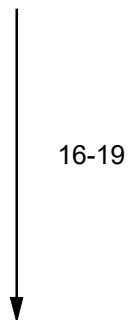
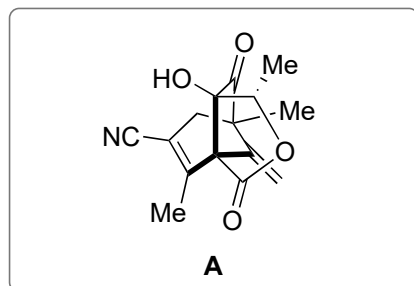
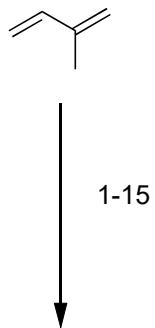
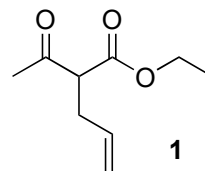


Total Synthesis of (±)-Dhilirolide U

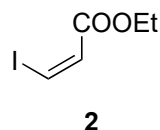
H. R. Wilke, M. Fadel, K. J. Patej, J. P. Prohaska, J. Kastner, V. Avramenko, O. Garcia Gonzalez, R. Bal, M. C. Amberg, J. Ahmad, N. Nasiri, T. K. Jenny, E. M. Carreira, "Total Synthesis of (±)-Dhilirolide U" J. Am. Chem. Soc. 2026, 148, 5916–5922.



- 1) NBS, AcOH
- 2) K_2CO_3 , MeOH-H₂O
- 3) $(i\text{-Pr})_3\text{SiOTf}$, $(i\text{-Pr})_2\text{NEt}$
- 4) **1**, NaH, *n*-BuLi
- 5) $Mn(OAc)_3 \cdot 2H_2O$, $Cu(OAc)_2 \cdot H_2O$, AcOH
- 6) LDA, HMPA, TsCN
- 7) Tf_2O , $(i\text{-Pr})_2\text{NEt}$
- 8) $Pd(PPh_3)_4$, Me_3Al
- 9) O_3 , Sudan III then Me_2S
- 10) LDA, MeCHO
- 11) Burgess reagent
- 12) Triton B, *t*-BuOOH
- 13) 4 M aq H_2SO_4
- 14) DBU, CS_2 , MeI
- 15) DTBMP, Ph_2O , 285 °C



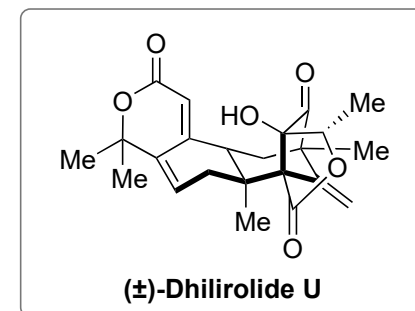
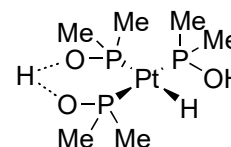
- 16) CSA, **2**
- 17) $NiCl_2 \cdot glyme$, neocuproine, Rieke Zn
- 18) Ghaffar–Parkins catalyst
- 19) *t*-BuONO

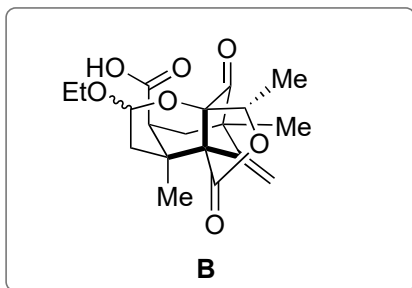


13) Hint: Payne-type rearrangement

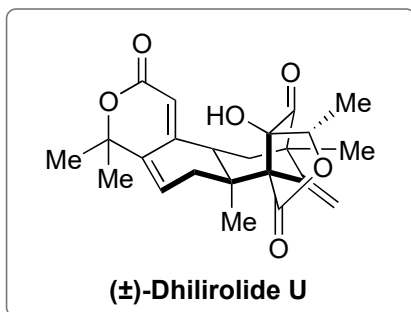
15) Name of the reaction?
Chugaev elimination

18) Structure of Ghaffar–Parkins catalyst ?

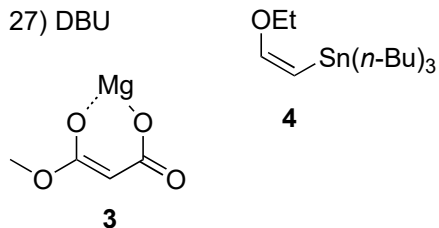




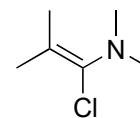
20-27



- 20) Ghosez's reagent then **3** then 6 M HCl
- 21) LiCl, DBU
- 22) Tf₂O, (*i*-Pr)₂NEt
- 23) Pd₂(dba)₃, P(2-furyl)₃, **4**, LiCl then 4 M HCl
- 24) BF₃·OEt₂, propane-1,3-dithiol
- 25) CDI then MeMgCl
- 26) I₂, NaHCO₃ then Bobbitt's salt
- 27) DBU



20) Structure of Ghosez reagent?



23) Name of the reaction?

Stille coupling