**Birch reduction** 

Saegusa oxidation

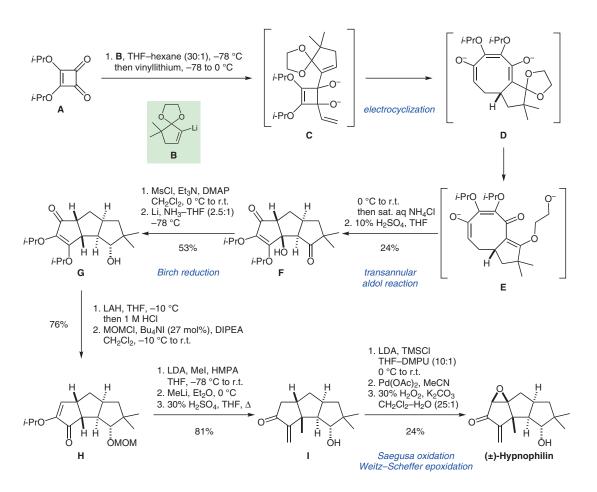
Weitz-Scheffer epoxidation



## J. Am. Chem. Soc. **2002**, 124, 9199–9203, DOI: 10.1021/ja020474t. Synthesis of (±)-Hypnophilin

L. A. PAQUETTE\*, F. GENG (THE OHIO STATE UNIVERSITY, COLUMBUS, USA)

Applications of the Squarate Ester Cascade to the Expeditious Synthesis of Hypnophilin, Coriolin, and Ceratopicanol



**Significance:** Paquette and Geng present the synthesis of (±)-hypnophilin. The linearly fused triquinane was isolated in 1981 from the fungus *Pleurotellues hypnophilus* and exhibits antitumor, antibacterial, and antifungal activity. Key to the reported synthesis is rapid assembly of the triquinane skeleton through a reaction cascade from squarate ester addition product **C**.

**Comment:** Rearrangement of putative intermediate **C**, followed by transannular aldol reaction and hydrolysis, furnished triquinane **F**. Conversion to the β-chloro carbonyl and subsequent reduction under Birch conditions produced secondary alcohol **G**. Saegusa oxidation of enone **I**, followed by Weitz–Scheffer epoxidation, completed the synthesis of (±)-hypnophilin.