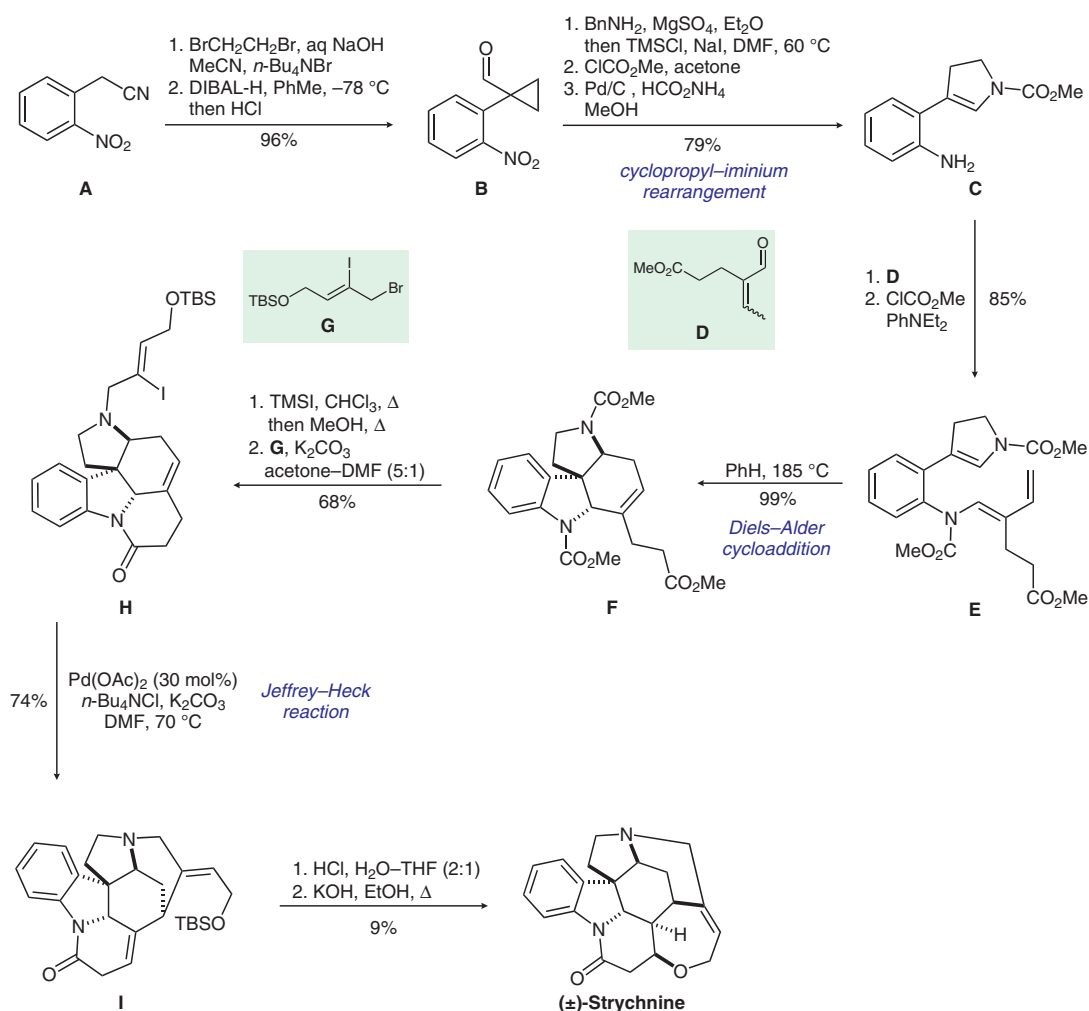


Total Synthesis of (±)-Strychnine



Significance: The heptacyclic alkaloid strychnine has been the focus of numerous synthetic efforts over the last 75 years since the first total synthesis by Woodward. In 1994, Rawal and Iwasa reported a concise, stereo-controlled total synthesis of racemic strychnine notable for its elegance.

Comment: Elaboration of starting material **A** to aniline **C** involves a cyclopropyl-iminium rearrangement. After alkylation to yield **E**, Diels-Alder cycloaddition gives rise to carbamate **F**. The Jeffrey modification of the Heck reaction yields advanced intermediate **I**, which is then converted to the natural product.