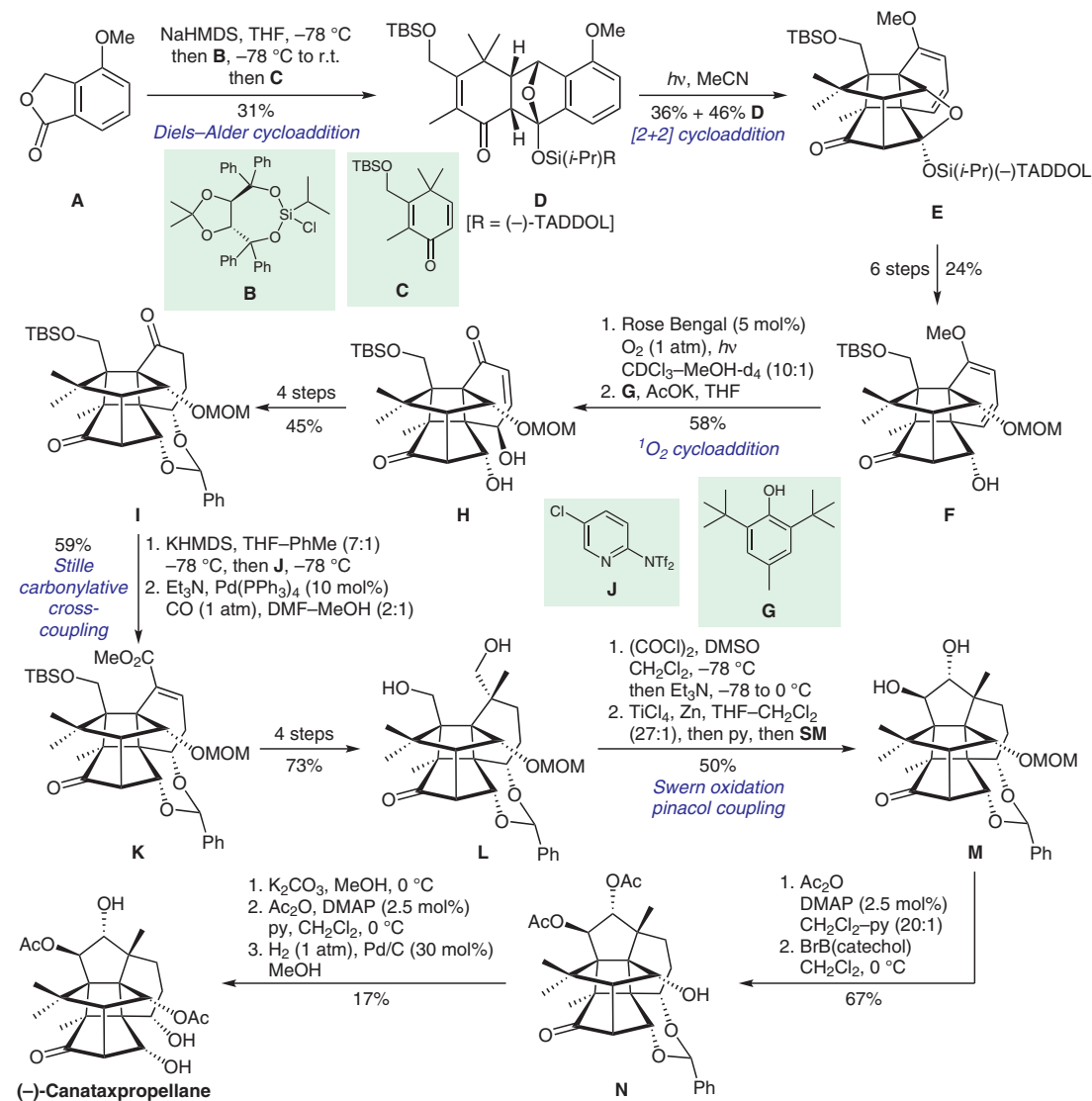


Synthesis of (–)-Canataxpropellane



Significance: (–)-Canataxpropellane is a taxane diterpenoid that was isolated from *Taxus canadensis*. Gaich and co-workers report the total synthesis of this structurally complex natural product. Key to the synthesis is an intramolecular [2+2] cycloaddition that forms the fully substituted cyclobutane.

Comment: Cyclobutane **E** was assembled in two steps from **A** and **B** through Diels–Alder cycloaddition and intramolecular [2+2] cycloaddition. $^1\text{O}_2$ cycloaddition of **F** followed by reductive O–O bond cleavage gave **H**. Oxidation of diol **L** and pinacol coupling completed the carbon skeleton.