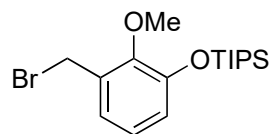
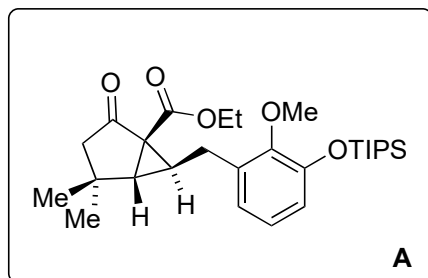


Total Syntheses of Rhodomolleins XX and XXII

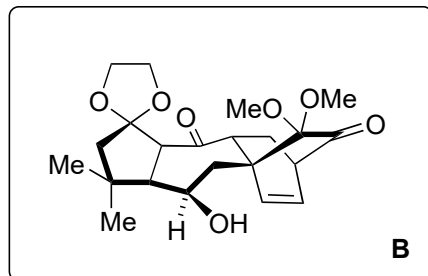
Kuan Yu, Zhen-Ning Yang, Chun-Hui Liu, Shao-Qi Wu, Xin Hong, Xiao-Li Zhao, Hanfeng Ding
Angew. Chem. Int. Ed. **2019**, *58*, 8556–8560.



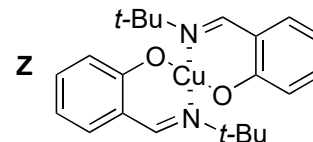
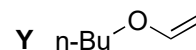
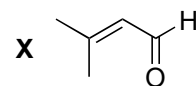
1 – 5



6 – 10

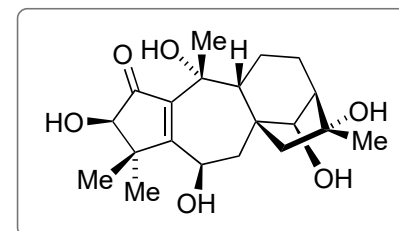


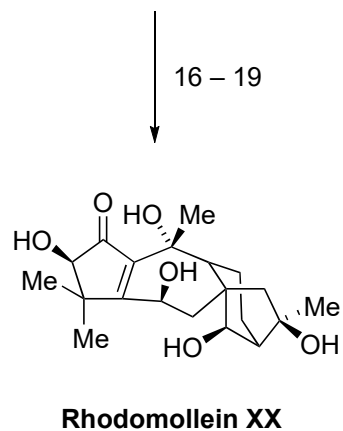
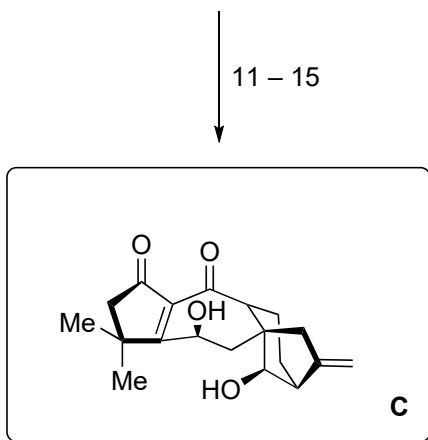
- 1) Mg, 1,2-dibromoethane
then **X**
- 2) Hg(OAc)₂, NaOAc, **Y**
- 3) ethyl diazoacetate, SnCl₂
- 4) TsN₃, NEt₃
- 5) **Z**, 115 °C



- 6) TMSOTf, (CH₂OTMS)₂
then pyridine
- 7) NBS, THF / H₂O
- 8) *t*-BuOK, then Pd/C, H₂
- 9) LDA (excess), MePO(OMe)₂,
(CH₂O)_n
- 10) TBAF
then PIDA, MeOH

- 2) Please name the reaction.
Claisen rearrangement
- 3) Please name the reaction.
Roskamp reaction





- 11) Sml_2
- 12) DMDO
- 13) Cp_2TiCl_2 , Mn, 2,4,6-collidine
- 14) Cp_2TiMe_2
then *p*-TsOH
- 15) PhSeCl, pyridine

- 16) $\text{Co}(\text{acac})_2$, PhSiH₃, O₂
- 17) TBSOTf, NEt₃
- 18) MeMgBr
- 19) MeReO₃, H₂O₂, pyridine
then PPTS

13) Please come up with a mechanism. Name of the reaction?

Dowd-Beckwith rearrangement

14) Please name the reaction. Name also alternatives.

Petasis

alternatives: Tebbe reagent, Takai-Lombardo reaction,
Wittig reaction, Nysted reagent

16) Please name the reaction.

Mukaiyama hydration

step 13

