Enantioselective Total Synthesis of (+)-Aberrarone
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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

1. What is the name of starting material A?
   (R)-Roche ester

8. i) What is the name of the chiral ligand used? N-methylephedrine
   ii) What is the intermediate species?

(+)-Aberrarone
11. What is the name of the reaction?  
   Sonogashira coupling

12. What is the name of the reaction?  
   Parikh-Doering oxidation

13.  
   i) What is the name of the gold catalyst and the phosphine ligand contained therein?  
      Echavarren’s catalyst and JohnPhos
   ii) Please draw the mechanism of the Au-cascade reaction.  
      see page below
   iii) What is the role of \( n\text{-Bu}_3\text{SnOMe} \)?  
      Hydrolysis of the ester followed by Sn-mediated aldol addition
Step 8


Au-cascade reaction

Meyer-Schuster

Nazarov Cyclization
See more: J. AM. CHEM. SOC. 2009, 131, 2993–3006