Enantioselective Total Synthesis of (+)-Euphorikanin A

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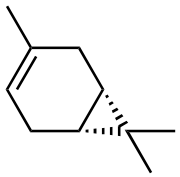

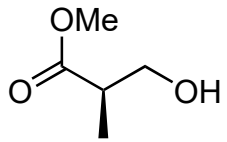

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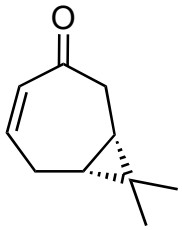
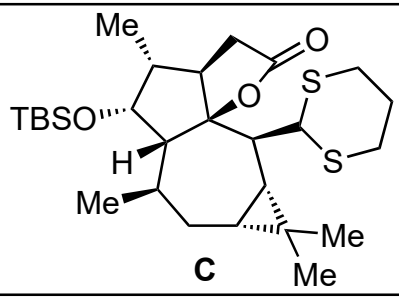


A

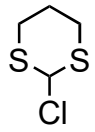
B

8-14



C

1. O_3, MeOH, CH_2Cl_2 *then* Me_2S
2. $(MeO)_3CH$, $CeCl_3•H_2O$
3. LDA, THF *then* TMSCl
4. $SnCl_4$, MeCN
5. AcOH, 120 °C
6. PMBCl, NaH, THF
7. DIBAL-H, CH_2Cl_2



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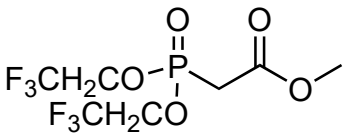


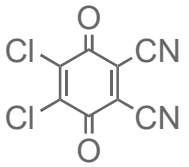
2

8. CuI, MeLi, Et_2O
9. TBSOTf, 2,6-lutidine, CH_2Cl_2
10. LiHMDS, THF, **1**
11. DDQ, CH_2Cl_2, pH 7 buffer
12. SO_3•py, Et_3N, CH_2Cl_2, DMSO
13. KHMDS, **2**, 18-crown-6, THF
14. SmI_2, MeOH, THF

1. Name of chiral pool starting material?

(+)-3-carene

11. Structure of DDQ?



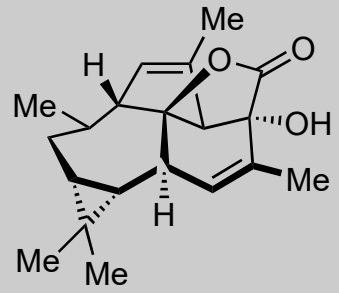
12. Name of the reaction?

Parikh-Doering Oxidation

13. Name of the reaction?

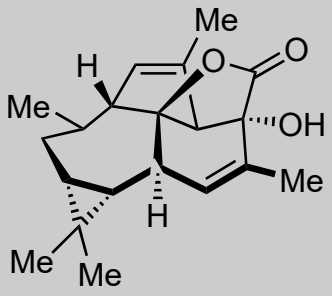
Still-Gennari Olefination

14. Please show mechanism.



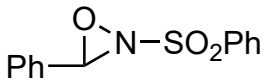
(+)-euphorikanin A

15-22



(+)-euphorikanin A

15. $PhI(O_2CCF_3)_2$, MeCN, H_2O
16. CBr_4, PPh_3, CH_2Cl_2
17. TBAF, THF
18. Martin's Sulfurane, CH_2Cl_2
19. CuI, MeLi, Et_2O *then* I_2
20. **3**, KHMDS, THF
21. DMP, CH_2Cl_2
22. *t*-BuLi, Et_2O



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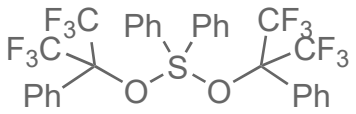
16. Name of the reaction?

Ramirez Olefination

18. Structure of reagent?



20. Name of reagent **3**?

Davis's oxaziridine