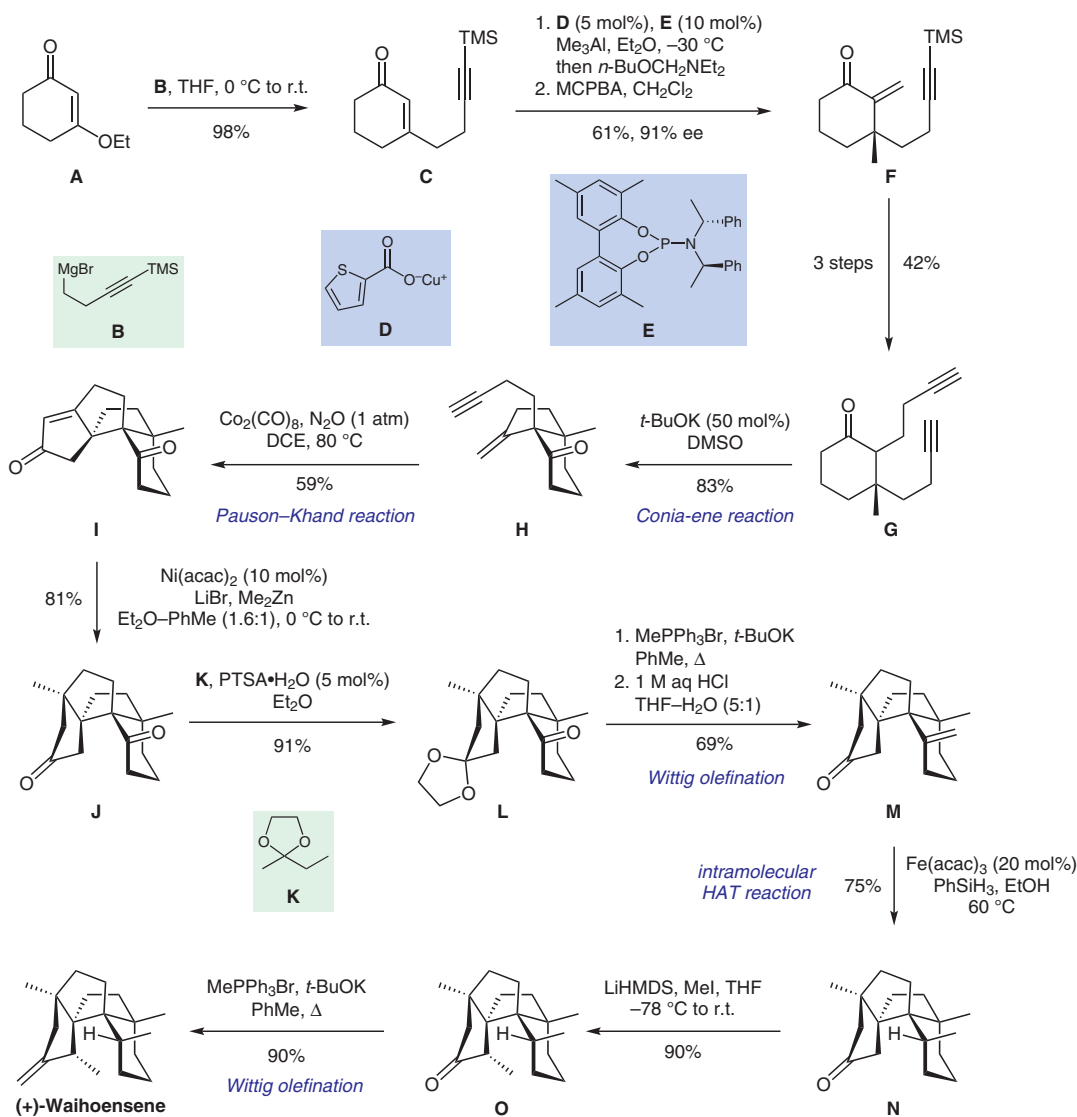


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Asymmetric Total Synthesis of (+)-Waihoensene
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Asymmetric Total Synthesis of (+)-Waihoensene



Significance: Huang, Yang, and co-workers report the asymmetric synthesis of (+)-waihoensene in 15 steps. Waihoensene features a congested [6,5,5,5] tetracyclic core, containing four contiguous quaternary carbons and a *cis*-fused six-membered ring.

Comment: In five steps, enone **A** is transformed into **G**, which undergoes diastereoselective Conia-ene reaction to **H**. Enyne **H** is elaborated to **J** through a Pauson-Khand reaction, followed by a nickel-catalyzed 1,4-addition. Reduction of the exocyclic double bond is achieved by Fe(acac)₃/PhSiH₃-mediated intramolecular HAT reaction to give **N**. Shortly after the publication of this synthesis, Snyder and co-workers reported another synthesis of this natural product following a very similar strategy (*Angew. Chem. Int. Ed.* **2020**, DOI: 10.1002/anie.202004177).

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Synthesis of Natural Products and Potential Drugs

Key words

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Conia-ene reaction

Pauson-Khand reaction

Wittig olefination

intramolecular HAT reaction

Synfact of the Month

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