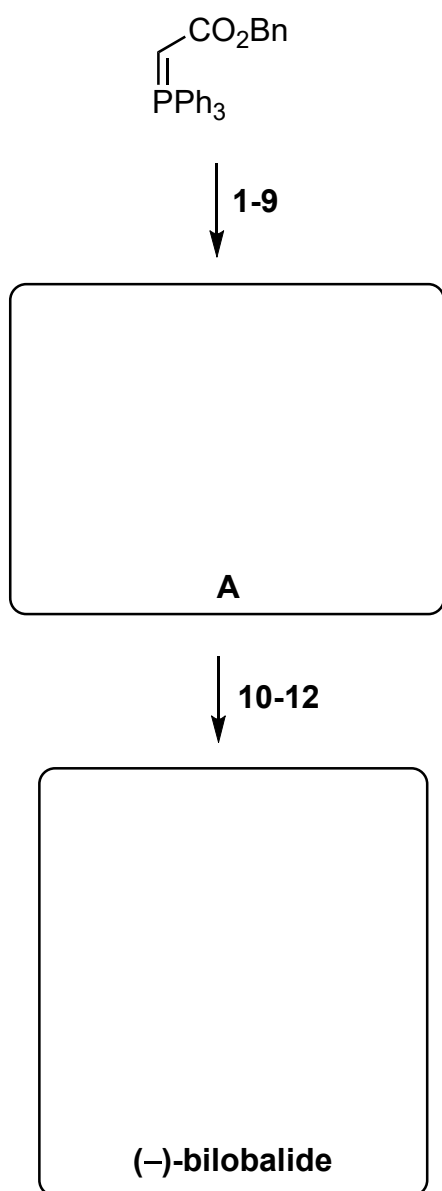


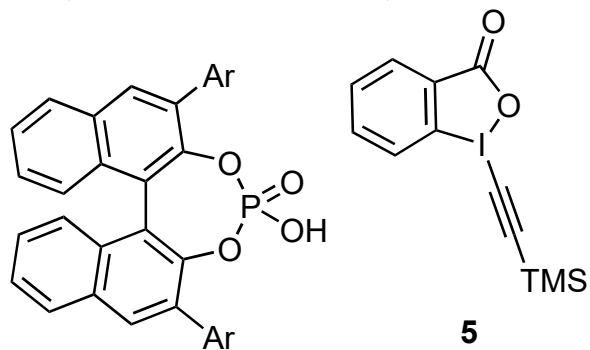
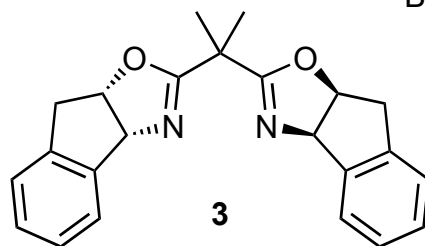
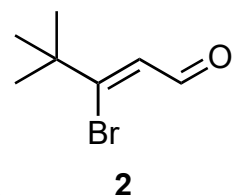
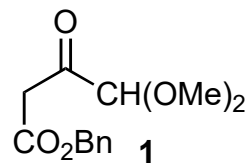
Concise asymmetric synthesis of (-)-bilobalide

M. A. Baker, R. M. Demoret, M. Ohtawa, R. A. Shenvi

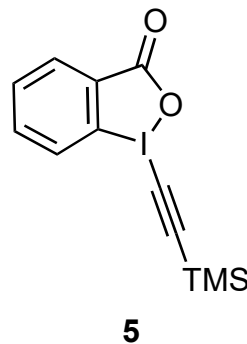
Nature 2019, 575, 643–646.



- 1) Br₂
- 2) **1**
- 3) **2, 3**, Et₂Zn
- 4) Bu₃SnH, AIBN
- 5) Mn(dmp)₃, Ph(*i*PrO)SiH₂, C₇H₁₄, O₂
- 6) **4**
- 7) IBX
- 8) **5**, then TBAF
- 9) Sml₂



Ar = 9-phenanthryl



- 10) LiHMDS, B(OMe)₃, then *m*CPBA
- 11) H₂, Pd/C, then 3 M HCl, 80 °C
- 12) Bz₂O, DMAP, then KHMDS, Davis reagent, then 3 M HCl

- 2) Name the reaction
- 2) How can you prepare **1**?
- 3) Name the reaction
- 3) How can you prepare **2**?
- 4) Name the Reaction
- 4) Explain the observed diastereoselectivity
- 5) Name the reaction
- 10) Provide a possible mechanism for alkyne oxidation
- 12) Show the structure of both intermediates
- 12) Structure of Davis reagent?

