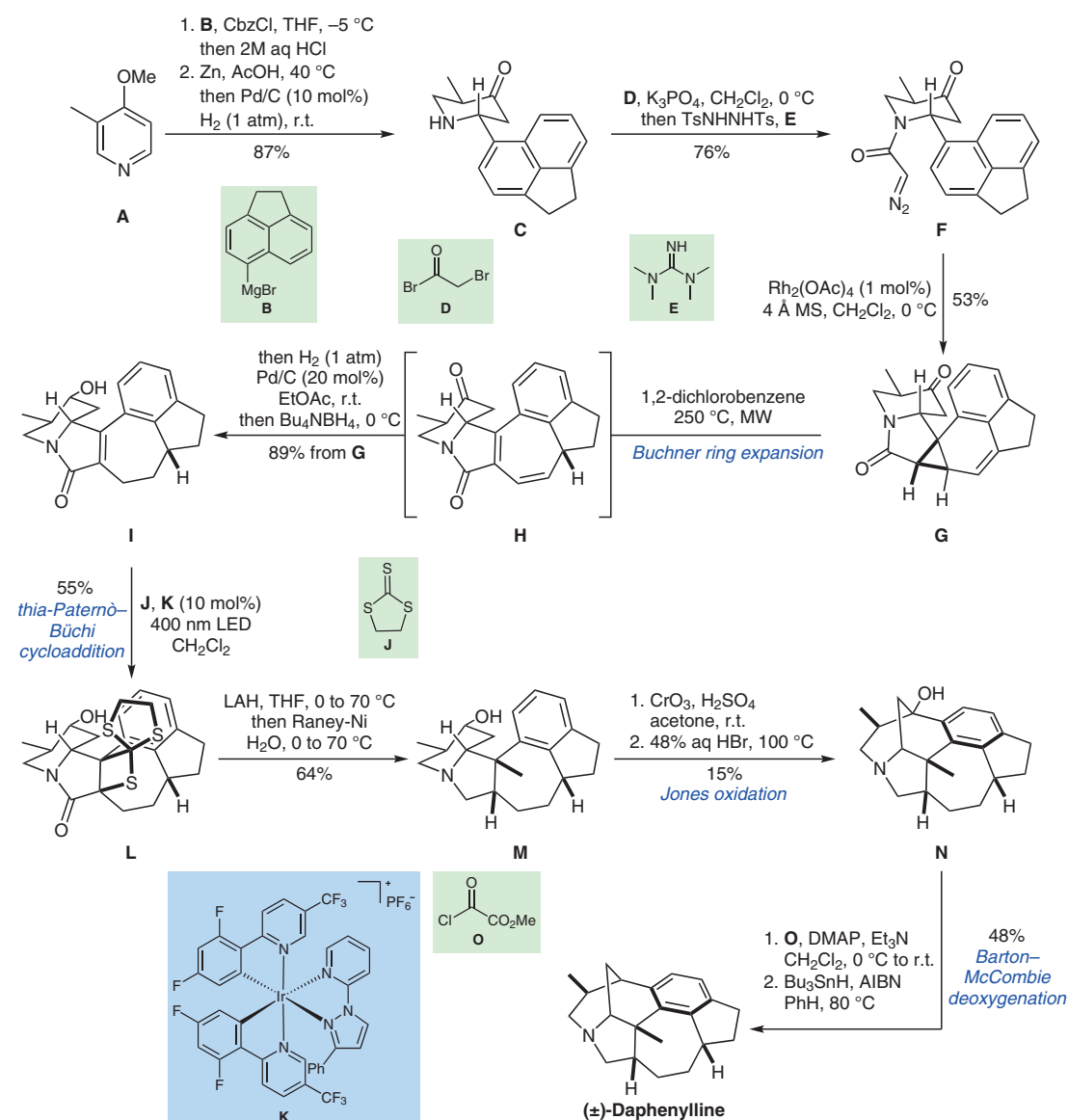


Total Synthesis of (±)-Daphenylline



Significance: Sarpong and co-workers report the total synthesis of (±)-daphenylline. The alkaloid features a 2-azabicyclo[3.3.1]nonane core attached to a 5-7-5 ring system. Their key synthetic strategy is the formation of the seven-membered ring by a Buchner ring expansion.

Comment: Diazoacetamide **F** was accessed from pyridine **A** in three steps. After cyclopropanation, lactam **I** was furnished through a 6 π -electrocyclic ring opening and reduction. The benzylic methyl group in amine **M** was installed through a thia-Paternò-Büchi cycloaddition and subsequent reduction of the thietane using LAH and Raney-Ni.