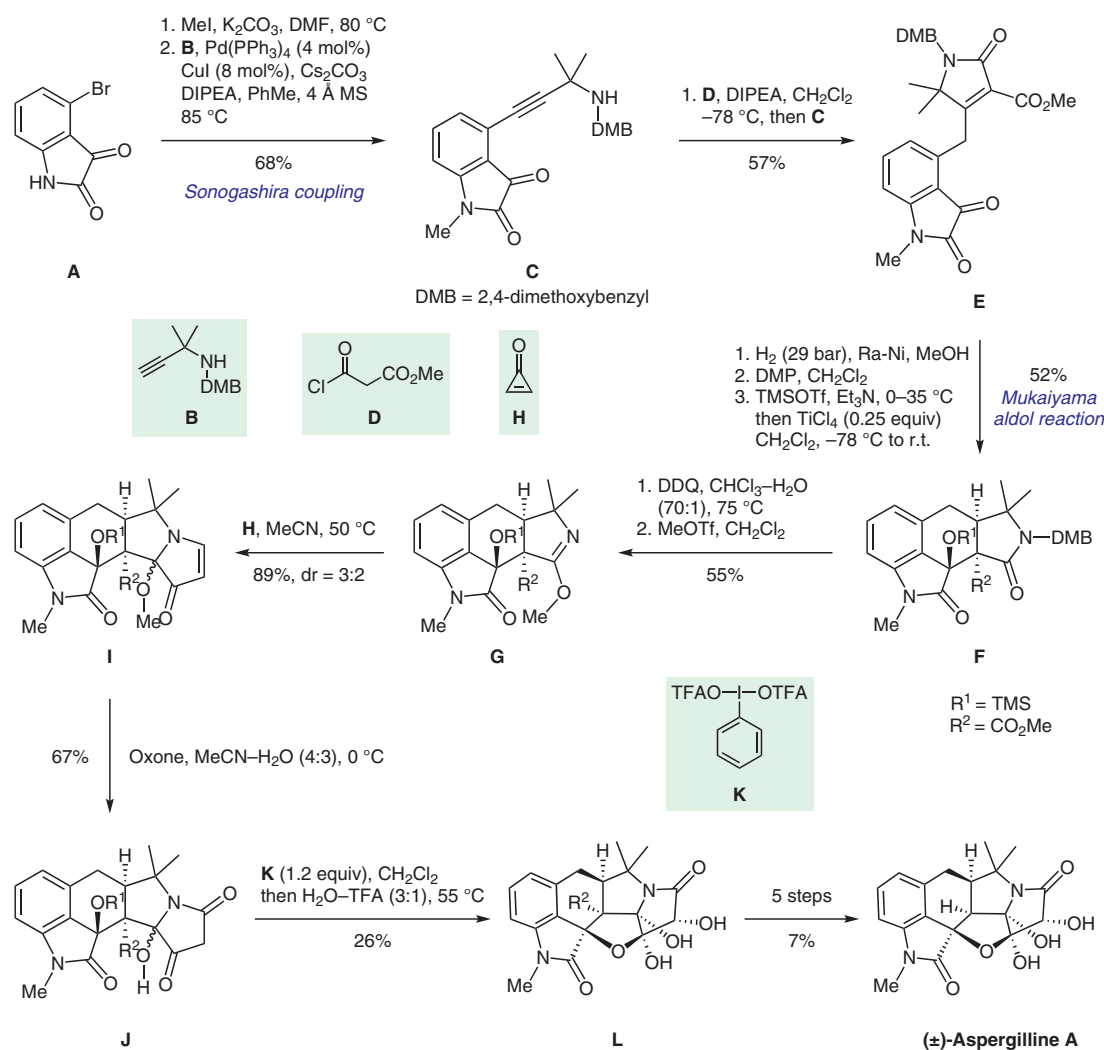


Concise Synthesis of the Alkaloid (±)-Aspergilline A



Significance: Aspergilline A was isolated from the fungus *Aspergillus versicolor* and possesses activity against the tobacco mosaic virus as well as anti-cancer activity. The Wood group reports a synthesis relying on an elegant pyrrolinone formation and a formal [3+2] cycloaddition.

Comment: Acylation followed by addition to an alkyne and double-bond isomerization transforms **C** into **E**. Mukaiyama aldol reaction creates the core structure in **F**. Imidate **G** undergoes formal cycloaddition with cyclopropanone to form **I** which is further transformed into the indole alkaloid aspergilline A through an oxidation–acetalization–decarboxylation sequence.