

عنوان مقاله:

Rapid and Green Synthesis of some Benzothiazole-, Benzimidazole- and Benzoxazole- γ -thiol Derivatives Using Copper Sulfate in Aqueous Media

محل انتشار:

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خلاصه مقاله:

In this study an easy, green, efficient and simple approach is reported for the synthesis of some benzothiazole-, benzimidazole- and benzoxazole- γ -thiol derivatives. The proposed approach employs the reaction of corresponding aromatic amine with potassium isopropyl xanthate (Z1) in the presence of copper sulfate (CuSO₄) as a catalyst under conventional heating and ultrasonic irradiation. The advantages of this protocol are: using water and glycerol as green solvents, commercially available precursors, simple work-up, an inexpensive catalyst, high yield and short reaction time.

کلمات کلیدی:

Water, Green synthesis, Benzothiazole, Benzimidazole, Benzoxazole, Copper sulfate, Ultrasonic irradiation

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