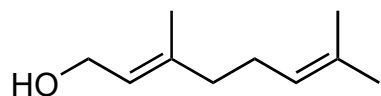


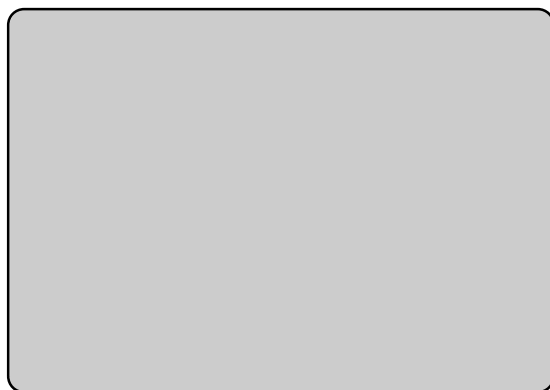
Total Synthesis of (+)-6-*epi*-Ophiobolin A

D. Q. Thach, Z. G. Brill, H. K. Grover, K. V. Esguerra, J. K. Thompson, T. J. Maimone

Angew. Chem. Int. Ed. **2020**, *59*, 1532–1536.

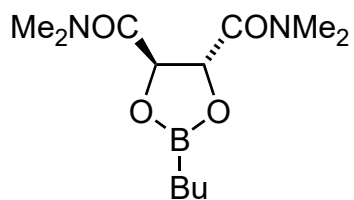


1-5

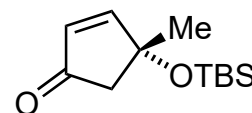


6-9

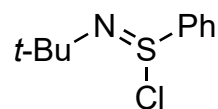
- 1, then $\text{Zn}(\text{CH}_2\text{I})_2$
- MsCl, then NaI
- t*-BuLi, CuI, **2**, then **3**
- DIBAL, CuI, PhMe_2SiLi , MeLi, HMPA, then **4**
- CuBr, 4,4'-di-*t*-Bu-bipy, 2,6-di-*t*-Bu-py



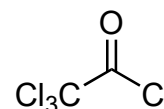
1



2

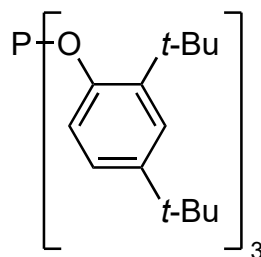


3



4

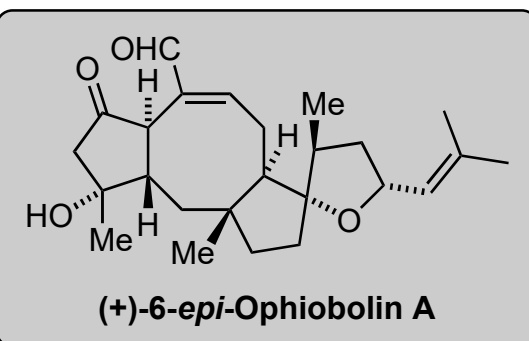
- NaBH_4
- NEt_3 , DMAP, Ac_2O (1 eq.), then DMP
- O_2 , methylene blue
- $\text{Rh}(\text{CO})_2(\text{acac})$, **5**, CO/H_2 (1:1), then NEt_3 , DMAP, Ac_2O

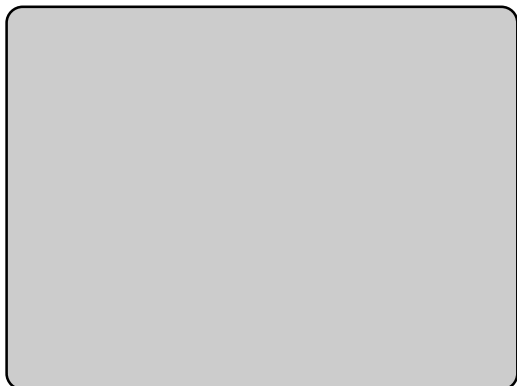


5

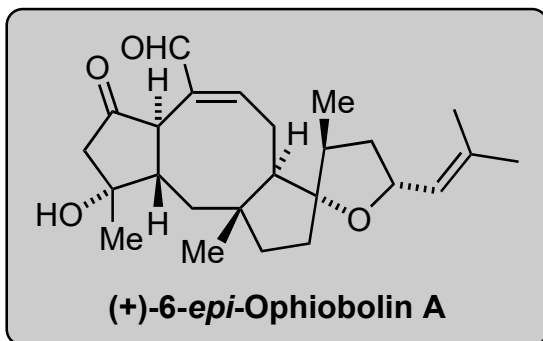
- name the underlying reaction and starting material
- name reagent **3**

- structure and role of methylene blue

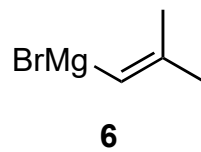




9-13
↓



9. InCl_3 , **6**, $\text{BF}_3 \cdot \text{Et}_2\text{O}$
10. Me_3SiI , $n\text{-BuLi}$
11. Li-Naph
12. TBAF
13. $(\text{COCl})_2$, DMSO, Et_3N



10. name the reaction