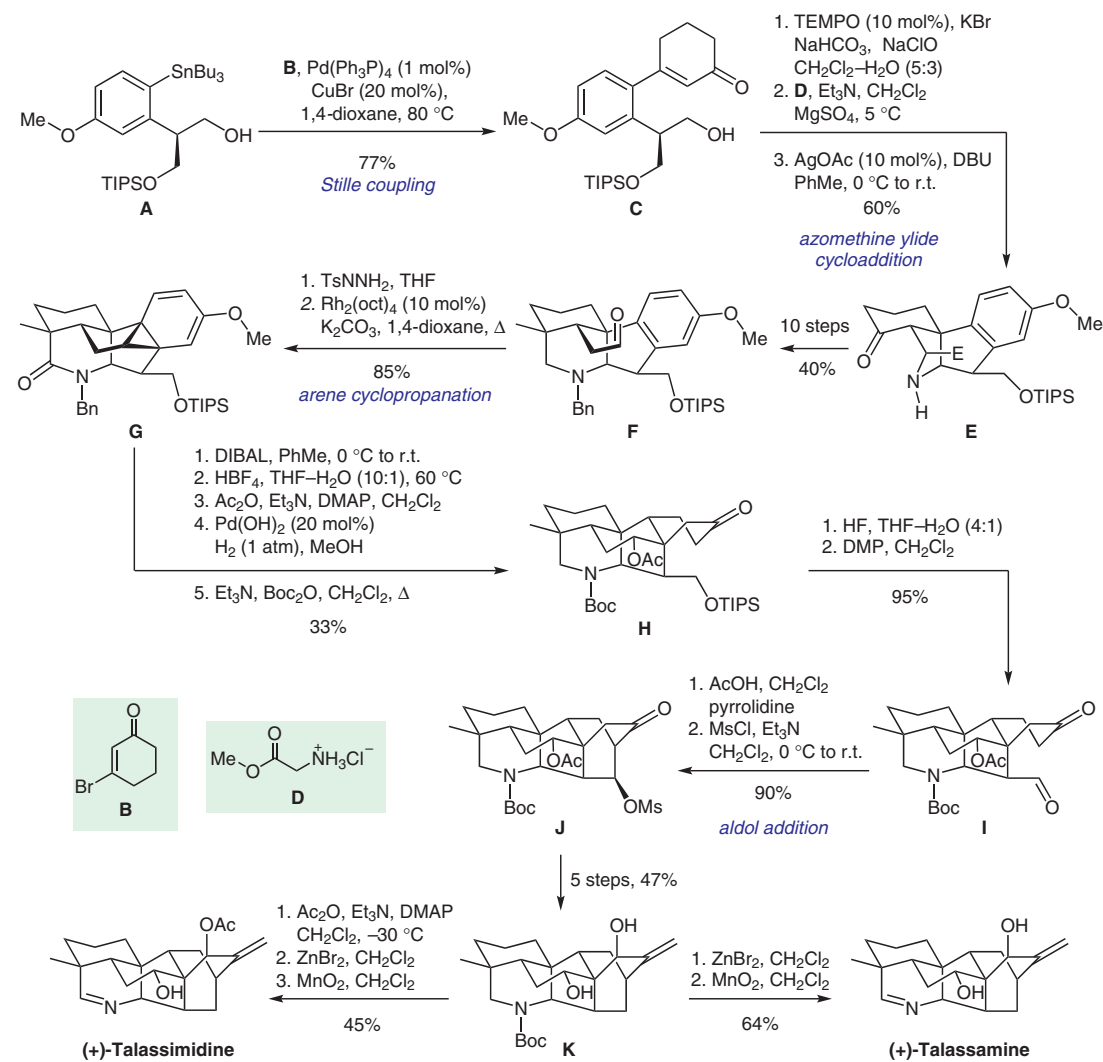


## Total Synthesis of (+)-Talassimidine and (+)-Talassamine



**Significance:** (+)-Talassimidine and (+)-talassamine, two hetidine alkaloids, were first isolated by Nishanov et al. from the plant *Aconitum talassicum*. Zhang and co-workers report an asymmetric total synthesis of (+)-talassimidine and (+)-talassamine, overcoming the challenges imposed by the hexacyclic ring system and oxidation pattern of this family of natural products.

**Comment:** Stille coupling of enantioenriched aryl stannane **A** gives precursor **C** for the key dipolar cycloaddition, assembling the tetracyclic skeleton in **F**. Arene cyclopropanation yields **G**, which is elaborated to ketone **I** via cyclopropane opening. Aldol addition of aldehyde **J** then gives rise to mesylate **K**, which is transformed into two natural products, (+)-talassimidine and (+)-talassamine.