

## عنوان مقاله:

Introduction of a new piperazine-based ionic liquid as an efficient catalyst for the biginelli reaction

## محل انتشار:

بیستمین کنگره شیمی ایران (سال: 1397)

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## خلاصه مقاله:

Catalytic systems in organic synthesis are constantly developing and expanding. Meanwhile, ionic liquids are very much considered for some reason, including reasonable prices, environmental compatibility, high reactivity, recyclability and selectivity [1]. So far, ionic liquids have been used successfully as a catalyst in many of the major synthetic reactions such as aldol condensation, protection of carbonyls, Koch carbonylation, Diels-Alder reactions, Mannich reaction, Heck reaction, Knoevenagel reaction and heterocyclic synthesis [2]. 3,4-Dihydropyrimidin-2(1H)-ones (DHPMs) and their derivatives, due to their significant biological properties, are important compounds in the pharmaceutical field. These compounds are used as medicines for antihypertensive, antibacterial, antiviral, anti-cancer and anti-HIV drugs in medicine [3]. In this work, a piperazine-based ionic liquid is synthesized and after characterization with FT-IR, Mass and NMR spectroscopy, is used as a catalyst for the Biginelli reaction. The main advantages of using this ionic liquid is high efficiency, acceptable reaction times, excellent yields of the achieved products and reusability of the catalyst.

## کلمات کلیدی:

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