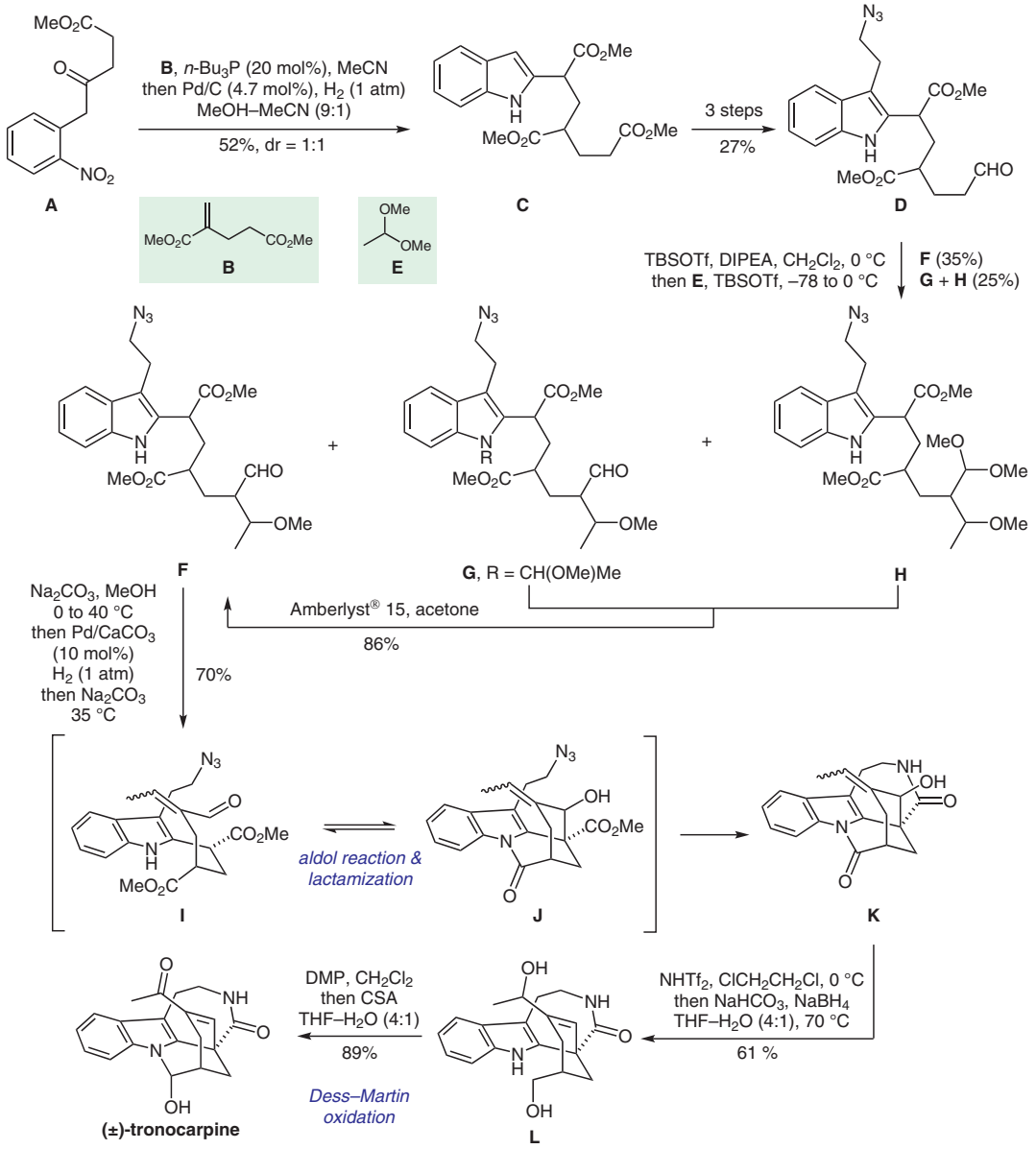
A. NAKAYAMA*, T. NAKAMURA, T. ZAIMA, S. FUJIMOTO, S. KARANJIT, K. NAMBA*
(TOKUSHIMA UNIVERSITY, JAPAN)

Concise Total Synthesis of Tronocarpine
Angew. Chem. Int. Ed. **2020**, DOI: 10.1002/anie.202009966.

Total Synthesis of (±)-Tronocarpine



Significance: Nakayama, Kamba and co-workers report a total synthesis of tronocarpine, a chippiine-type indole alkaloid containing an azabicyclo[3.3.1]nonane core. The synthesis features a tandem cyclization consisting of unsaturated aldehyde formation, intermolecular aldol reaction, and lactamization.

Comment: Indole **D** was obtained from known precursors in four steps. **D** gave rise to **F** and an inseparable mixture of **G** and **H**, which could be converted to **F** in one step. Tandem cyclization was achieved by subsequent treatment with Na_2CO_3 and $Pd/CaCO_3$. Tronocarpine was obtained in two steps from **K**.

SYNFACTS Contributors: Erick M. Carreira, Moritz J. Classen
Synfacts 2020, 16(12), 1383 Published online: 17.11.2020
DOI: 10.1055/s-0040-1719534; **Reg-No.:** C06620SF

Category
Synthesis of Natural Products and Potential Drugs

Key words
(±)-tronocarpine
chippiine alkaloids
tandem cyclization
Dess–Martin oxidation

Synfact of the Month