Synthesis of (–)-Himalensine A

Category

Synthesis of Natural
Products and
Potential Drugs

Key words

(–)-himalensine A

daphniphyllum
alkaloid

amidofuran

Diels–Alder
reaction

Negishi coupling

Stetter cyclization

Synfact
of the month

Significance: (–)-Himalensine A is a highly congested alkaloid featuring a trincalyciphylline A skeleton. Dixon, Paton, and co-workers report its first enantioselective synthesis in 23 steps involving an intramolecular amidofuran Diels–Alder reaction (see also *Synfacts* **2018**, *14*, 203).

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Comment: The enantioselective, intramolecular Diels–Alder reaction of **B** afforded tetracycle **D**. A Stetter cyclization of **L** using NHC catalyst **M** forged the final ring of the carbon framework. Subsequent amide reduction completed the total synthesis.