Synthesis Challenge #82

Total Synthesis of Atropurpuran, S. Xie, G. Chen, H. Yan, J. Hou, Y. He, T. Zhao, J. Xu,
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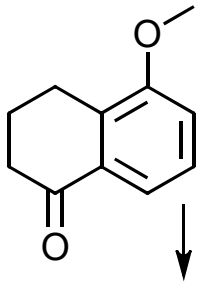
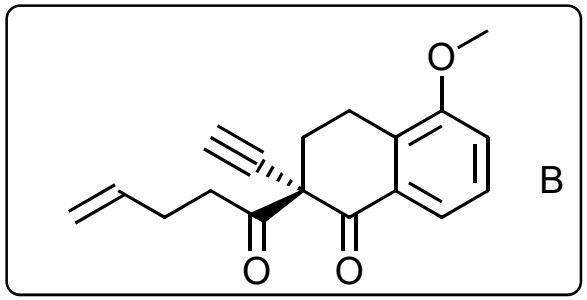
24.10.2019



A

1-2

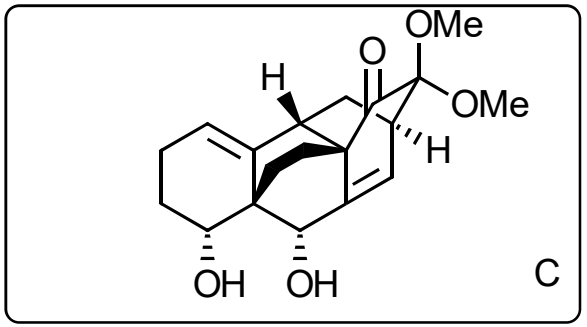
1) LHMDS, 4-pentenoyl chloride, THF
2) TBAF, TMS-EBX, THF



B

3-4

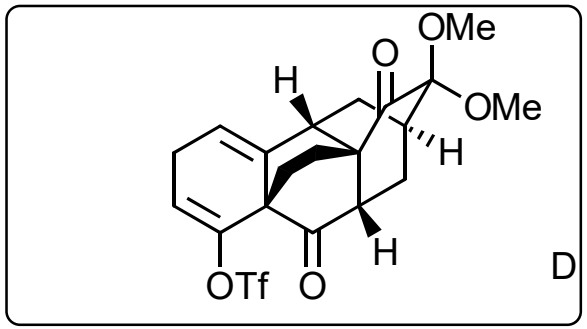
3) Grubbs-II Cat, CH_2Cl_2; −78ºC, BBr_3; $AlCl_3/LiAlH_4$
4) $PhI(OAc)_2$, rt, MeOH; BHT, mesitylene, 160ºC



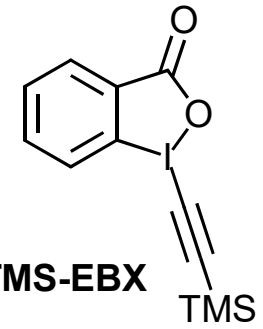
C

5-6

5) Crabtree's cat, H_2, CH_2Cl_2; TPAP, NMO
6) KHMDS, $PhNTf_2$, THF

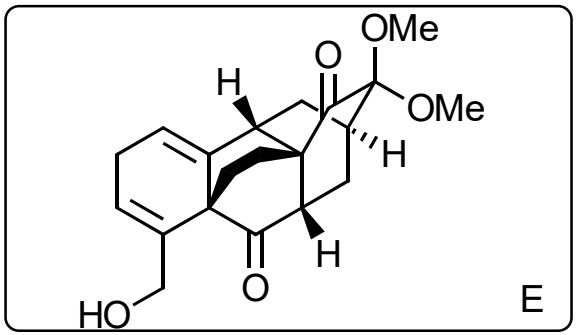


D



TMS-EBX

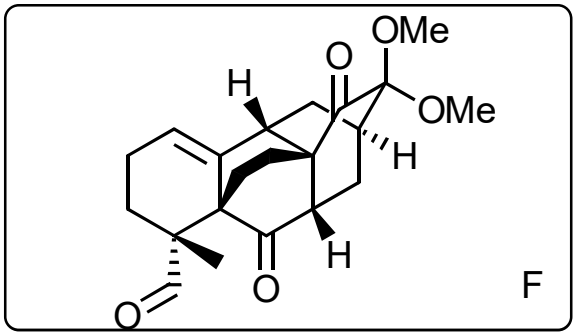
7-8



E

7) $Pd(PPh_3)_4$, CO, $n$$Bu_3SnH$, THF; DIBAL
8) TFAA, DMSO, CH_2Cl_2, Et_3N

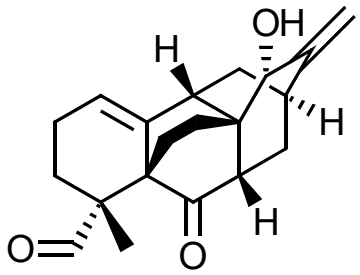
9-10



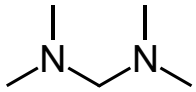
F

9) Crabtree's catalyst, H_2, CH_2Cl_2; Dess-Martin
10) tBuOK, tBuOH, MeI

11-13



11) SmI_2, THF, MeOH
12)TMMN, Ac_2O, DMF
13) $NaBH(OMe)_3$, THF, MeOH



TMMN