ortho-quinones

ruthenium

 $K.\ C.\ NICOLAOU, *\ Y.\ TANG,\ J.\ WANG\ (THE\ SCRIPPS\ RESEARCH\ INSTITUTE,\ LA\ JOLLA\ AND\ UNIVERSITY\ OF\ CALIFORNIA,\ SAN\ DIEGO,\ USA)$

Total Synthesis of Sporolide B

Angew. Chem. Int. Ed. 2009, 48, 3449-3453.

Synthesis of Sporolide B

Significance: Sporolide B is a marine metabolite with no apparent biological activity. The Scripps synthesis uses a ruthenium-catalyzed [2+2+2] cycloaddition to generate the chlorinated arene ring in **G** and an intramolecular Diels-Alder reaction of the *ortho*-quinone **H**.

Comment: The excellent diastereoselectivity in the Diels–Alder reaction is due to the steric bias arising from the two oxygen substituents in the dienophile. However, the regioselectivity of the reaction is harder to explain.

 $\textbf{SYNFACTS Contributors:} \ Philip \ Kocienski$

Synfacts 2009, 9, 0939-0939 Published online: 21.08.2009

DOI: 10.1055/s-0029-1217621; Reg-No.: K10409SF