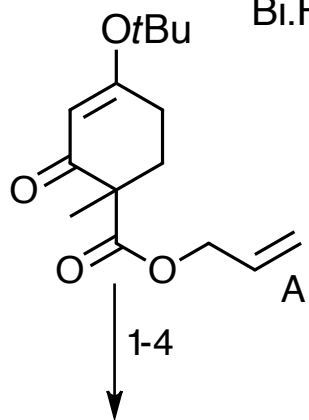


Synthesis Challenge # 41

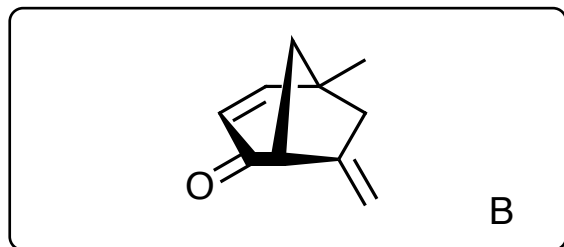
"Total Synthesis of (+)-Neopallavicinin",

Bi.Huang, L. Guo, Y. Jia, *Angew. Chem. Int. Ed.* **2015**, *54*, 13599 –13603

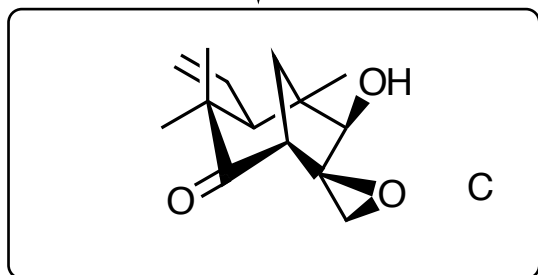
12.11.2015



1-4



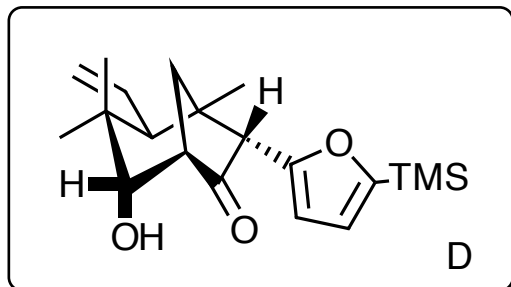
5-8



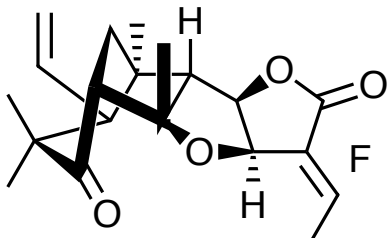
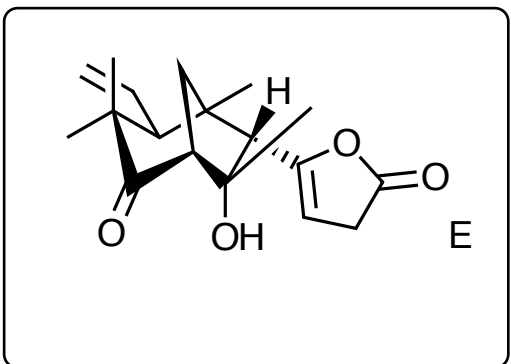
- 1) (*S*)-*t*Bu-PHOX, Pd₂(pmdba)₃, toluene, 50°C
- 2) LiAlH₄, Et₂O, rt, then H₂SO₄
- 3) LDA, TBSCl, HMPA, THF, -78°C
- 4) Pd(OAc)₂, O₂, DMSO, 65°C

- 5) vinylMgBr, CuBr*Me₂S, -40°C
- 6) NaH, MeI (excess), DME
- 7) SeO₂, *t*BuO₂H, CH₂Cl₂, RT
- 8) VO(acac)₂, *t*BuO₂H, CH₂Cl₂

9-11



12-14



- 9) DMP, CH_2Cl_2
10) 2-TMS-furan, nBuLi, Et_2O
11) LiBHET_3 , THF, 60°C

- 12) DMP, CH_2Cl_2 , RT
13) MeMgBr, THF, -40°C
14) *m*-CPBA, CH_2Cl_2 , RT

- 15) DBU, CH_2Cl_2 , RT
16) LDA, CH_3CHO , THF, -78°C
17) MsCl, Et_3N , DMAP, CH_2Cl_2

In step 15) are two isomers formed.
Which ones, and why?