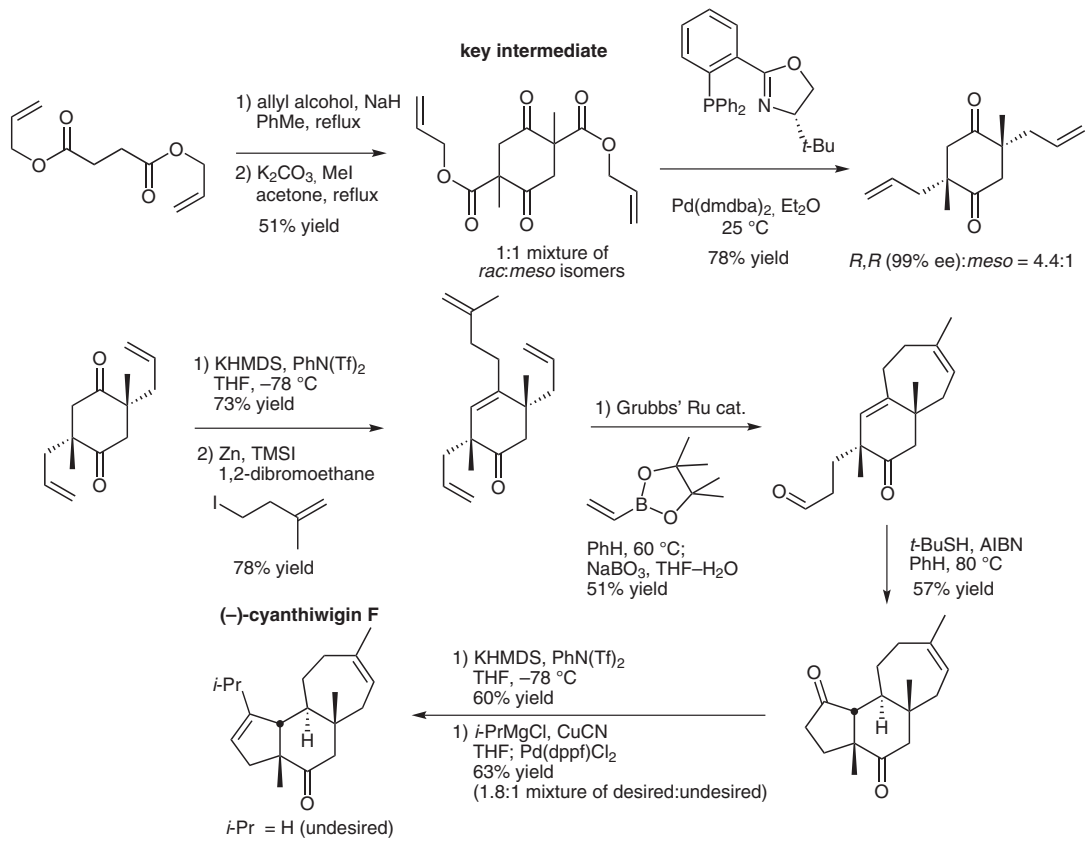
J. A. ENQUIST, JR, B. M. STOLTZ* (CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, USA)

The Total Synthesis of (–)-Cyanthiwigin F by Means of Double Catalytic Enantioselective Alkylation
Nature **2008**, *453*, 1228-1231.

Double Catalytic Enantioselective Alkylation: Total Synthesis of (–)-Cyanthiwigin F



Significance: Double-catalytic transformations are efficient and interesting routes to construct highly complex and functionalized compounds rapidly. There are a number of examples of double-catalytic enantioselective reactions to date (see Reviews below). This report utilizes this unique approach to construct a key precursor to what is arguably the greatest challenge in the synthesis of this natural product.

Reviews: S. Masamune, W. Choy, J. S. Petersen, L. R. Sita *Angew. Chem. Int. Ed.* 1985, *24*, 1-30; O. I. Kolodiazhnyi *Tetrahedron* **2003**, *59*, 5953-6018.

Comment: While double-enantioselective catalytic reactions are well known, the authors have cleverly utilized this process to construct two all-carbon quaternary centers in a single step. This rapid approach gave way to the following efficient route to the desired product in a minimum number of steps. The overall transformation is interesting and quite efficient.

SYNFACTS Contributors: Hisashi Yamamoto, Joshua P. Abell
Synfacts 2008, 10, 1057-1057 Published online: 22.09.2008
DOI: 10.1055/s-2008-1078136; **Reg-No.:** H10408SF