

عنوان مقاله:

A mild Synthesis of Pyrophthalone Derivatives Catalysed by ZnO Nanoparticles under Solvent-free Conditions

محل انتشار:

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خلاصه مقاله:

Pyrophthalone derivatives have been proposed as photo semiconductors for the preparation of electrophotographic materials [1]. A study of the electro physical properties of pyrophthalones in thin-film systems [2] showed that pyrophthalone, tetra chlorophthalone, and γ -pyrophthalone have considerable photosensitivity. Some pyrophthalone derivatives display considerable anticoagulant activity and low toxicity. Antiphlogistic and analgesic action has been found for these compounds [3]. The complexation properties of some pyrophthalone derivatives, imino-pyrophthalone and quinophthalone towards some transition metal ions have been studied. According to this research we were prompted to develop a general and efficient method for the synthesis of pyrophthalone derivatives starting from phthalic anhydride and pyridine derivatives under solvent-free conditions in the presence of ZnO nanoparticles as catalyst (Fig 1). We have demonstrated a ZnO nanoparticles-catalysed synthesis of Pyrophthalone derivatives. The cheap ZnO NPs catalysis promoted the condensation reaction in good to excellent yields with broad substrate scope, which provides a promising method for the synthesis of pharmacologically significant Pyrophthalone derivatives

کلمات کلیدی:

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