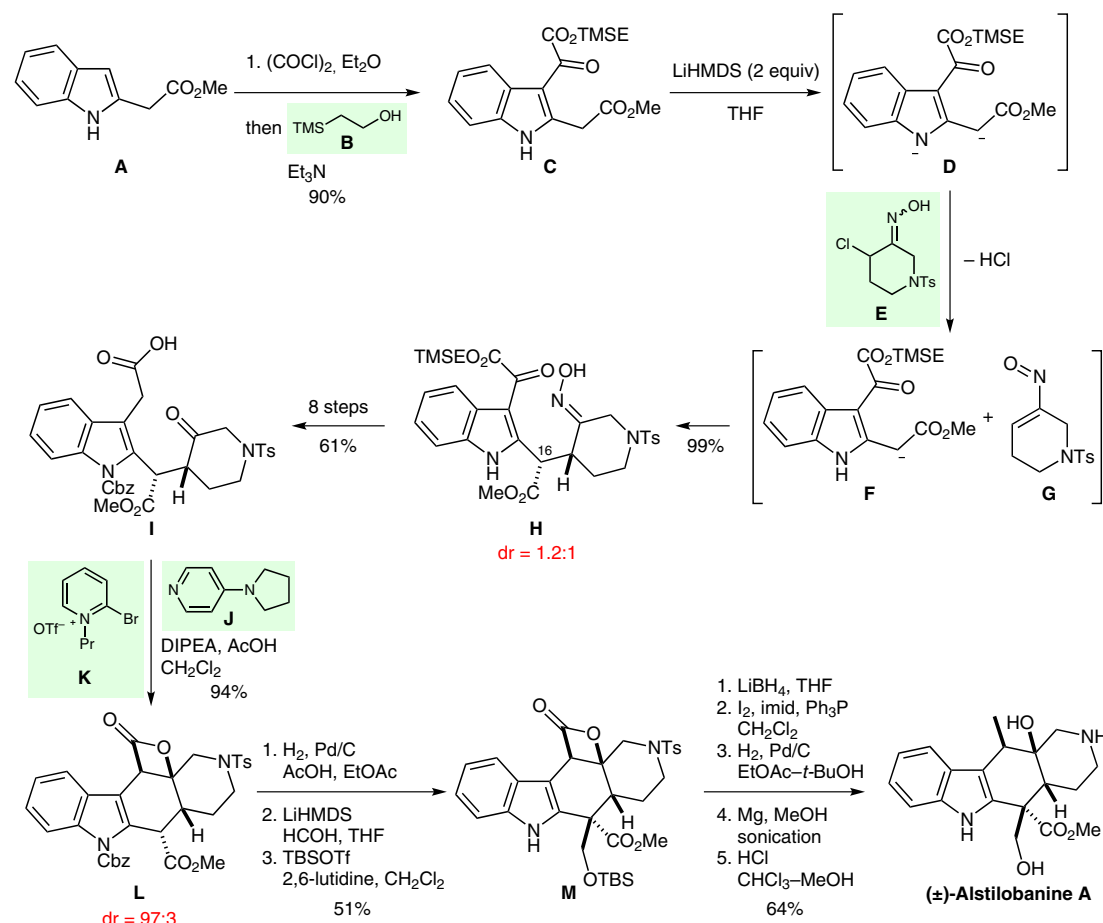


Total Synthesis of (\pm)-Alstilobanine A



Significance: Monoterpene indole alkaloids usually consist of a tryptamine residue attached to a monoterpenoid unit. (\pm)-Alstilobanine A, however, features an intriguing rearranged skeleton. The authors based their concise synthesis on the conjugate addition of ester enolate **F** to an in situ-generated nitrosoalkene and the formation of β -lactam **L** via an intramolecular formal ketene–ketone [2+2] cycloaddition developed by Romo and co-workers (*Org. Lett.* 2006, 8, 4363).

Comment: The intermolecular conjugate addition of ester enolate **F** onto nitrosoalkene **G**, generated in situ from α -chlorooxime **E**, proceeded efficiently to give **H**. This transformation highlights an interesting method to construct 1,4-dicarbonyl frameworks. Both C16-diastereomers could be used to access **I**, which then underwent a formal [2+2] cycloaddition to afford the desired *syn*-2-azadecalin **L** in excellent yield and diastereoselectivity. The synthesis was completed in eight steps from **L** to generate the natural product in an impressive 14% overall yield.