M. Zydowsky, S. D. Edmondson, L.-Q. Sun, R. Skerlj, *J. Org. Chem.* **1999**, 64, 3244–3254.

L. A. Paquette, J. Yang, Y. O. Long, *J. Am. Chem. Soc.* **2002**, 124, 6542–6543.



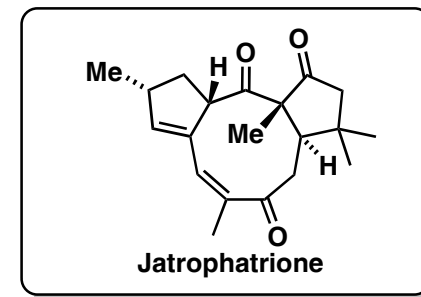
- 1) KO t -Bu, 18-C-6, then MeI
- 2) NBS
- 3) LiBr, Li₂CO₃
- 4) Zn

- 5) LiAlH₄, CuI
- 6) LiAlH₄
- 7) MsCl, (i -Pr)₂NEt
- 8) KO t -Bu
- 9) LiAlH₄
- 10) Me₂SiHCl, NEt₃
- 11) H₂PtCl₆

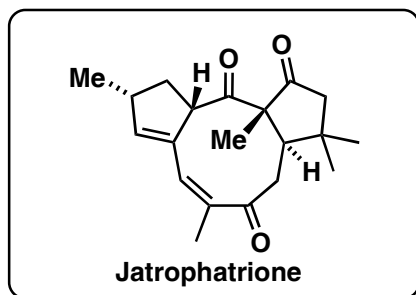
Step 1: Please name the reaction.

Hint: the product contains four rings

Step 8: Please name the reaction.



12-19



- 12) H_2O_2 , KF, KHCO_3
- 13) im_2CO
- 14) $\text{Hg}(\text{O}_2\text{CCF}_3)_2$
- 15) TPAP, NMO
- 16) BCl_3
- 17) im_2CS , Δ
- 18) K_2CO_3
- 19) IBX

Step 12: Please name the reaction.

Hint step 14: an oxidative transposition takes place
Step 15: Please name the reaction.