

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

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Abstract. With ZnAl₂O₄@ZnO as a catalyst, an environmentally eco-friendly and highly effective method was developed for regio- and chemo-selective bis-enamination of 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 offers good yields. This procedure may be done at room temperature and is environmentally beneficial because it uses ZnAl₂O₄@ZnO as catalyst heterogeneous, recyclable, and stable under free solvents conditions. This catalyst was prepared by the co-precipitation reaction at constant pH, their morphology-structure was confirmed by spectral analysis techniques such as: X-ray diffraction, SEM, EDX, FTIR.

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