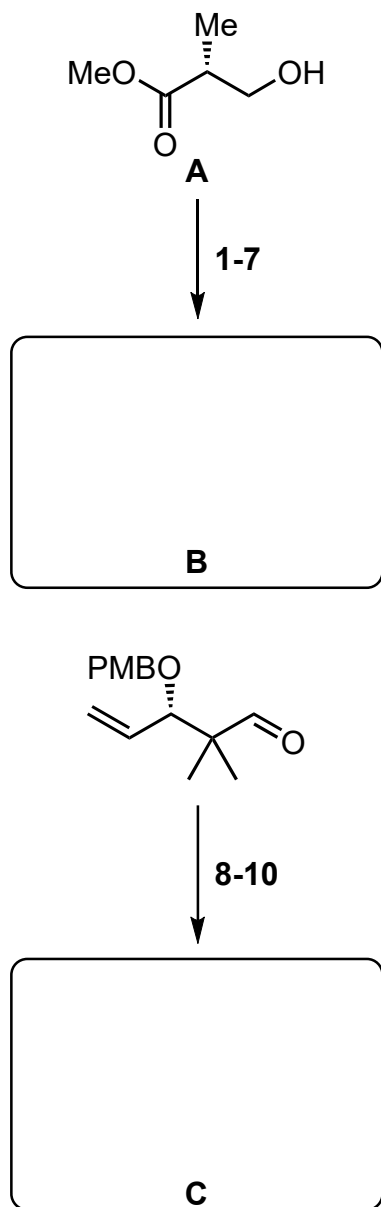


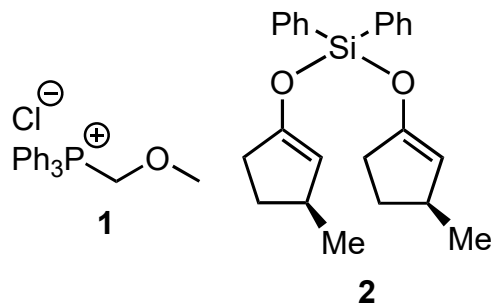
Enantioselective Total Synthesis of (+)-Aberrarone

W. M. Amberg, E. M. Carreira

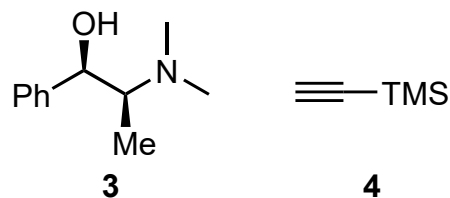
J. Am. Chem. Soc. 2022, 144, 15475–15479.



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



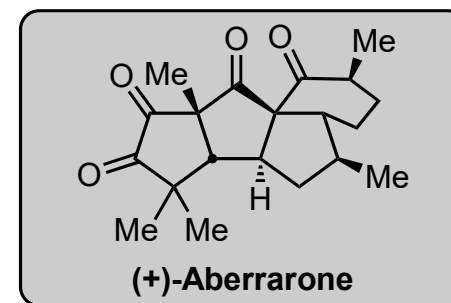
8. **3**, Zn(OTf)₂, Et₃N, **4**
9. TBAF
10. Et₃N, DMAP, Ac₂O



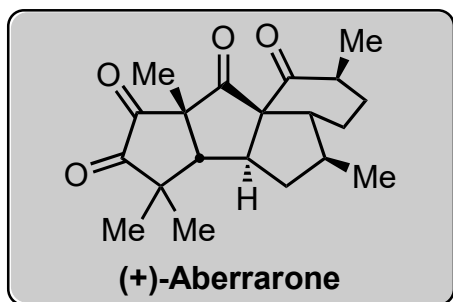
1. What is the name of starting material **A**?

8.
i) What is the name of the chiral ligand used?

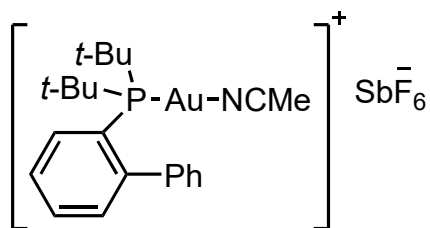
ii) What is the intermediate species?



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?