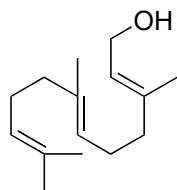
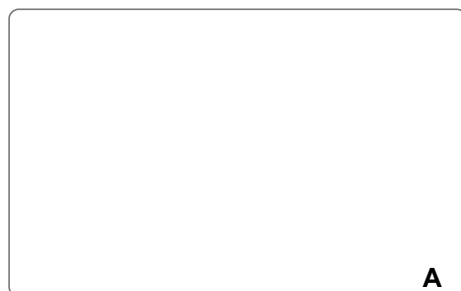


Total Synthesis of Berkeleyone A and Preaustinoid A through Epoxypolyene Cyclization

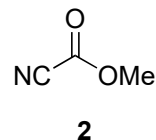
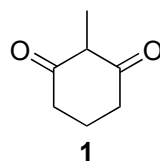
Xingyi Li, Zhifang Chang, Shengfu Duan, and Zhixiang Xie *Angew. Chem. Int. Ed.* 2025, 64, e202416211.



1 - 7



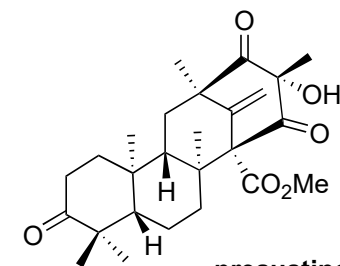
- 1) MsCl, Et₃N, LiBr
- 2) **1**, NaH
- 3) LiHMDS, **2**
- 4) NaH, Tf₂O
- 5) Pd(PPh₃)₄ (10 mol%), TMSCH₂ZnCl in situ
- 6) NBS, THF/H₂O (5:1)
- 7) K₂CO₃, MeOH



1) Name of the starting material:

3) Name of the reaction

5) Name of the reaction



preaustinoid A

A

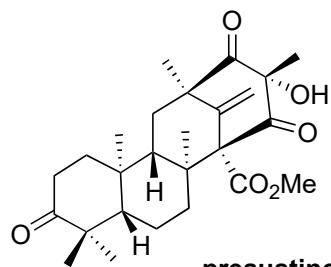


8 - 13

berkeleyone A



14



preaustinoid A

- 8) TiCl₄
- 9) Ac₂O, pyridine, Me₂NCH₂NMe₂
- 10) RhCl₃·3H₂O
- 11) NMO, OsO₄
- 12) (COCl)₂, DMSO, then Et₃N
- 13) *p*-TsOH

14) DMP

8) Hint: all circles are formed in this step

9) Two reactions occur

11) Name of the reaction