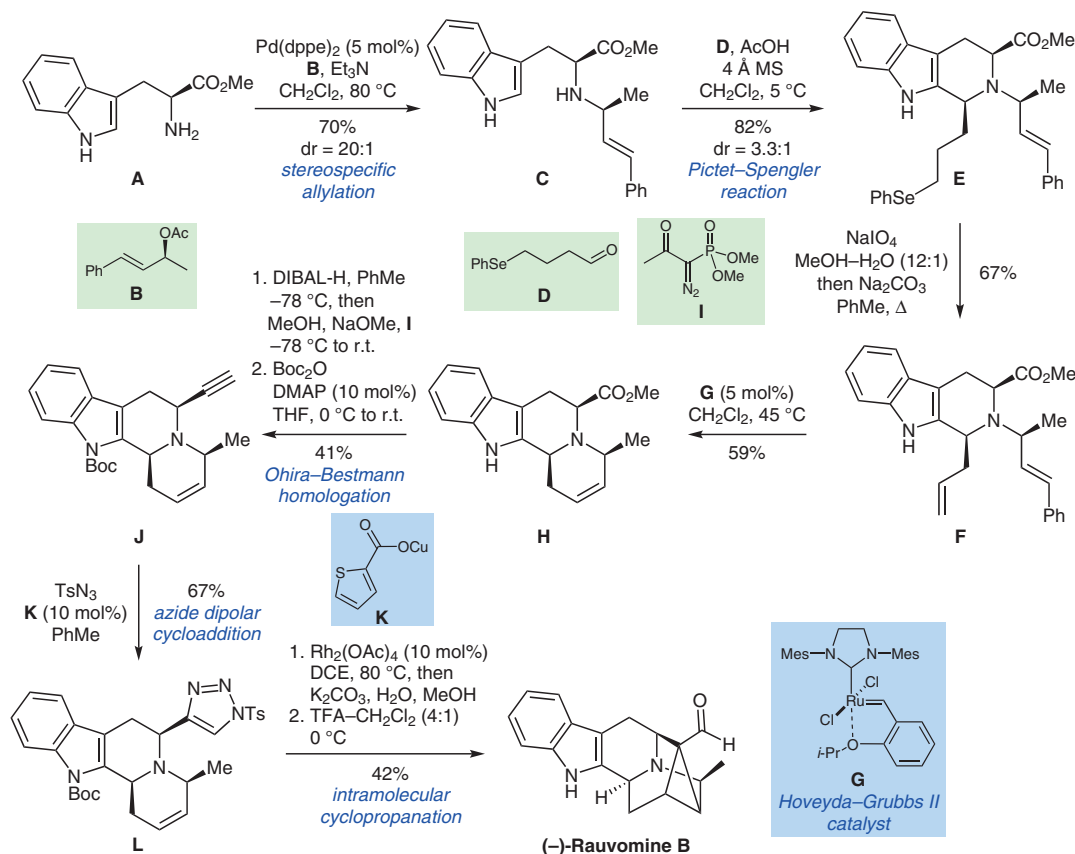


## Total Synthesis of (–)-Rauvomine B



**Significance:** Smith, Chen, and co-workers report the first total synthesis of (–)-rauvomine B, a monoterpene indole alkaloid belonging to the sarpagine class. The natural product features an unusual bridging cyclopropane motif embedded in an indoloquinolizidine unit. Key to the synthesis is the construction of a triazole via azide dipolar cycloaddition, which serves as a carbene precursor for the intramolecular cyclopropanation.

**Comment:** The synthesis commenced with the stereospecific allylation of tryptophan methyl ester **A** to secondary amine **C**. Compound **C** was engaged in a Pictet–Spengler reaction with aldehyde **D** to afford alkyl selenide **E**. Oxidation and elimination of **E** returned diene **F**, which was subjected to HG II catalyst, delivering the indoloquinolizidine in **H**. Conversion of the methyl ester into **H** to the key triazole **L** set the stage for the intramolecular cyclopropanation. Under Rh(II) catalysis, **L** formed the putative carbene that cleanly returned the full core of (–)-rauvomine B. Boc deprotection mediated by TFA completed the synthesis.