Functionalized cyclic nitrones: Multicomponent synthetic approach and reactivity study

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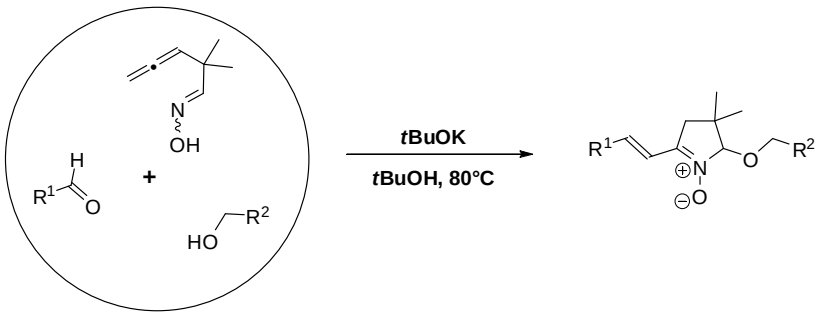
New type of multicomponent reaction leading to 5-membered functionalized cyclic nitrones will be presented. Reaction design is based upon unique reactivity of allenyloxime in the presence of different primary alcohols and aldehydes (see scheme). Optimization of reaction conditions and evaluation of reaction scope was followed by a study of reactivity. 1,3-Dipolar cycloadditions in the presence of various dipolarophiles were tested. In addition, unique chemistry of selected derivatives was found and studied in detail. Nitrones that contained planar aromatic polycycles in their structure showed ability to interact with DNA helix. Theoretical and experimental studies related to biological activity will be discussed.



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