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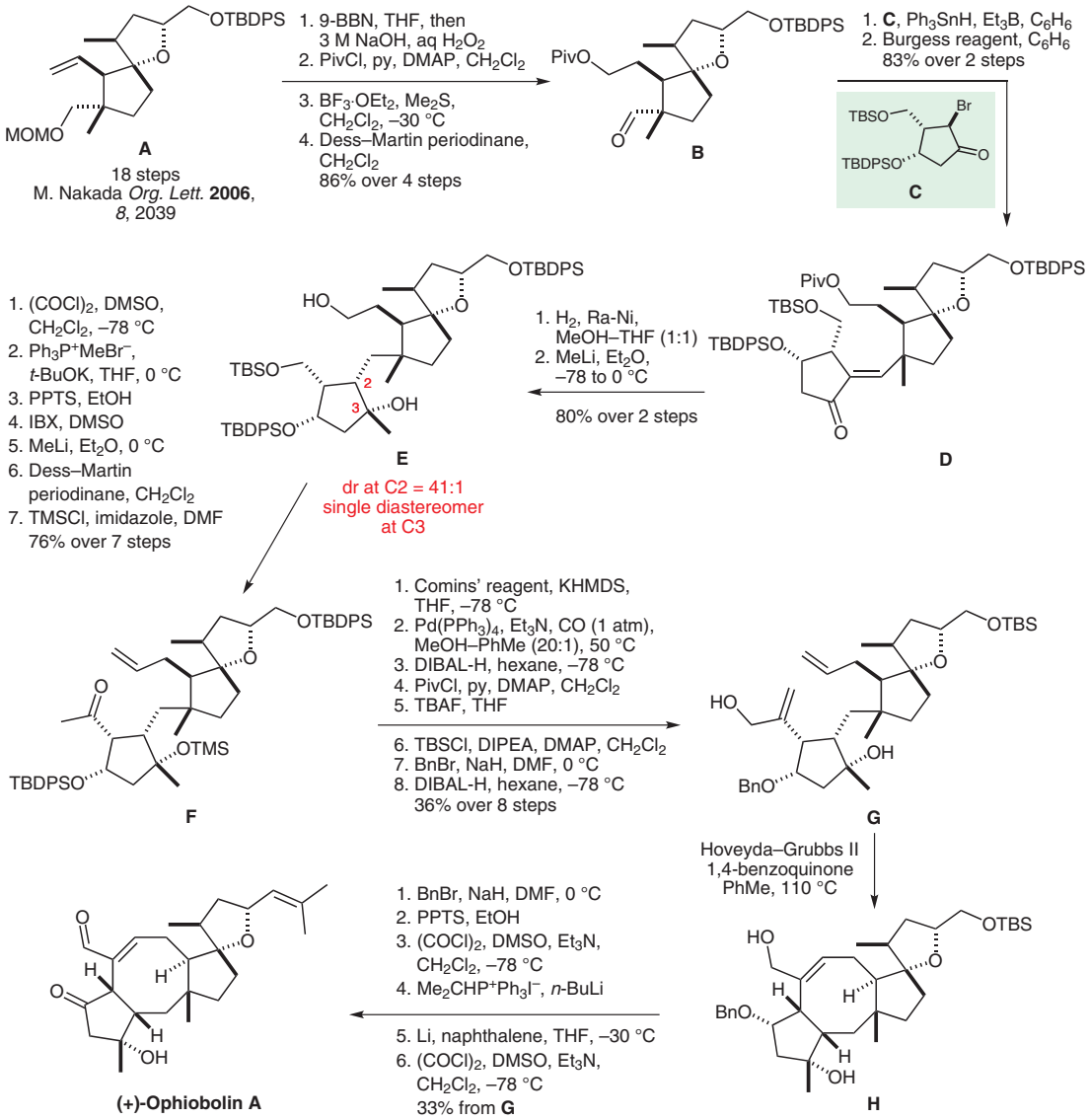
Convergent Total Synthesis of (+)-Ophiobolin A
Angew. Chem. Int. Ed. **2011**, *50*, 9452-9455.

Synthesis of (+)-Ophiobolin A



Significance: (+)-Ophiobolin is a naturally occurring sesterterpene isolated from the pathogenic plant fungus *Ophiobolus miyabeanus* in 1958. It exhibits bioactivity against a range of nematodes, fungi, and bacteria. Herein, the first total synthesis of (+)-ophiobolin is reported.

Comment: This synthesis utilizes Utimoto's conditions (*Tetrahedron Lett.* **1988**, *29*, 1041) for the Reformatsky-type coupling of α-bromo ketone **C** and aldehyde **B** in high yield. Stereoselective hydrogenation and methyl addition are utilized to install the stereocenters at C2 and C3 with excellent selectivity. A ring-closing metathesis is used to form the unsaturated eight-membered ring.

SYNFACTS Contributors: Steven V. Ley, Sean Newton
Synfacts 2011, 12, 1265-1265 Published online: 18.11.2011
DOI: 10.1055/s-0031-1289342; **Reg-No.:** N06911SF