

عنوان مقاله:

One-pot, clean and energy efficient synthesis of dibenzo[b,f][1,4]oxazepine derivatives promoted by ultrasound

محل انتشار:

نشریه آسیایی شیمی سبز, دوره 2, شماره 1 (سال: 1397)

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خلاصه مقاله:

In the present study, a variety of dibenzo [b,f][1,4] oxazepine derivatives was successfully synthesized in good yields under ultrasonic irradiation as an environmental friendly technique. This one-pot method is practically reliable, mild, catalyst-free, and inexpensive. Ultrasonic irradiation on the reaction mixture leads to fine emulsion between the reactants and violent collapses of a lot of cavitation bubbles in less than a microsecond releases extreme heat, leading to cross the activation energy barrier. In the absence of ultrasonic irradiation, a trace amount of the product was formed after ۵۰ min. The superiority of the ultrasound irradiation over other methods in the synthesis of dibenzo [b,f][1,4] oxazepine derivatives is its low reaction temperature and operational simplicity in approximately same yields.

کلمات کلیدی:

Dibenzo[b, f][1, ۴]oxazepine Ultrasonic irradiation Sonocatalytic ability Catalyst-free reaction

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