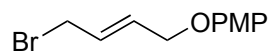


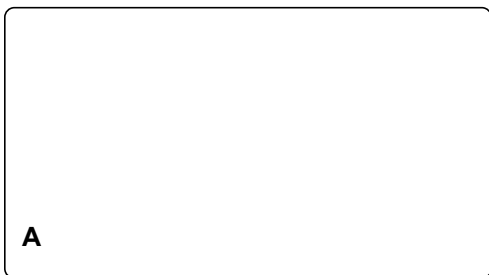
Total Synthesis of (-)-Jiadifenin

Yang Yang, Xingnian Fu, Jianwei Chen, and Hongbin Zhai*

Angew. Chem. Int. Ed. **2012**, *51*, 9825–9828



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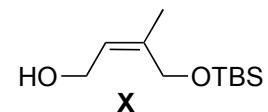


7-8



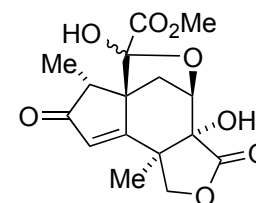
- 1) 1-bromo-1-propene, *n*-BuLi, CuI
- 2) AD-mix- β , MeSO₂NH₂, *t*-BuOH/H₂O
- 3) KOH, CH₂I₂, 18-crown-6
- 4) CAN, MeCN/H₂O
- 5) Jones reagent
- 6) DCC, DMAP, **X**

- 7) LDA, TMSCl, THF, -78 °C to reflux
- 8) TsOH·H₂O, MeOH, Δ

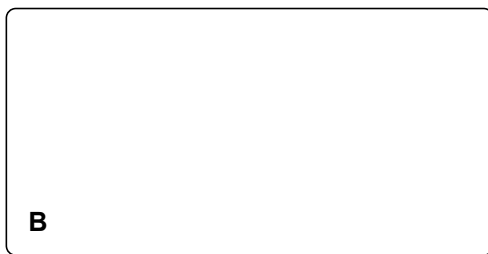


5) what's Jones reagent?

7) name the reaction and draw the transition state



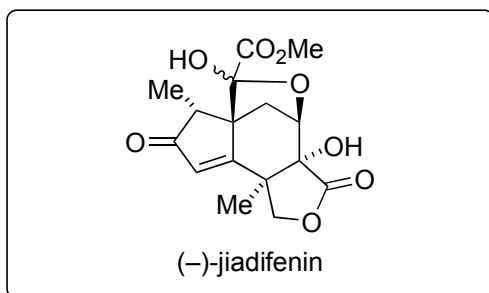
(-)-jiadifenin



9-12



13-18



- 9) $\text{Ph}_3\text{C}\cdot\text{BF}_4$, CH_2Cl_2 , Δ
10) TBSOTf, Et_3N , CH_2Cl_2
11) $[\text{Co}_2(\text{CO})_8]$, Bu_3PS , toluene, Δ
12) $h\nu$, allene, THF, -78°C

- 13) i) O_3 , MeOH, then Me_2S -78°C ;
ii) NaOMe, MeOH
14) LDA, TMSCl, Et_3N
15) $\text{Pd}(\text{OAc})_2$, O_2
16) TBAF
17) NaHMDS, -78°C ,
(-)-*trans*-(phenylsulfonyl)-3-phenyloxaziridine
18) Jones reagent, then MeOH

name reaction 15+16