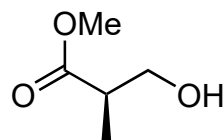
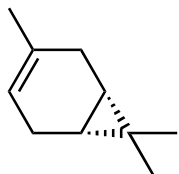


# Enantioselective Total Synthesis of (+)-Euphorikanin A

M. J. Classen, M. N. A. Böcker, R. Roth, W. M. Amberg, E. M. Carreira

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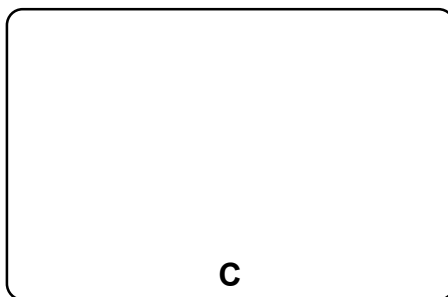


1-5

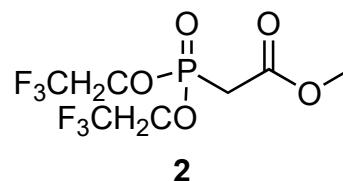
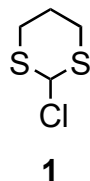
6-7



8-14



1. O<sub>3</sub>, MeOH, CH<sub>2</sub>Cl<sub>2</sub> then Me<sub>2</sub>S
2. (MeO)<sub>3</sub>CH, CeCl<sub>3</sub>·H<sub>2</sub>O
3. LDA, THF then TMSCl
4. SnCl<sub>4</sub>, MeCN
5. AcOH, 120 °C
6. PMBCl, NaH, THF
7. DIBAL-H, CH<sub>2</sub>Cl<sub>2</sub>



8. CuI, MeLi, Et<sub>2</sub>O
9. TBSOTf, 2,6-lutidine, CH<sub>2</sub>Cl<sub>2</sub>
10. LiHMDS, THF, **1**
11. DDQ, CH<sub>2</sub>Cl<sub>2</sub>, pH 7 buffer
12. SO<sub>3</sub>·py, Et<sub>3</sub>N, CH<sub>2</sub>Cl<sub>2</sub>, DMSO
13. KHMDS, **2**, 18-crown-6, THF
14. SmI<sub>2</sub>, MeOH, THF

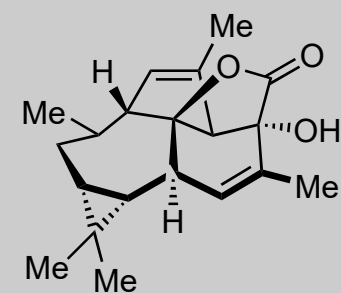
1. Name of chiral pool starting material?

11. Structure of DDQ?

12. Name of the reaction?

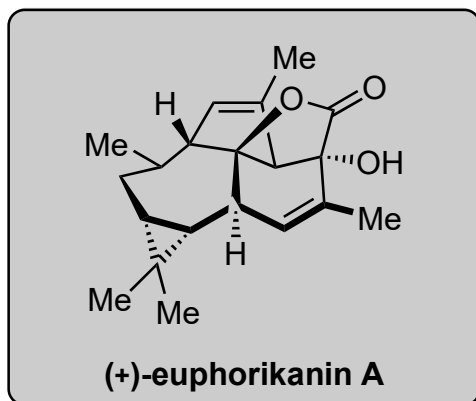
13. Name of the reaction?

14. Please show mechanism.

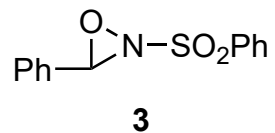


**(+)-euphorikanin A**

15-22



15.  $\text{Ph}(\text{O}_2\text{CCF}_3)_2$ , MeCN,  $\text{H}_2\text{O}$
16.  $\text{CBr}_4$ ,  $\text{PPh}_3$ ,  $\text{CH}_2\text{Cl}_2$
17. TBAF, THF
18. Martin's Sulfurane,  $\text{CH}_2\text{Cl}_2$
19.  $\text{CuI}$ , MeLi,  $\text{Et}_2\text{O}$  then  $\text{I}_2$
20. **3**, KHMDS, THF
21. DMP,  $\text{CH}_2\text{Cl}_2$
22. *t*-BuLi,  $\text{Et}_2\text{O}$



16. Name of the reaction?

18. Structure of reagent?

20. Name of reagent **3**?