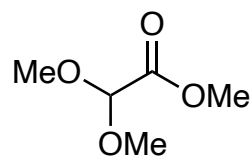
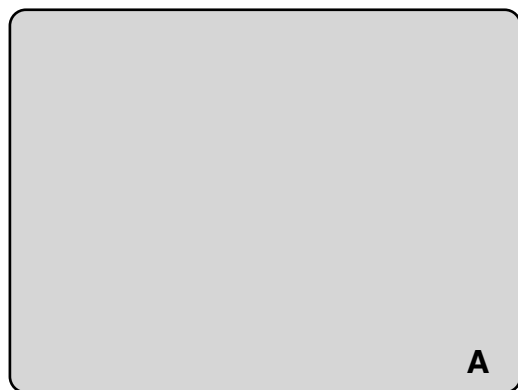


Concise Total Synthesis of (-)-Bipolarolide

Sun, S. ; Wei, Q.; Liu, Y.; Lu, Z.
J. Am. Chem. Soc. **2024**, ASAP

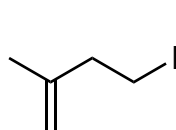


1-6

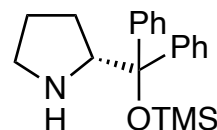


7-11

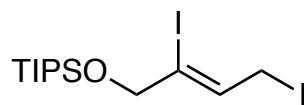
- 1) LDA, HMPA then **1**
- 2) DIBAL-H (1.2 eq.)
- 3) NaH, cyclopentadiene
- 4) 9-BBN then NaOH, H₂O₂
- 5) PDC
- 6) **2**, PhCOOH, 4A molecular sieves then 0.5 M HCl (aq.)



1



2



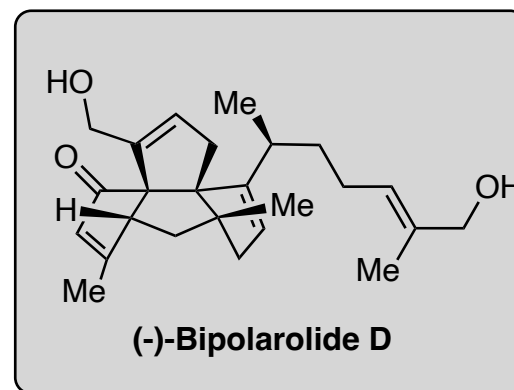
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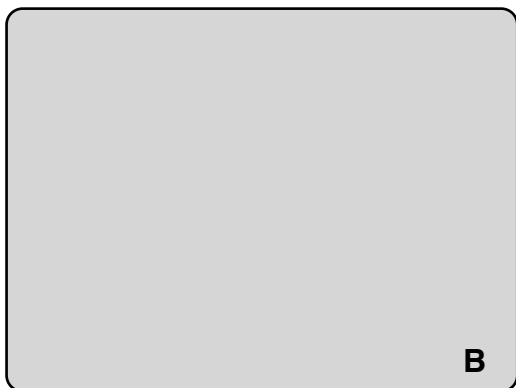
- 7) **3**, *t*-BuOK, Cu
- 8) Pd(OAc)₂, *R*-BINAP, AgOAc
- 9) 1.0 M NaOH (aq.)
- 10) [Rh(COD)₂]₂BF₄ then MeMgBr
- 11) PDC

6) *Hint*: Cycloaddition
Draw a mechanism for this step and classify [X+X]

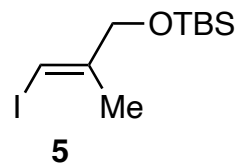
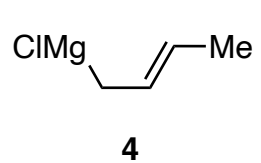
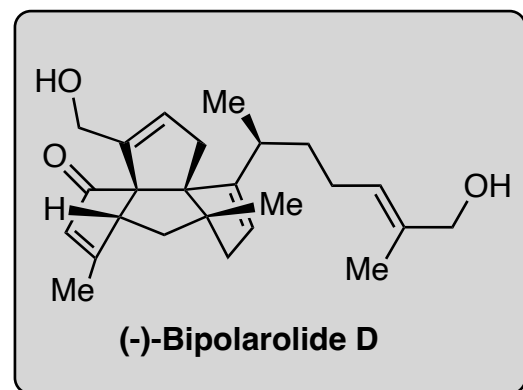
8) Name of reaction?
Hint: Interception of π-allyl with acetate

9) *Hint*: Hydrogen transfer reaction





12-15



- 12) **4**
- 13) 9-BBN, *then* 2M NaOH, Pd(PPh₃)₄, **5**
- 14) SOCl₂, 2,6-lutidine
- 15) HF

- 12) *Hint*: 3 stereocenters are formed
- 13) Name of Reaction?
- 14) Structure of 2,6-lutidine?