Z. G. BRILL, H. K. GROVER, T. J. MAIMONE* (UNIVERSITY OF CALIFORNIA, BERKELEY, USA)

Enantioselective Synthesis of an Ophiobolin Sesterterpene via a Programmed Radical Cascade
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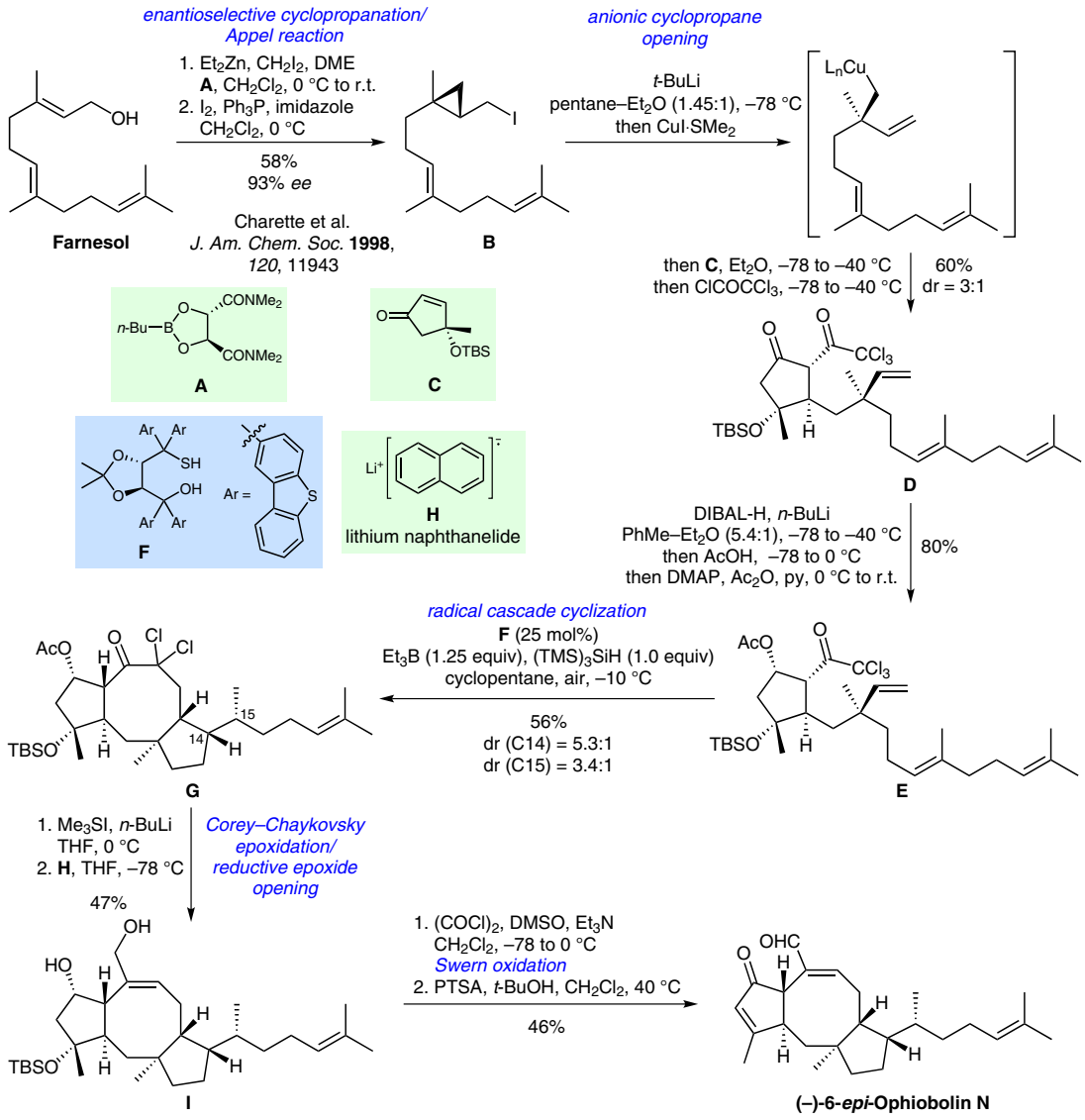
Total Synthesis of (–)-6-*epi*-Ophiobolin N



Significance: The ophiobolin family of sesterpenes is characterized by a fused 5-8-5 ring system. Brill, Grover, and Maimone developed a radical cascade cyclization to assemble this ring system, culminating in the total synthesis of (–)-6-*epi*-ophiobolin N. The complete synthesis is remarkably short for a sesterterpene, merely requiring nine linear steps.

Comment: Commencing from farnesol, cyclization precursor **5** could be accessed in four steps. The central radical cascade gave the fused carbon skeleton of the target molecule in 56% yield. TADDOL-derived thiol **6** was found to be crucial to favor the correct stereochemistry at C15. The natural product was obtained after four additional steps.

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