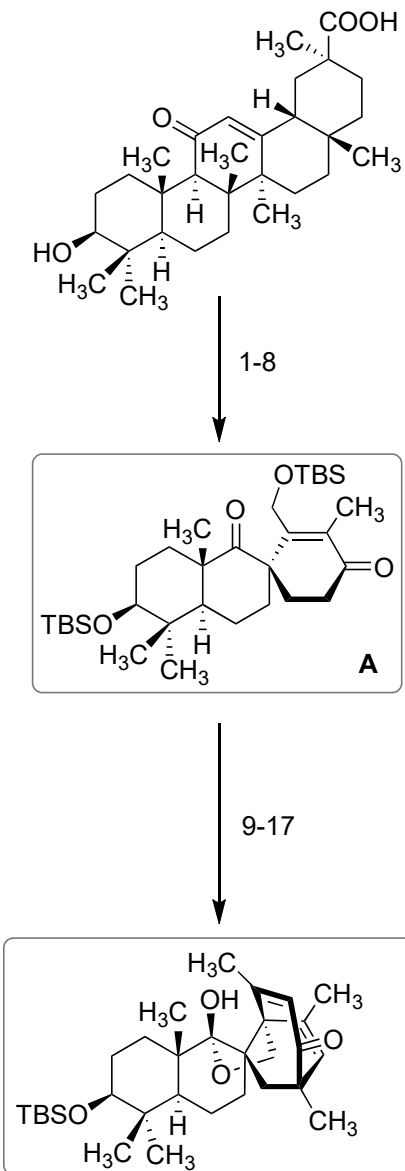
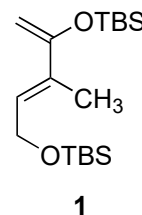
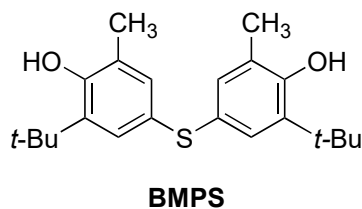


The total synthesis of (-)-spiroaspertrione A: A divinylcyclopropane rearrangement approach

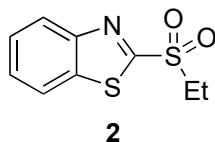
Huang, W.; Pan, L.; Zhao, H.; Schneider, F.; Gaich, T. *Science* **2025**, 390 (6770), 261–265.



- 1) $\text{CrO}_3/\text{H}_2\text{SO}_4$
- 2) BMPS, 350 °C, 53 mbar
- 3) NaBH_4
- 4) TBSOTf, Et_3N
- 5) *m*-CPBA, NaHCO_3 , then LiTMP
- 6) $(\text{COCl})_2$, DMSO, Et_3N
- 7) **1**, AlBr_3 , $\text{Al}(\text{CH}_3)_3$
- 8) DDQ, 2,6-lutidine



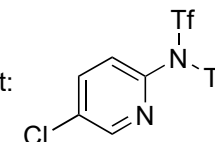
- 9) NaHMDS, ZnEt_2 , CH_3I
- 10) NaHMDS, Comins' reagent
- 11) $\text{Pd}(\text{OAc})_2$, PPh_3 , Et_3N , HCO_2H
- 12) CHBr_3 , NaOH (aq.)
- 13) PTSA, BnOH
- 14) *t*-BuLi
- 15) *t*-BuLi, then DMF, then CSA
- 16) **2**, KHMDS
- 17) 180 °C



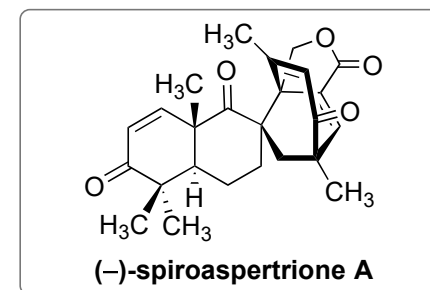
- 1) Name of the reaction: *Jones oxidation*
- 2) Hint: *retro-Diels-Alder reaction*

- 6) Name of the reaction: *Swern oxidation*

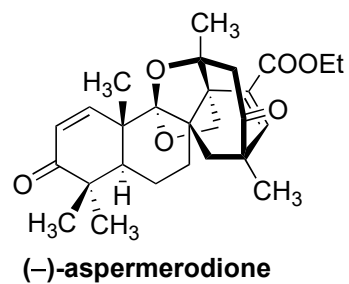
- 10) Structure of Comins' reagent:



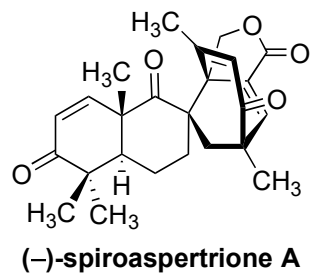
- 16) Name of the reaction: *modified Julia olefination*



18-21



22



18) DMDO, CD₃OD, *then* PhTeLi
 19) IBX, *then* PTSA
 20) SeO₂
 21) NaClO₂, NaH₂PO₄, 2-methyl-2-butene, H₂O
then TMSCHN₂

22) DBU

20) Name of the reaction: *Riley oxidation*
 21) Name of the reaction: *Pinnick oxidation*

