عنوان مقاله:

Solvent-free Pechmann condensation using sulfonated magnetic nanocomposite catalyst

محل انتشار:

اولین کنگره بین المللی شیمی و نانو شیمی از پژوهش تا فناوری (سال: 1397)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

Fe3O4-chitosan-SO3H nanocomposites (Fe 3 O4-Ch-SO3H NCs) are prepared simply from inexpensive starting materials in aqueous media. The magnetic Fe3O4 -Ch-SO3H NCs display excellent catalytic activity for the synthesis of coumarin derivatives using solvent-free Pechmann condensation under mild condition. The mgnetic heterogeneous catalyst of Fe3O4- Ch-SO3H NCs are characterized by FT -IR, SEM, and VSM techniques. After Pechmann condensation, the catalyst could be effortlessly separated by external magnet. The Fe3O4-chitosan- SO3H NCs appear as an effective catalyst for the efficient synthesis of coumarin, simplicity in operation, and a green reaction profile by avoiding toxic conventional catalysts and solvents.

کلمات کلیدی:

Fe3O4-Ch-SO3H NCs, Magnetic heterogeneous catalyst, Pechmann condensation, Coumarin synthesis