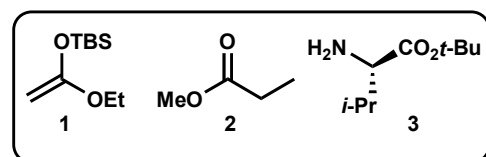
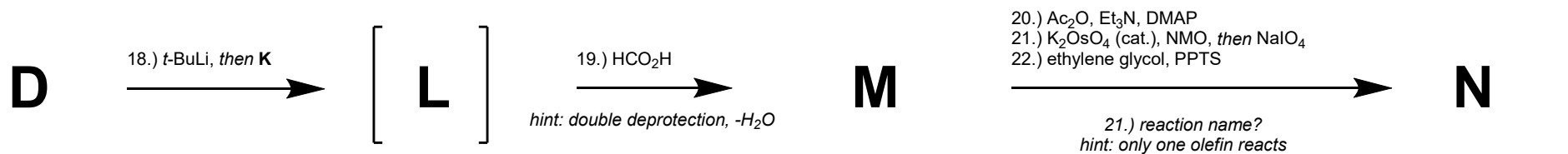
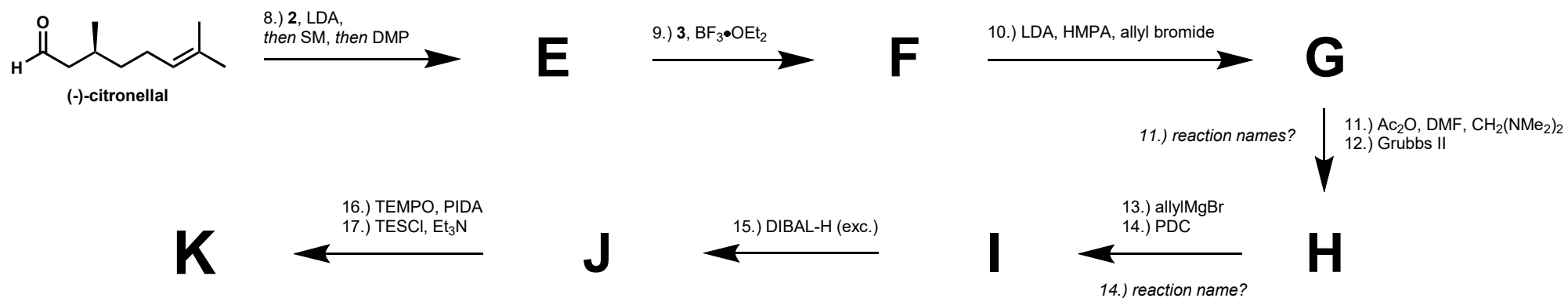
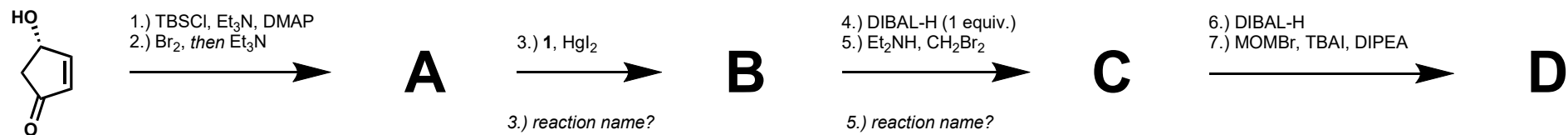
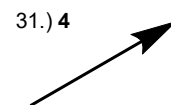
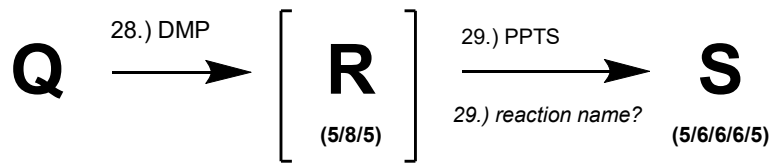
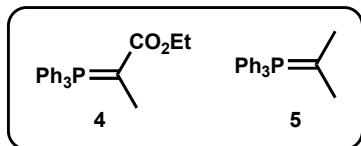


# Bioinspired Total Synthesis of Bipolarolides A and B

Bo Li, Chuanzhen Tan, Tianhao Ma, and Yanxing Jia; *Angew. Chem. Int. Ed.* **2024**, 63, e202319306.

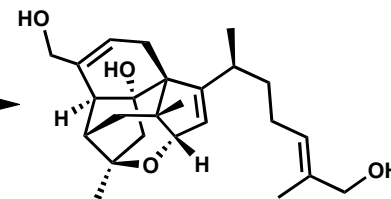


(5/8/5)

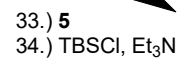


**U**

32.) DIBAL-H (exc.)



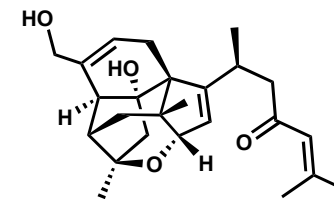
**bipolarolide B**



**V**

35.) methylene blue,  
O<sub>2</sub>, hν, then PPh<sub>3</sub>  
36.) PDC  
37.) TBAF

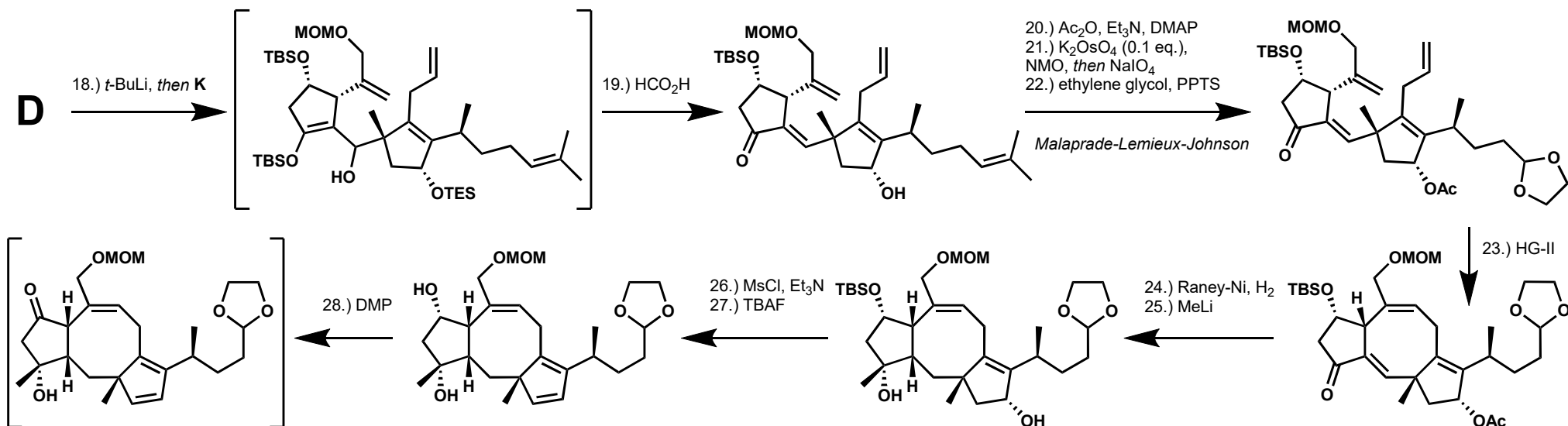
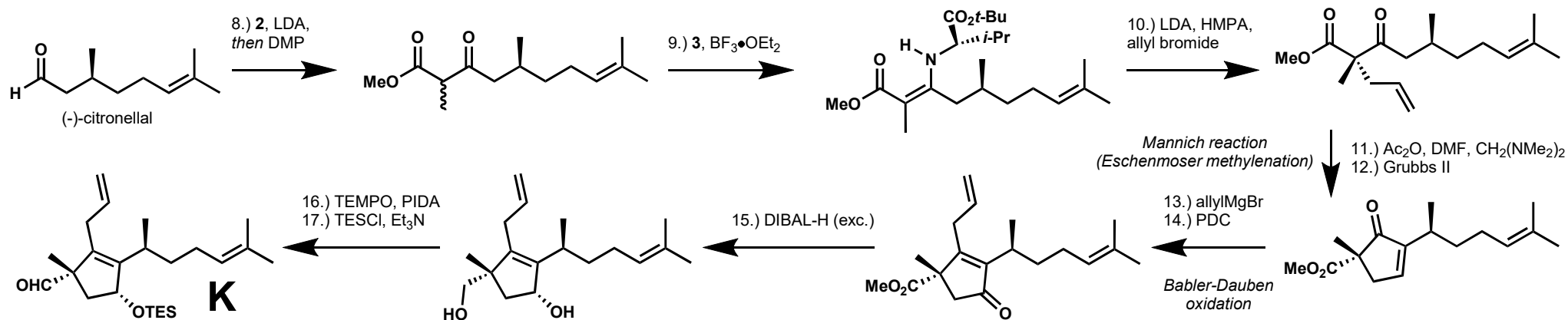
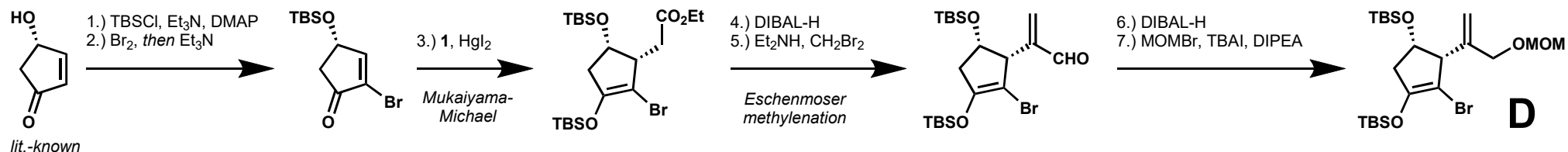
35.) reaction name?

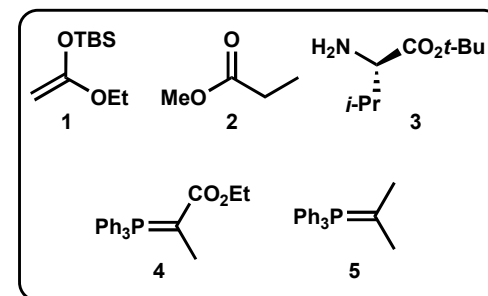
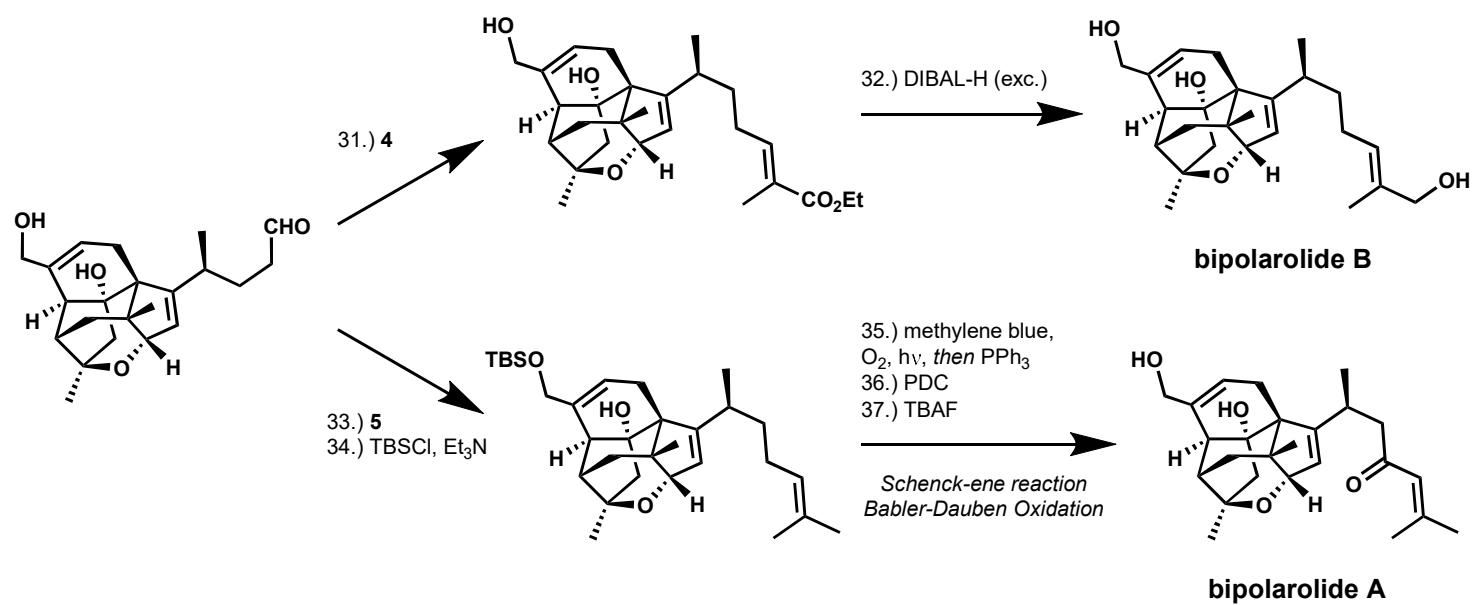
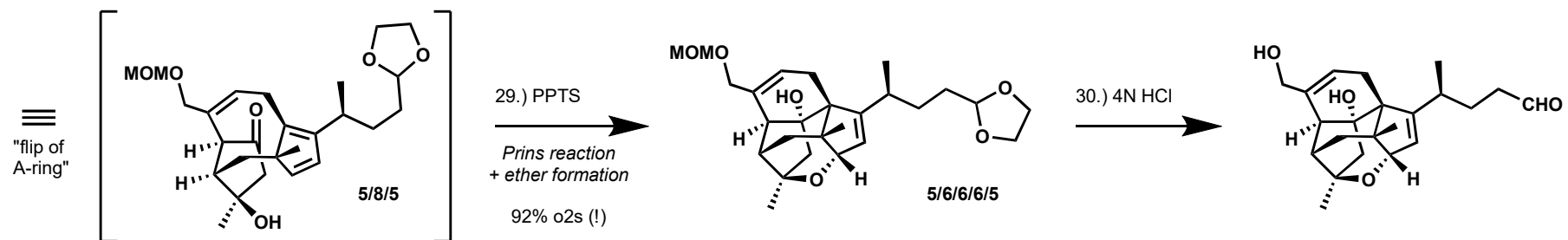


**bipolarolide A**

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#### Relevant literature:

Step 3: Danishefsky's L.A. / HgI<sub>2</sub>-promoted *cis*-1,4-addition to enones with EWGs in  $\gamma$ -position  
Procedure: *JACS* **1989**, *111*, 3456-3457. Explanation: *JOC* **1991**, *56* (1), 387-395.

Step 9/10: Asymmetric alkylation with valine-based chiral enamines  
*Tetrahedron* **1993**, *49* (8), 1579-1588.

Step 24: Chemoselective 1,4-reduction with Raney-Ni  
*Synlett* **1999**, *10*, 1663-1666.