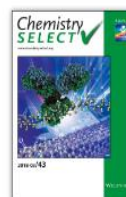




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Green Synthesis of the Ag/Bentonite Nanocomposite Using *Euphorbia larica* Extract: A Reusable Catalyst for Efficient Reduction of Nitro Compounds and Organic Dyes

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This paper is dedicated to Prof. Dr. Kamal Kolo for his heartily attempts to supervise my Ph.D thesis at Soran University.



References



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Abstract

During this study, a rapid and simple method is presented for the green synthesis of the Ag/bentonite nanocomposite using *Euphorbia larica* extract as a stabilizing and reducing agent. The average size of biosynthesized Ag nanoparticles (NPs) was estimated less than 32 nm. The catalytic activity of Ag/bentonite nanocomposite was investigated in the reduction of 4-nitrophenol (4-NP) and some organic dyes including Congo red (CR), Methylene blue (MB) and Rhodamine B (RhB). According to the catalytic results, the biosynthesized Ag/bentonite nanocomposite can be used as an appropriate catalyst for an efficient, simple and economic strategy to degrade various organic dyes from wastewaters. Recyclability tests demonstrated catalyst stability and its capability in practical applications.