K. C. NICOLAOU,* S. M. DALBY, S. LI, T. SUZUKI, D. Y.-K. CHEN* (INSTITUTE OF CHEMICAL AND ENGINEERING SCIENCES, A*STAR, SINGAPORE; THE SCRIPPS RESEARCH INSTITUTE, LA JOLLA AND UNIVERSITY OF CALIFORNIA, SAN DIEGO, USA)

Total Synthesis of (+)-Haplophytine

Angew. Chem. Int. Ed. **2009**, 48, 7752-7756.

Synthesis of (+)-Haplophytine

Significance: The first of the five quaternary centers in haplophytine was installed by an oxidative coupling reaction (**A** + **B** → **C**) mediated by phenyliodonium bis(trifluoroacetate) (PIFA).

Comment: The oxidative semi-pinacol rearrangement (**D** → **E**) was also used in Fukuyama's synthesis of haplophytine (*Angew. Chem. Int. Ed.* **2009**, 48, 7600; *Synfacts* **2010**, 3). The lactone ring was created by an oxidative cyclization mediated by K₃[Fe(CN)₆].

SYNFACTS Contributors: Philip Kocienski
Synfacts 2010, 1, 0001-0001 Published online: 21.12.2009
DOI: 10.1055/s-0029-1218392; Reg-No.: K15909SF

2010 © THIEME STUTTGART • NEW YORK

Category

Synthesis of Natural Products and Potential Drugs

Key words

haplophytine

oxidative coupling

Suzuki-Miyaura coupling

radical cyclization

semi-pinacol oxidative rearrangement

SYNFACT
of the month