

عنوان مقاله:

Pd-Biurea/MCM-41: As an efficient and recyclable nanocatalyst for one-pot three-component synthesis of dihydropyrano[3,2-c]chromene derivatives

محل انتشار:

بیست و هفتمین کنفرانس شیمی آلی ایران (سال: 1398)

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خلاصه مقاله:

One-pot multicomponent reactions (MCRs) have proved to be very powerful and efficient bond-forming tools in organic and medicinal chemistry in the context of green chemistry.¹ Dihydropyrano[3,2-c]chromenes and their derivatives which have received significant attention due to their important biological and pharmacological properties, have been synthesized using the MCR system.² Along with other reaction parameters, the nature of the catalyst plays a significant role in determining yield and general applicability. In literature, various catalysts are used for the one-pot synthesis of chromene derivatives. In continuation of our previous work,³ we report herein the application of Pd-Biurea/MCM-414 as a heterogeneous and easy recoverable catalyst in the eco-friendly synthesis of dihydropyrano[3,2-c]chromenes derivatives 5 via a one-pot three-component condensation of aromatic aldehydes 1 with malononitrile 2 and 4-hydroxycoumarin 3 in excellent yields. The synthesized derivatives were also characterized by melting points, FT-IR, ¹H-NMR, ¹³C-NMR, and this nanocatalyst was characterized using FT-IR, TEM, and BET techniques

کلمات کلیدی:

Heterogeneous nanocatalyst, Multicomponent reactions, 4-hydroxycoumarin, Dihydropyrano[3,2-c]chromenes, MCM-41.

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