CHEMICAL SCIENCE

REGIOSELECTIVE SYNTHESIS OF SPIROOXINDOLES *VIA* 1,3-DIPOLAR CYCLOADDITION REACTION

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Abstract

A series of spiropyrrolizidines were synthesized efficiently by using one-pot three-component 1,3-dipolar cycloaddition reaction in absolute ethanol at room temperature. The *in situ* generated azomethine ylide on reaction with dipolarophiles yielded the target compounds in good to excellent yields. The use of eco-friendly solvent, less energy consumption by employing the reaction at rt., operational simplicity and simple purification method make this protocol become environmentally benign and can be considered to be as green protocol. The structures of all the target compounds were in agreement with their spectroscopic (FTIR, ^{1}H NMR, ^{13}C NMR) and mass spectral data. The synthesized compounds were evaluated for their *in vitro* anti-proliferative and radical scavenging activities.

Keywords*: spiropyrrolizidine,1,3-dipolar cycloaddition, azomethine ylide*