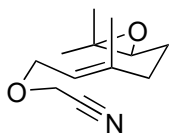
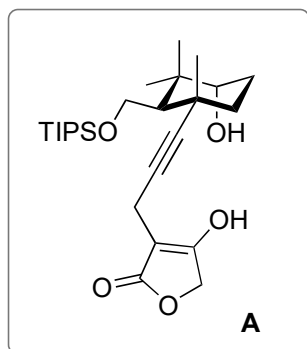


Total Synthesis of (±)-Leonuketal

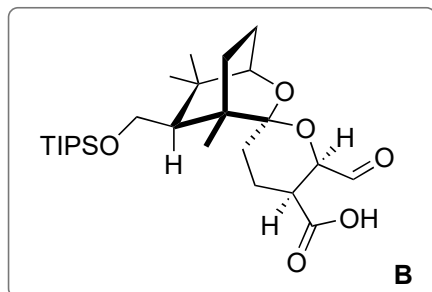
P. S. Grant, D. P. Furkert, M. A. Brimble, *Org. Lett.* **2020**, 22, 8735–8740.



1 - 11

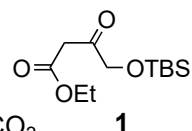


12 - 17



- 1) Cp_2TiCl_2 , Zn
- 2) ethylenglykol, TsOH
- 3) DMP
- 4) L-Selectride
- 5) HCl (aq.)
- 6) TsNHNH_2 , PPTS
- 7) MeLi
- 8) TIPSOTf, DIPEA
- 9) MeLi, $(\text{CH}_2\text{O})_n$
- 10) MsCl, Et_3N
- 11) NaI

- 12) **1**, NaH
- 13) TsOH then K_2CO_3
- 14) $\text{AuCl} \cdot \text{DMS}$, PPTS
- 15) H_2 , Rh- Al_2O_3
- 16) LiOH
- 17) DMP



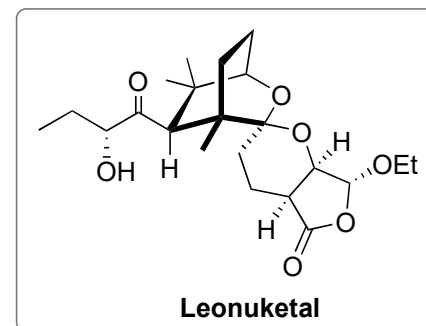
6) +7) Name of the reaction?
Shapiro type fragmentation

11) Name of the reaction?
Finkelstein reaction

12) Hint: sodium hydride reacts first with compound 1.

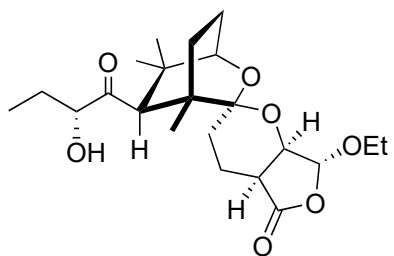
13) Define the product of cyclization according to Baldwin's rules.
5-exo-trig

14) Hint: New ring is formed.



B

18-21



Leonuketal

- 18) PPTS, EtOH
- 19) TBAF
- 20) DMP
- 21) *n*PrMgBr
- 22) DMP
- 23) O₂, LiHMDS *then* P(OEt)₃

18) *Hint: look at the final molecule.*

