



Use of Magnesium Ferrite as Catalyst in Knoevenagel Condensation Reaction

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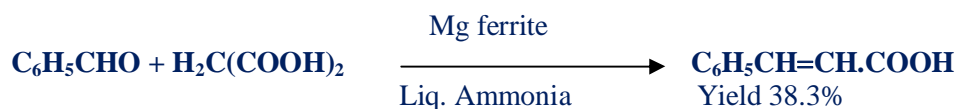
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ABSTRACT

Magnesium ferrite was used to catalyse the Knoevenagel condensation of benzaldehyde and malonic acid in the presence of liquid ammonia. Magnesium ferrite was prepared by hydrothermal process. It was characterized by Field Emission Scanning Electron Microscopy (FESEM), X-Ray Diffraction Spectroscopy (XRD), and Energy Dispersive X-Ray Spectroscopy (EDX). The crystalline size of magnesium ferrite was found to have 82.47 nm and these are nano-flowers in shape. It was found that the yield of the product (cinnamic acid) in the presence of Mg ferrite was 38.3%, which is almost 2.4 times the yield obtained in the absence of catalyst.

Graphical Abstract:



Keywords: Knoevenagel condensation, Magnesium ferrite, Catalyst, Synthesis, Hydrothermal method.