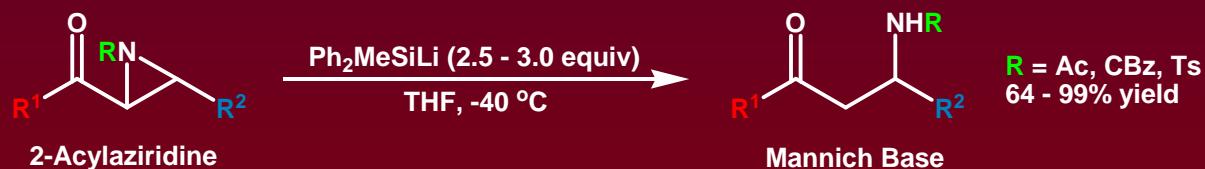


Preparation of Mannich Bases and their Corresponding Silyl Enol Ethers from 2-Acylaziridines

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Mannich bases (β -aminoketones) are an important class of organic compounds with extensive synthetic value, particularly in the preparation of biologically active molecules. Existing methods for their preparation often suffer from long reaction times, poor regio- and stereoselectivity, and competition from unwanted side reactions.

We are developing new methods for the regioselective preparation of Mannich bases and their corresponding proximal β -amino silyl enol ethers from 2-acylaziridines utilizing a Brook rearrangement triggered by the addition of a silyllithium reagent. We have successfully identified general conditions for the preparation of Mannich bases in good to excellent yields, and are currently exploring the scope of the method.



We have also successfully identified general conditions for the preparation of the intermediary β -amino silyl enol ethers, and are currently exploring both the scope of the method and effective means for the purification of these useful precursors to more highly substituted and functionalized Mannich bases.

