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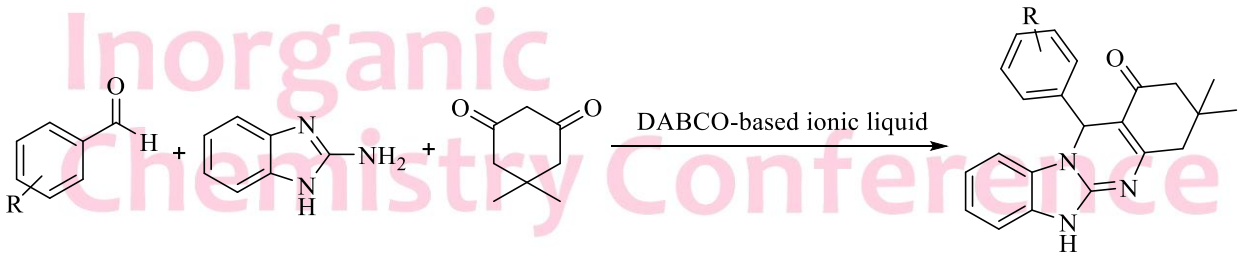
Introduction of a new DABCO-based ionic liquid as an efficient catalyst for the synthesis of benzimidazoquinazolinone derivatives

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Benzimidazoquinazolinones are heterocyclic compounds that have been shown various pharamacological activities such as anti-cancer, anti-inflammatory, anti-oxidant, antimicrobial and neuroprotective activity. The diverse pharmacological activities exhibited by benzimidazoquinazoinone make it a promising lead compound for the development of novel therapeutic agents. These attempts resulted in the introduction of a variety of reagents for the promotion of the synthesis of these compounds. Although, each of these methods have their own advantages, some of them often suffer from one or more disadvantages such as use of stoichiometric amounts of reagents, expensive metal precursors, tedious work-up, long reaction times, unsatisfactory product yields, excess of organic solvent, high temperatures, harsh reaction conditions, and difficulty in preparation of the catalyst, which limit the use of these methods. Therefore, it is important to find more convenient methods for the synthesis of benzimidazoquinazolinone derivatives. In this research, we have reported the preparation of a new DABCO-based ionic liquid catalyst which can be used for the promotion of the synthesis of benzimidazoquinazolinone derivatives. It is expected that using the mentioned dicationic ionic liquid with its remarkable features be useful for the elimination of some of the disadvantages of the previously reported methods. [1,2]



Keywords: DABCO, multi-component reactions, ionic liquid catalyst, benzimidazoquinazolines

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