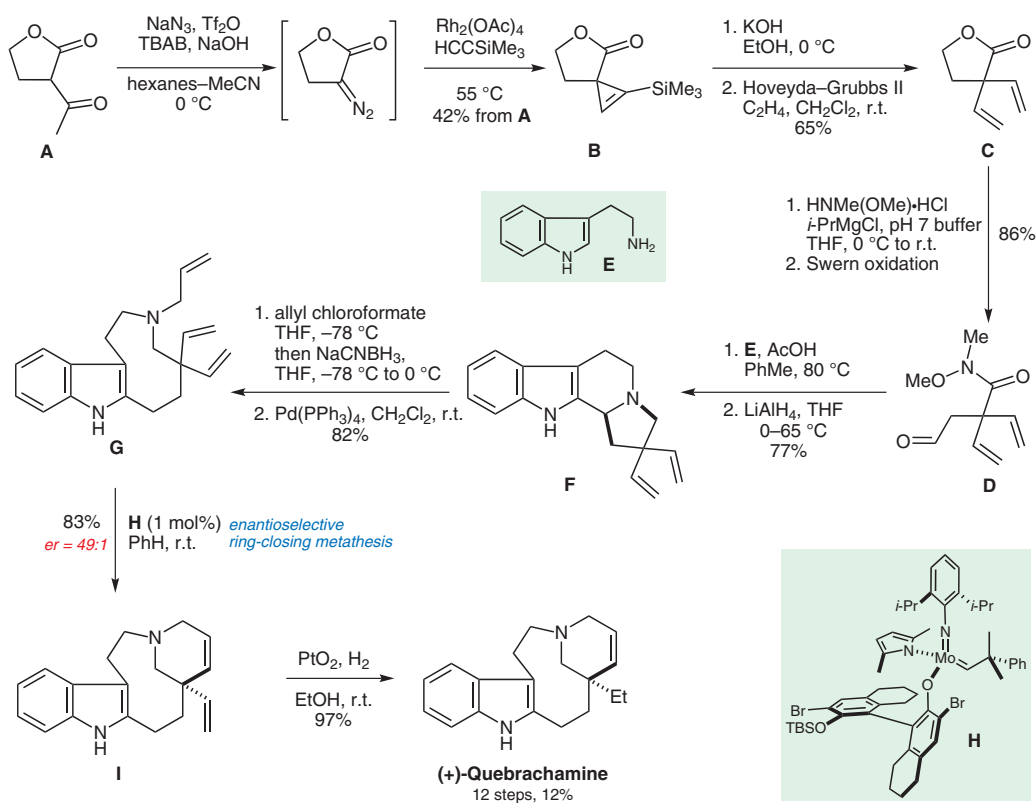


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Design and Stereoselective Preparation of a New Class of Chiral Olefin Metathesis Catalysts and Application to Enantioselective Synthesis of Quebrachamine: Catalyst Development Inspired by Natural Product Synthesis
J. Am. Chem. Soc. **2009**, *131*, 943-953.

Synthesis of (+)-Quebrachamine



Significance: Quebrachamine is an *Aspidosperma* alkaloid that is an adrenergic blocker. This synthesis is noteworthy for the highly enantioselective ring-closing cross-metathesis (**G** \rightarrow **I**) using a chiral molybdenum catalyst which is stereogenic at the metal center.

Comment: The catalyst **H** was made by a diastereoselective desymmetrization (*dr* = 7:1) of a Mo bispyrrolide precursor with one equivalent of monosilyl-protected octahydrobinaphthol in benzene at room temperature. No improvement on the impressive enantiomeric ratio was seen when diastereoisomerically pure **H** was used.

SYNFACTS Contributors: Philip Kocienski, Stewart Eccles
 Synfacts 2009, 8, 0817-0817 Published online: 23.07.2009
 DOI: 10.1055/s-0029-1217578; Reg-No.: K08809SF

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Category

Synthesis of Natural Products and Potential Drugs

Key words

quebrachamine

enantioselective ring-closing metathesis

chiral molybdenum catalysts

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