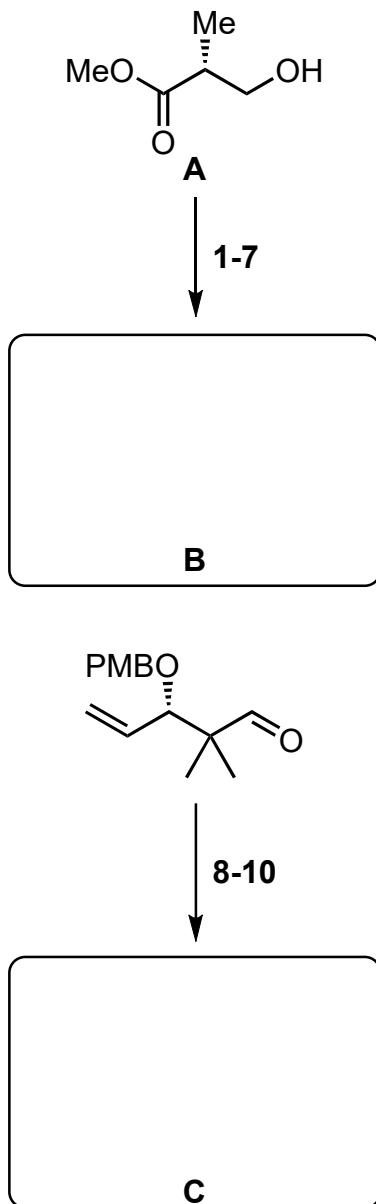
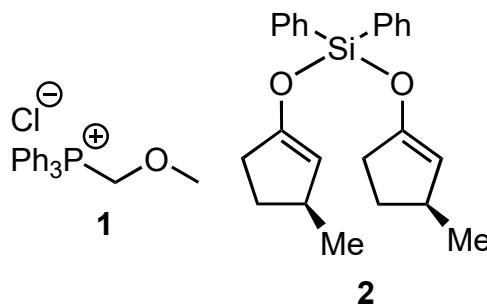


Enantioselective Total Synthesis of (+)-Aberrarone

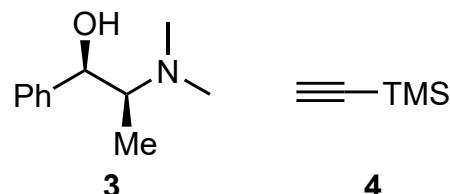
Amberg, W. M.; Carreira, E. M.
J. Am. Chem. Soc. **2022**, 144, 15475–15479.



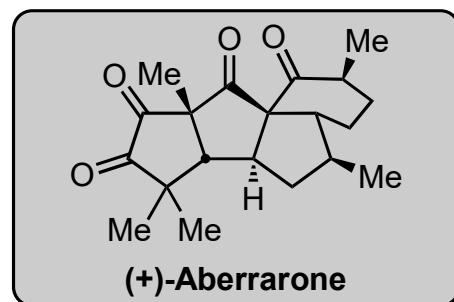
1. TBDPSCl, Im.
2. DIBAL-H
3. **1**, NaHMDS
then HCl 2M
4. **2**, MeLi
then starting material
5. NaHMDS, CS₂, Mel
6. *n*-Bu₃SnH, AIBN
7. KHMDS, Comins' reagent
then TBAF



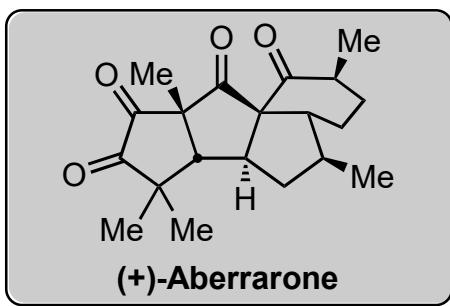
8. **3**, Zn(OTf)₂, Et₃N, **4**
9. TBAF
10. Et₃N, DMAP, Ac₂O



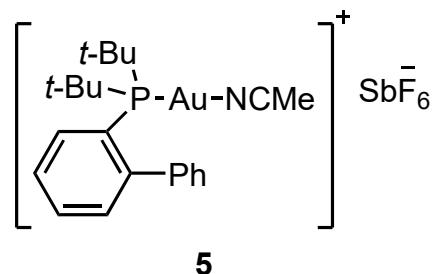
1. What is the name of starting material **A**?
8.
 - i) What is the name of the chiral ligand used?
 - ii) What is the intermediate species?



11-18



11. **B**, Et₃N, PdCl₂(PPh₃)₂, CuI
then **C**
12. DMSO, DIPEA, SO₃•Py
13. **5**
then, n-Bu₃SnOMe
14. DDQ
15. LiAlH₄
16. PtO₂, H₂
17. DMSO, DIPEA, SO₃•Py
18. SeO₂



11. What is the name of the reaction?
12. What is the name of the reaction?
13.
 - i) What is the name of the gold catalyst and the phosphine ligand contained therein?
 - ii) Please draw the mechanism of the Au-cascade reaction.
 - iii) What is the role of n-Bu₃SnOMe?