

Zinc-Catalyzed Synthesis of N-methyl carbamate (MPC) from Aniline and Dimethyl Carbonate

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Isocyanate is industrially produced by phosgenation route, and the use of phosgene is avoided due to its toxicity and its' hydrogen chloride byproduct which is strongly corrosive. N-methyl carbamate (MPC) is known as an important precursor for preparing methylene diphenyl diisocyanate (MDI) through non-phosgene routes, which is an important intermediate for the synthesis of polyurethane. Preparation of N-methyl carbamate (MPC) through non-poisonous route via was conducted from dimethyl carbonate and aniline using zinc acetate as base catalyst material and amine compounds as co-catalyst. The effect of catalyst recycling was investigated by GC and FTIR.