Heterogeneous Acid Catalyzed Synthesis and Spectroscopic Characterization of Schiff Bases Derived from Chalcone Derivatives

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Abstract

Schiff bases have continued to gain attention as essential building blocks and versatile pharmacophores in drug development and drug-like molecular entities. Thus, the synthesis of Schiff bases was achieved herein via facile acetic acid catalyzed synthetic transformation of chalcones. The targeted Schiff bases and related compounds 2a-m were accessed by the treatment of amines with chalcone 1 which was previously derived through Claisen-Schmidt reaction between benzaldehyde and acetone, at ambient temperature. Structural characterization was achieved via physicochemical properties and the use of IR, UV, 1H and 13C NMR which were spectroscopic techniques. The compounds have essential candidature for further study, in biological activity so as to unleash their medicinal potential.

Keywords

chalcone; azomethine; substituted benzaldehyde; heterogenous catalyst