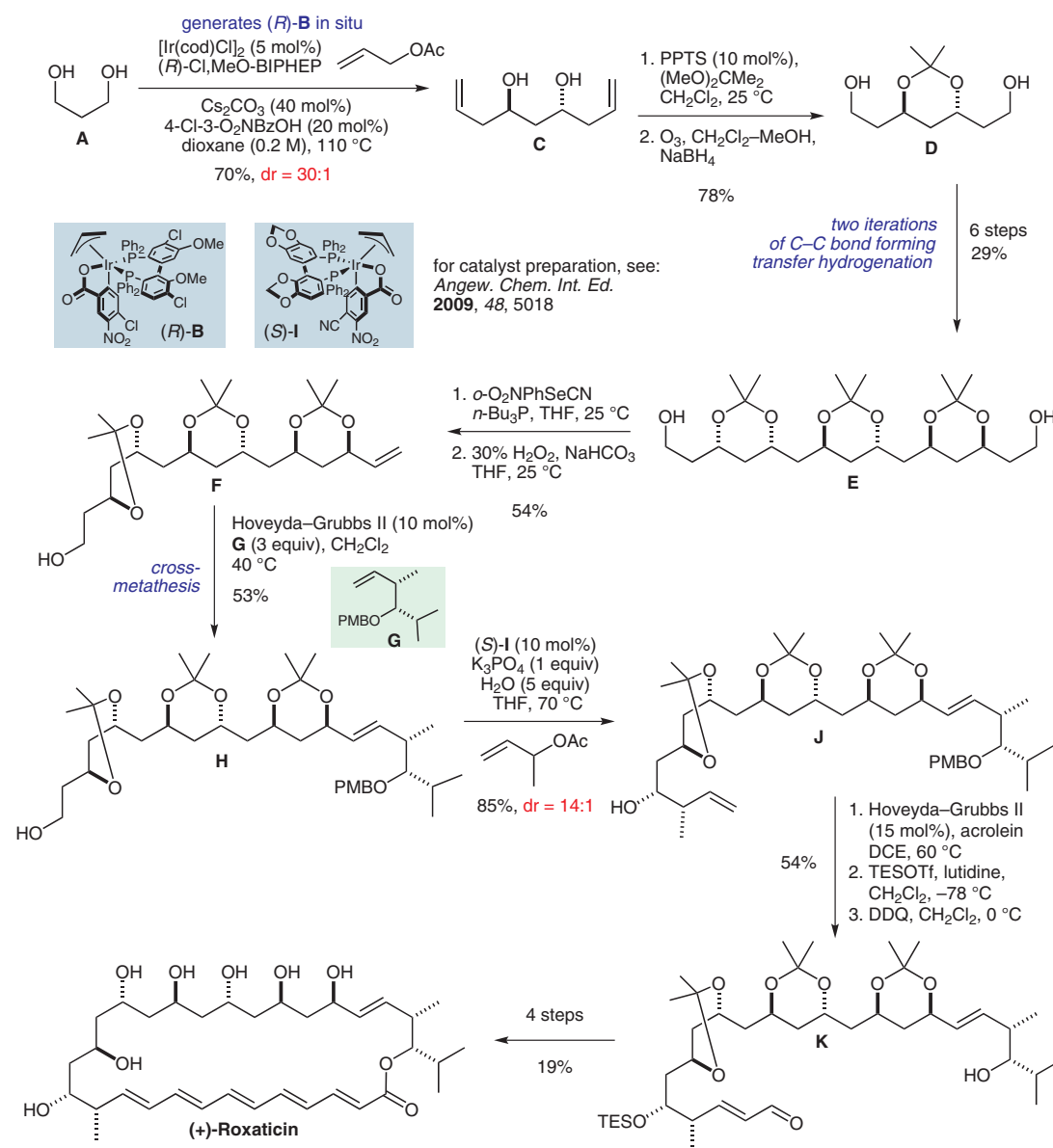


S. B. HAN, A. HASSAN, I. S. KU, M. J. KRISCHE* (UNIVERSITY OF TEXAS AT AUSTIN, USA)
 Total Synthesis of (+)-Roxaticin via C–C Bond Forming Transfer Hydrogenation: A Departure from Stoichiometric Chiral Reagents, Auxiliaries and Premetalated Nucleophiles in Polyketide Construction
J. Am. Chem. Soc. **2010**, *132*, 15559–15561.

Total Synthesis of (+)-Roxaticin



Category

Synthesis of Natural Products and Potential Drugs

Key words

(+)-roxaticin

cross-metathesis

C–C bond forming transfer hydrogenation

SYNFACT
of the month

Significance: The oxo-polyene macrolide (+)-roxaticin has been a popular target for the synthetic community. This synthesis requires only 20 steps and is particularly efficient due to a lack of chiral auxiliary controlled reactions and redox manipulations.

SYNFACTS Contributors: Steven V. Ley, Catherine F. Carter
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Comment: The key step in the synthesis is a C–C bond forming transfer hydrogenation (e.g. **A** → **C**), which is used to form seven C–C bonds.