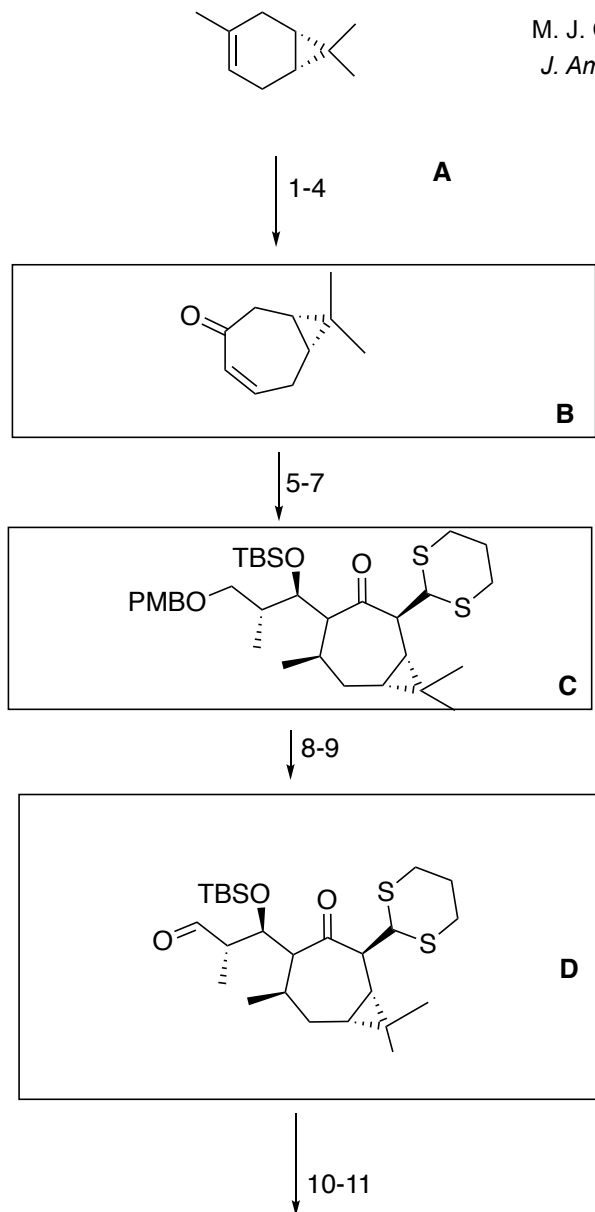


Synthesis Challenge 96

Enantioselective Total Synthesis of (+)-Euphorikanin A

M. J. Classen, M. N. A. Böcker, R. Roth, W. M. Amberg, E. M. Carreira,
J. Am. Chem. Soc. **2021**, ASAP: <https://doi.org/10.1021/jacs.1c04210>

10.06.2021



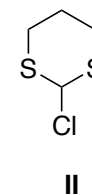
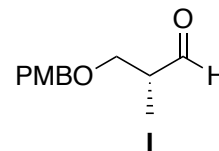
- 1) O_3 , $\text{MeOH}-\text{CH}_2\text{Cl}_2$ (10:1), -78°C , then Me_2S , then $\text{HC}(\text{OMe})_3$, $\text{CeCl}_3 \cdot 7\text{H}_2\text{O}$, r.t.
- 2) $\text{LiN}(\text{i-Pr})_2$, Me_3SiCl , THF, -78°C to r.t.
- 3) SnCl_4 , MeCN , -20°C
- 4) AcOH , 120°C

- 5) Me_2CuLi , Et_2O , -78°C , then **I**, -78°C to r.t.
- 6) 2,6-lutidine, $t\text{-BuMe}_2\text{SiOTf}$, CH_2Cl_2 , -78 to 0°C
- 7) $\text{Li}(\text{N}(\text{SiMe}_3)_2)$, **II**, THF, 0°C to r.t.

- 8) 2,3-dichloro-5,6-dicyano-1,4-benzoquinone (DDQ), CH_2Cl_2 , pH 7 buffer (10:1), r.t.
- 9) $\text{SO}_3 \cdot \text{pyridine}$ -complex, Et_3N , CH_2Cl_2 -DMSO (2:1)

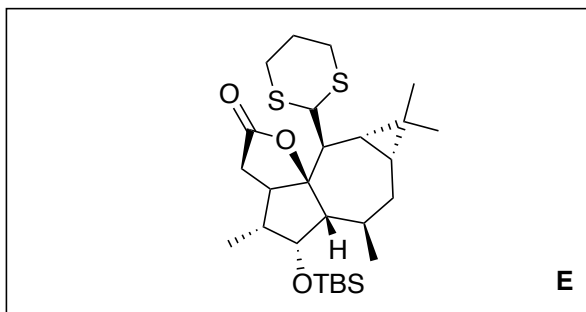
- 10) $\text{K}(\text{N}(\text{SiMe}_3)_2)$, Methyl *P,P*-bis(2,2,2-trifluoroethyl)phosphonoacetate, 18-crown-6, THF, -78°C to r.t.
- 11) Sml_2 , MeOH , THF, r.t.

Ozonolysis

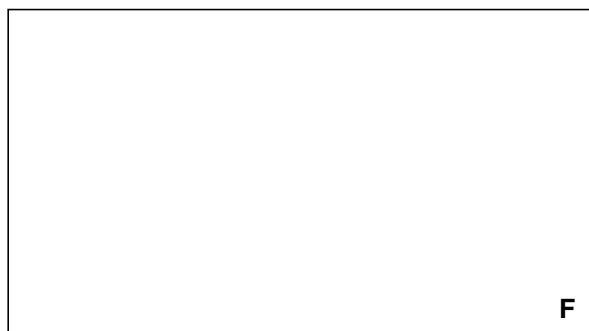


Parikh-Doering oxidation

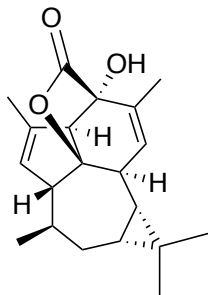
Still-Gennari-Olification



↓ 12-15



↓ 16-19



- 12) $\text{PhI}(\text{O}_2\text{CCF}_3)_2$, $\text{MeCN-H}_2\text{O}$ (6:1) r.t.
- 13) CBr_4 , PPh_3 , CH_2Cl_2 , 0°C
- 14) $n\text{-Bu}_4\text{NF}$, THF, 0°C to r.t.
- 15) $(\text{Ph}(\text{CF}_3)_2\text{CO})_2\text{SPh}_2$, CH_2Cl_2 , 0°C

- 16) Me_2CuLi , Et_2O , -78°C , then I_2 , -78°C to r.t.
- 17) $\text{K}(\text{N}(\text{SiMe}_3)_2)$, 3-phenyl-2-(phenylsulfonyl)-1,2-oxaziridine, THF, -78°C
- 18) Dess-Martin periodinane (DMP), CH_2Cl_2 , r.t.
- 19) $t\text{-BuLi}$, Et_2O , -78°C

Ramirez olefination

Martin's sulfurane

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

