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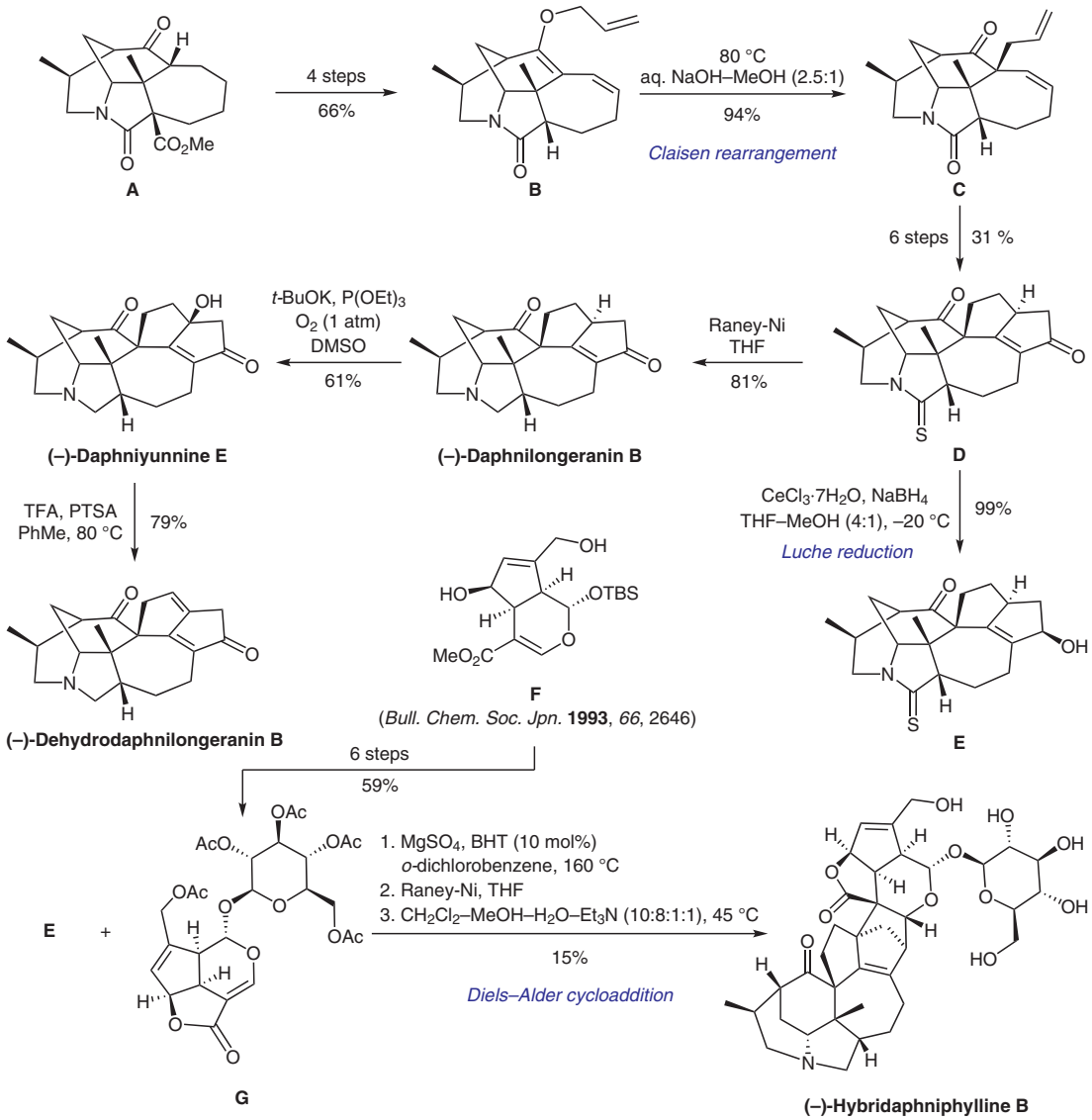
Total Synthesis of Hybridaphniphylline B

J. Am. Chem. Soc. **2018**, *140*, 4227–4231.

Syntheses of *Daphniphyllum* Alkaloids



Significance: The first total synthesis of (–)-hybridaphniphylline B in addition to three other *daphniphyllum* alkaloids was accomplished. The synthetic strategy relied on a biomimetic Diels–Alder cycloaddition to forge the stereochemically dense decacyclic skeleton.

Comment: Utilizing previously synthesized **A** (*J. Am. Chem. Soc.* **2017**, *139*, 14893), hexacycle **D** was accessed in eleven steps through an optimized Claisen rearrangement. **D** served as a common intermediate for the synthesis of four natural products.

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Category

Synthesis of Natural Products and Potential Drugs

Key words

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Diels–Alder cycloaddition

Claisen rearrangement

biomimetic synthesis

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