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Total Synthesis of (\pm) -Maoecrystal V

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Total Synthesis of (±)-Maoecrystal V

Significance: Maoecrystal V was isolated in 2004 by Sun from the Chinese herb *Isodon eriocalyx*. Both the congested framework and biological inhibition against HeLa cells ($IC_{50} = 60$ nm) has made maoecrystal V a worthy target for the synthetic community.

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Comment: Key steps involve the formation of the seven-membered ring via a rhodium-catalyzed O–H insertion to give **H**. The pentacyclic system was completed by use of a Wessely oxidative acetoxylation followed by an intramolecular Diels–Alder reaction in which **L** was the major product.

Category

Synthesis of Natural Products and Potential Drugs

Key words

Wessely oxidative acetoxylation

intramolecular
Diels-Alder reaction

rhodium-catalyzed O–H insertion

