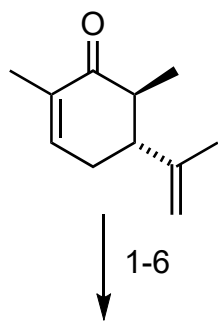
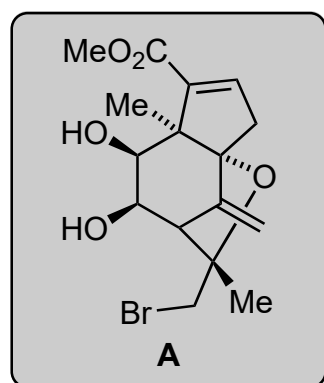


Total synthesis of 25 picrotoxanes by virtual library selection

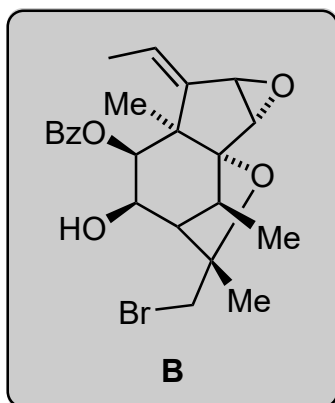
Li, C.; Shenvi, R. *Nature* **2025**, 638, 950–986.



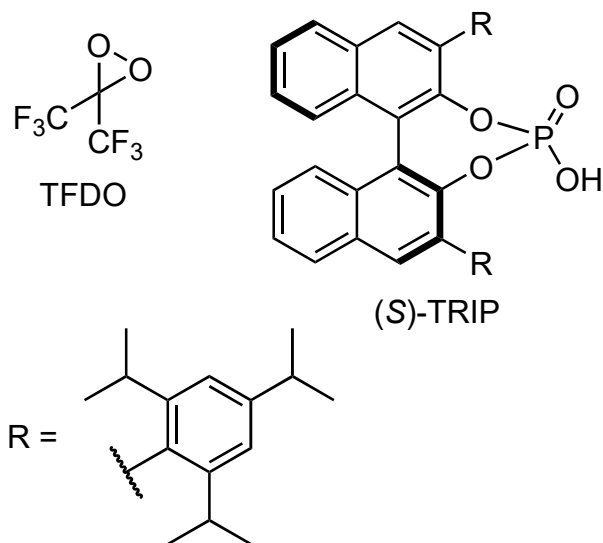
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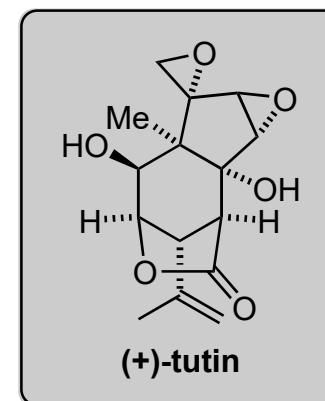
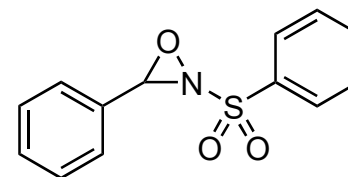
7-10

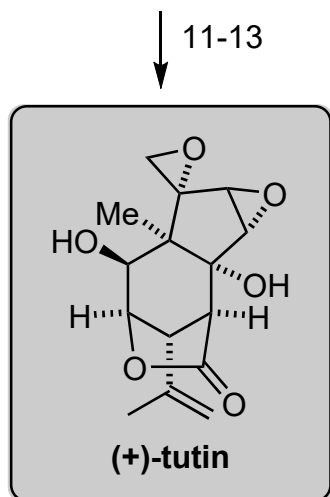


- 1) LHMDs, Pd(P-Bu₃)₂, vinyl-Br
- 2) KHMDS, ZnBr, MeO₂C(CO)Et
- 3) SOCl₂, DMAP
- 4) LDA *then* TBABr₃, *then* OsO₄, NMO, NaIO₄
- 5) Ph₂PO(OH), norbornadiene, [Rh(OH)(COD)]₂
- 6) OsO₄, NMO
- 7) PhCH(OMe)₂, HCl *then* Pt/C, H₂
- 8) LDA, Davis oxaziridine
- 9) DIBAL
- 10) MsCl, *t*-BuOK



- 4) Hint: two new rings are formed
- 5) Name of the reaction?
Dong transfer hydroformylation
- 8) Structure of Davis oxaziridine





- 11) TFDO, (S)-TRIP *then* I₂, TFDO
- 12) CrO₃, TBAIO₄
- 13) Zn, AcOH *then* Sml₂, H₂O

11) Hint: oxidation of and opening of the PG occurs besides epoxidation *then* formation of a new ring