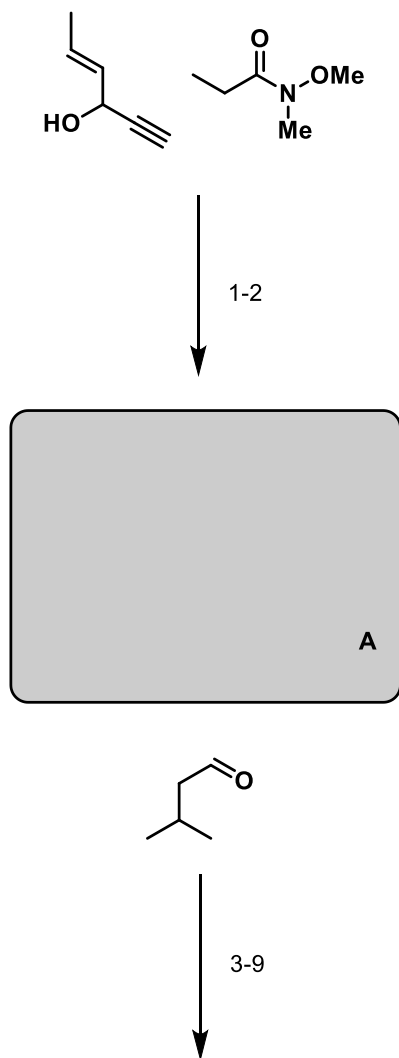
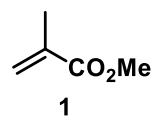


Convergent Total Synthesis of Papililone A via Pd-Catalyzed Alkenylation/Cyclization Cascade

Xing-Qian, ShanXiang, ZhangPeng-Fei, LianBao-Kuan, GuoYong-Qiang and TuSi-Hua Hou
J. Am. Chem. Soc. **2025**, 147, 49, 44714–44719



- 1) *i*-PrMgCl
- 2) HBr



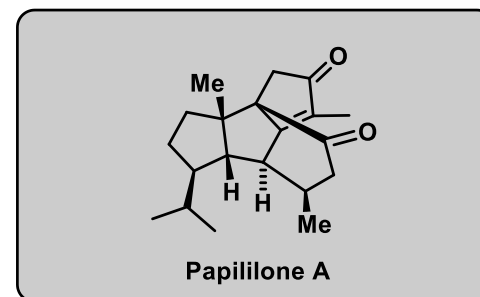
- 3) CH₂O, toluene 25 °C
- 4) [Ph₃PCH₃]Br, *n*-BuLi
- 5) PPh₃, CBr₄, DCM
- 6) 1, Mg, CuCl, TMSCl, THF, -78 °C then NaOH
- 7) NH₄HCO₃, Boc₂O, pyridine, 1,4-dioxane
- 8) TFAA, NEt₃, DCM
- 9) MeMgBr, Et₂NH, naphthalene, 2-MeTHF, 130 °C

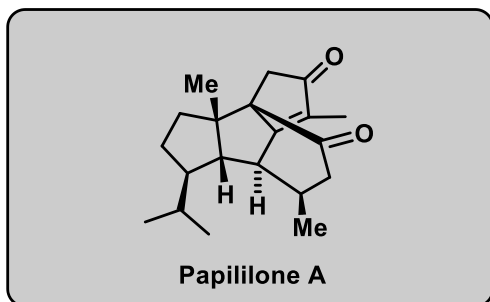
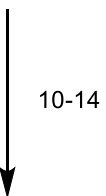
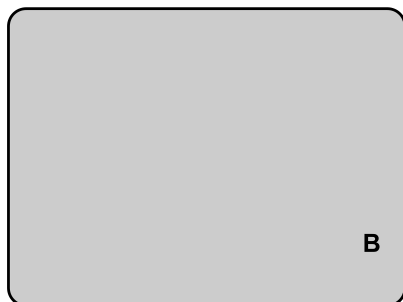
2) Hint: heterocycle

5) Name of the reaction

8) Hint: all ¹³C below 140 ppm

9) show a mechanism, Hint: 2 rings are formed





- 10) **A**, *n*-BuLi, then **B**, LaCl₃•2LiCl THF -78 °C
11) O₂, methylene blue, *hν*, DCM -80 °C then Me₂S
12) KOH, DCM/*i*PrOH
13) LiHMDS, Comin's reagent, THF -78 °C
14) Pd(MeCN)₂Cl₂, DPPP, Cs₂CO₃, toluene 140 °C

10) Name of the Lanthanum salt

11) role of methylene blue?

13) Hint: only cyclopentanone reacts

14) show a mechanism