Organosilicon compounds as valuable tools for the synthesis of heterocycles

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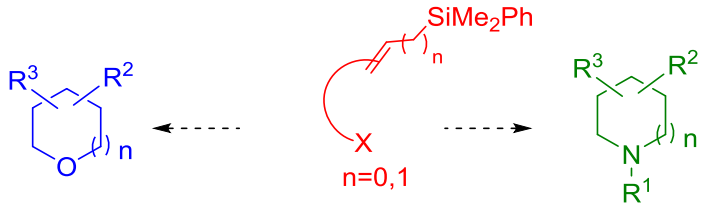
The heterocyclic motif is very abundant in biologically active natural products. The number of synthetic approaches developed to access this type of structures is very large and always growing. Within them, Prins cyclization has shown to be a very versatile tool to prepare heterocycles in a very selective manner. [1] The classical Prins reaction involves the condensation of an alkenyl alcohol with an aldehyde to provide oxacycles. The silyl-Prins variant implies the use of alkenyl silanes as electron-rich alkene derivatives and has several advantages, such as improved selectivity or faster reactions.[2]

We now present our recent results on the utilization of the silyl-Prins and aza-silyl-Prins reaction to obtain oxa- and aza-cycles of different sizes. [2,3] The effect of the substituents, the reaction conditions and the nature of the catalyst used in the process will be discussed.



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