

ZnAl₂O₄@ZnO AN EFFECTIVE, HETEROGENEOUS CATALYST FOR THE SYNTHESIS OF β -ENAMINONES AND β -ENAMINOESTERS

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Abstract. Using ZnAl₂O₄@ZnO as a catalyst, an environmentally friendly and very effective method has been developed to selectively add a ring to 1,3-dicarbonyl compounds and aromatic, aliphatic primary amines. A wide variety of bis(β -enaminones) and bis(β -enaminoesters) can be synthesized using this highly versatile method, which provides good yields. This procedure can be carried out at room temperature, which is environmentally advantageous as it utilizes ZnAl₂O₄@ZnO as a heterogeneous, recyclable and stable catalyst under free solvent conditions. A co-precipitation reaction at constant pH was used to prepare this catalyst, and spectral analysis (X-ray diffraction, FTIR) and morphological characterization techniques (SEM, EDX) confirmed its morphological structure.

Keywords: bis(β -enaminoester), bis(β -enaminone), free solvent condition, condensation, heterogeneous catalyst.

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