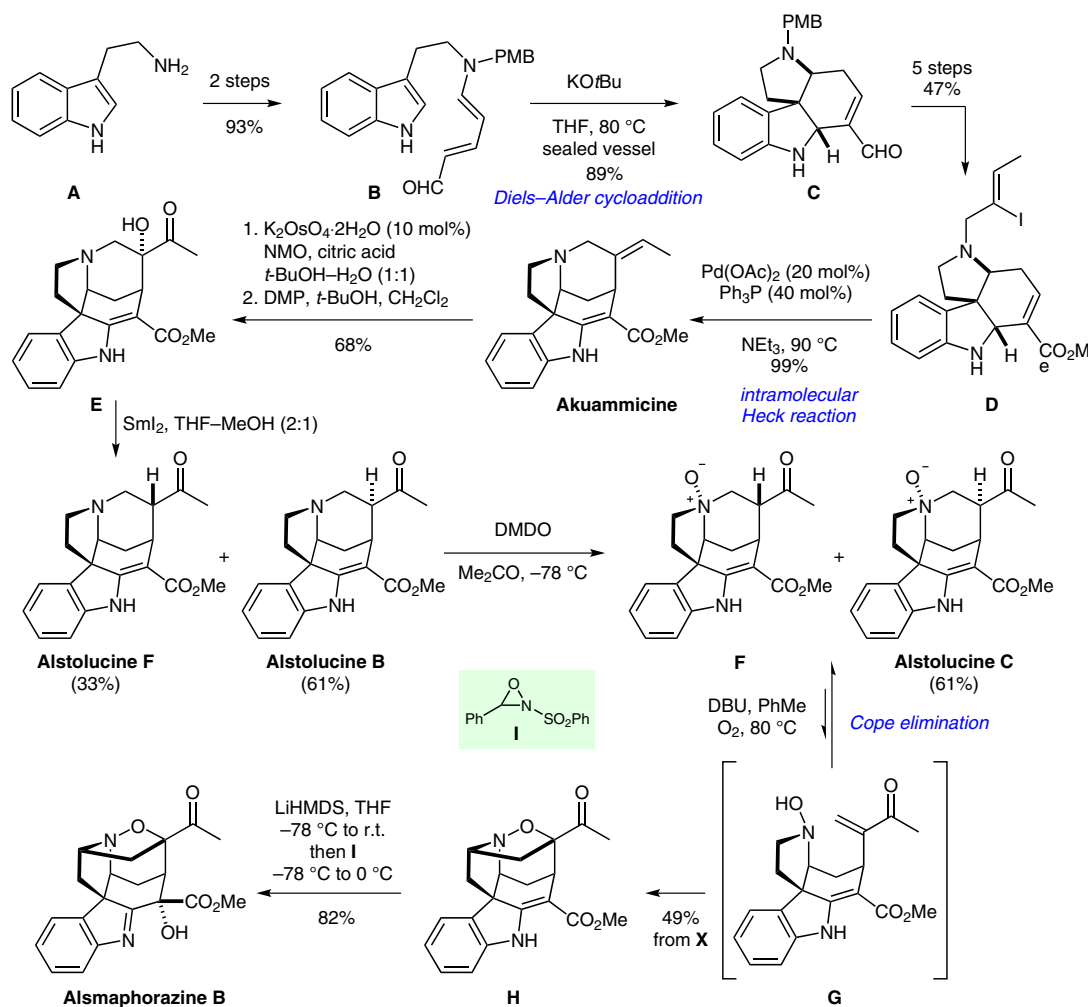


## Synthesis of Alsmaphorazine B



**Significance:** Alsmaphorazine B is an indole alkaloid endowed with an isoaxzolidine embedded in the hexacyclic skeleton. Biosynthetically, this natural product is believed to originate from the related alkaloid akuammicine. Hong and Vanderwal present a short synthetic route employing an oxidation/Cope elimination/cycloaddition sequence to enable the transformation of akuammicine into alsmaphorazine B.

**Comment:** A previously employed intramolecular Heck reaction provided high-yielding access to akuammicine from **D**. Oxidation followed by Sml<sub>2</sub>-mediated deoxygenation gave alstolucines B and F. Oxidation with DMDO followed by base induced Cope elimination yielded hydroxylamine **G**, which upon oxidation to the nitron underwent 1,3-dipolar cycloaddition to **H**. Finally,  $\alpha$ -hydroxylation furnished alsmaphorazine B in 15 steps and 11% overall yield.