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Title:	Recent Developments on the Synthesis and Applications of Natural Products-Inspired Spirooxindole Frameworks
Authors:	Arulananda Babu, S. (/jspui/browse?type=author&value=Arulananda+Babu%2C+S.) Padmavathi, R. (/jspui/browse?type=author&value=Padmavathi%2C+R.) Ahmed Aslam, M. (/jspui/browse?type=author&value=Ahmed+Aslam%2C+M.) Rajkumar, V. (/jspui/browse?type=author&value=Rajkumar%2C+V.)
Keywords:	Spirooxindole heterocyclic biologically active
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Abstract:	<p>Spirooxindole moiety is an important heterocyclic framework that is present as the core structural unit in several biologically active synthetic and naturally occurring molecules. The stereoselective construction of the spiro unit present in the spirooxindole framework and the spirooxindole-based molecules with more than one chiral center has been considered as one of the important synthetic challenges. Apart from the biologically active naturally occurring spirooxindole molecules, various synthetic spirooxindole derivatives have been found to exhibit several potential biological activities and drug like behavior (e.g., antimalarial, antiviral, antitumoral, antibiotic, and local anesthetic properties, etc.). Further, a variety of spirooxindole derivatives have served as potential synthetic intermediates for assembling spirooxindole-based natural products. The promising biological activities exhibited by natural and unnatural spirooxindole frameworks have fostered the interests of synthetic chemists. Markedly, in the past few years, there have been rapid developments in the research area pertaining to the synthesis and application of spirooxindole-based molecules. Notably, a wide range of synthetic strategies have been developed for assembling architecturally complex spirooxindole molecules with a focus on finding potential drug candidates. In this review, we have presented an overview of some of the recent, elegant methods and developments appearing from the year 2005, with regard to the synthesis and application of spirooxindole-based molecules.</p>
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