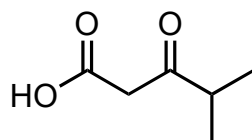


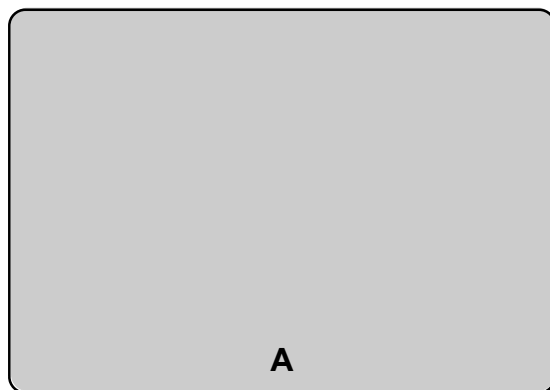
# $\beta$ -Ketoesters as Mono- or Bisnucleophiles: A concise Enantioselective Total synthesis of (-)-Englerin A and B

Lei Guo and Bernd Plietker

*Angew. Chem. Int. Ed.* **2019**, *58*, 8346-8350

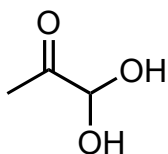


1-5

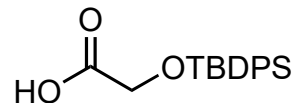


6-8

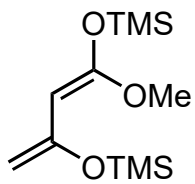
- 1, (DHQD)<sub>2</sub>PHAL in THF/TFE
- 2, Et<sub>3</sub>N, DMAP, TCBC
- 3, TMSOTf cat
- LiHMDS, DMPU, then 4
- LiCl, wet DMSO



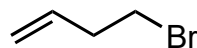
1



2



3



4

6. KHMDS, PhNTf<sub>2</sub>
- 7(a) Pd(PPh<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub>, Et<sub>3</sub>N  
(b) then MeSiCl<sub>2</sub>H  
(c) then H<sub>2</sub>O<sub>2</sub>
8. TPAP, NMO
9. (S)-CBS, BH<sub>3</sub>
10. H<sub>2</sub> Pd/C
11. Cinnamoyl chloride, Et<sub>3</sub>N, DMAP  
then TBAF
12. K<sub>2</sub>CO<sub>3</sub> MeOH/H<sub>2</sub>O

1. What is the name of compound 1?

Please classify the reaction

2. Name of the reaction?

3. Please classify the reaction and propose a mechanism

5) Name of the reaction?

7) a) Name of the reaction?

c) Name of the reaction?

