# Glycerol Carbonate Synthesis from Biomass-derived Glycerol over Zn/Al-based Hydrotalcite-like Catalysts

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Glycerol carbonate is a bifunctional compound employed as solvent, surfactant or else, due to its low toxicity, vapor pressure and flammability, good biodegradability and moisturizing ability.
In this work, synthesis of glycerol carbonate with urea over Zn/Al based mixed oxide catalysts has been studied. The effect of various reaction conditions was investigated. The Zn / (Zn + Al) ratio of the mixed oxide was varied to investigate the role of Zn atom in catalyst to conversion and selectivity, and the experiments were performed under 150 °C, 3 h and 1:1 molar ratio of glycerol to urea, The results of experiments were characterized by $N_2$ physisorption, TPD, XRD, TGA, SEM and GC. The Zn/Al based catalysts showed very high selectivity to glycerol carbonate (99 %) and moderate glycerol conversion (83 %) at 150 °C, 10 mPa.