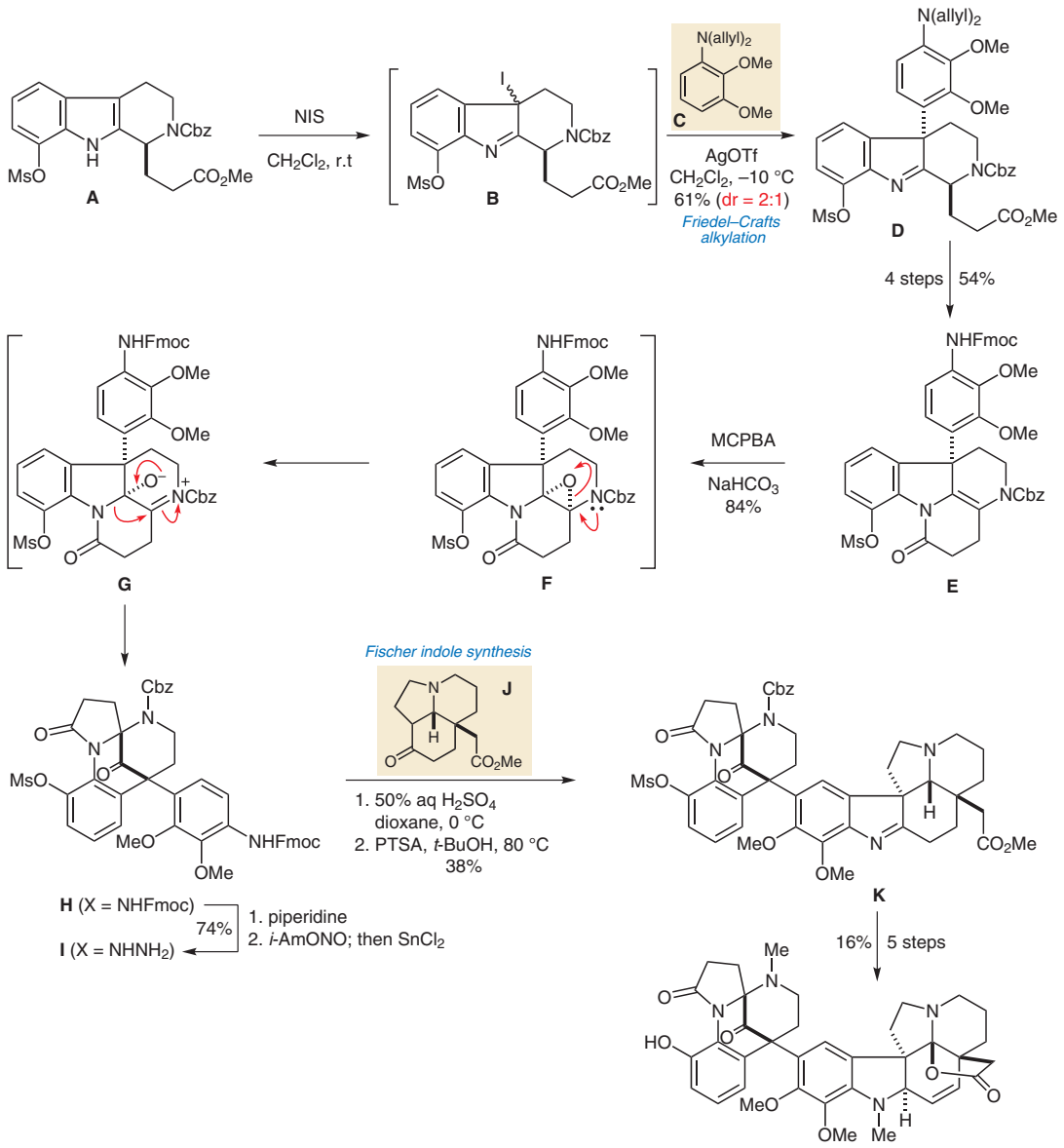
H. UEDA, H. SATOH, K. MATSUMOTO, K. SUGIMOTO, T. FUKUYAMA,* H. TOKUYAMA*
(TOHOKU UNIVERSITY, SENDAI AND UNIVERSITY OF TOKYO, JAPAN)
Total Synthesis of (+)-Haplophytine
Angew. Chem. Int. Ed. **2009**, *48*, 7600-7603.

Synthesis of (+)-Haplophytine



Significance: The first total synthesis of haplophytine features a Friedel–Crafts alkylation to create the quaternary center in **D** and an oxidative rearrangement **F** → **G** → **H**.

Comment: The stereogenic center in tetrahydro-β-carboline **A** was installed via a Noyori asymmetric hydrogenation. The Fischer indole synthesis gave two regioisomers (5:3, **K** major).

SYNFACTS Contributors: Philip Kocienski
Synfacts 2010, 1, 0003-0003 Published online: 21.12.2009
DOI: 10.1055/s-0029-1218265; **Reg-No.:** K15809SF

2010 © THIEME STUTTGART • NEW YORK

Category
Synthesis of Natural Products and Potential Drugs

Key words
haplophytine
indole alkaloids
Fischer indole synthesis
Friedel–Crafts alkylation
quaternary centers

SYNFACT of the month

This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.