X. YU, L. XIAO, Z. WANG, T. LUO* (PEKING UNIVERSITY, P. R. OF CHINA)
Scalable Total Synthesis of (–)-Vinigrol
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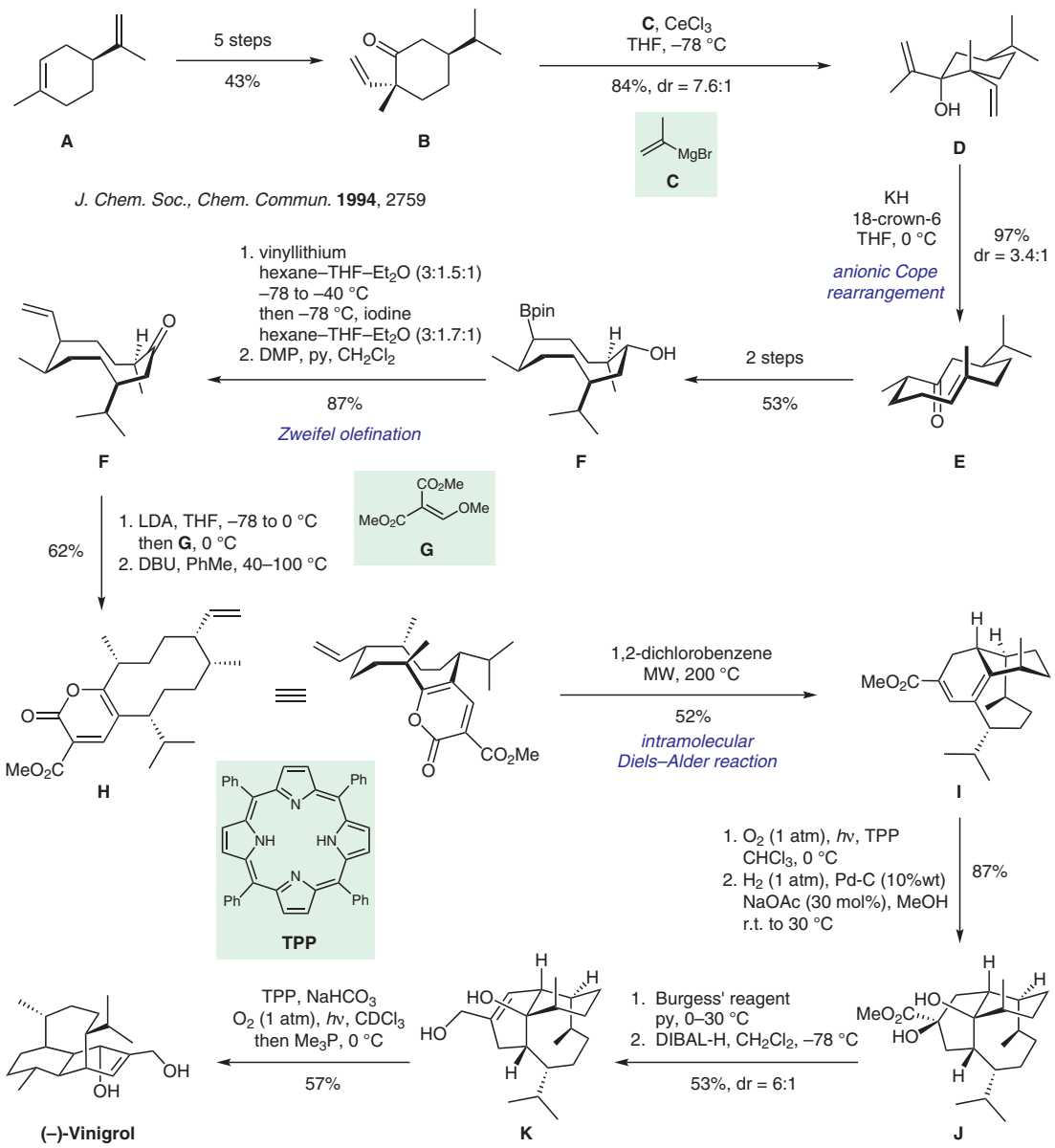
Total Synthesis of (–)-Vinigrol



Significance: The authors report the total synthesis of (–)-vinigrol, which has been an attractive target since its isolation in 1987. Key features of the synthesis include a transannular Diels–Alder reaction and an anionic Cope rearrangement.

Comment: The synthesis starts from (–)-limonene and gives ketone **B** following a known procedure. Anionic Cope rearrangement and further elaboration yield macrocycle **H**. Intramolecular Diels–Alder reaction gives access to the skeleton of vinigrol, which itself is obtained after five more steps.

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Category
Synthesis of Natural Products and Potential Drugs

Key words
(–)-vinigrol
Cope rearrangement
Zweifel olefination
Diels–Alder reaction

Synfact of the Month

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