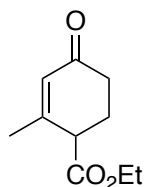


Total Synthesis of (±)-Chloranthalactone A

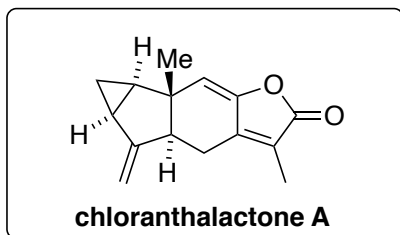
Yue, G.; Yang, L.; Yuan, C.; Jiang, X.; Liu, B.; *Org. Lett.* **2011**, *13*, 5406–5408.



1-6



7-12



- 1) vinylMgBr, CuBr · SMe₂
- 2) *p*-TsOH, ethylene glycol
- 3) HNMe(OMe) · HCl, *n*-BuLi, then substrate
- 4) *n*-Bu₃SnCH₂OMOM, *n*-BuLi, then substrate
- 5) CH₂Br₂, *n*-BuLi
- 6) LiTMP

- 7) aq. HCl
- 8) 1,1'-thiocarbonyldiimidazole
- 9) P(OMe)₃
- 10) ethyl pyruvate, LDA, ZnCl₂
- 11) *p*-TsOH, Ac₂O
- 12) DBU

Name of the starting material how would you make it? (at least 2 synthetic routes)

step 5: Name the reaction, what could be an alternative reaction?

keystep 6: Name and classify the reaction, draw the transition state

step 8/9: Name the reaction and propose a mechanism as well as an alternative name reaction.

Which famous 8-membered ring can be synthesized by this method?