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Full Paper

Transesterification Reaction of Dimethyl Terephthalate by 2-Ethylhexanol in the Presence of Heterogeneous Catalysts under Solvent-free Condition

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摘要 In this study, the synthesis of bis-(2-ethylhexyl) terephthalate, via the transesterification reaction of dimethyl terephthalate (DMT) by 2-ethylhexanol in the presence of different heterogeneous catalysts, such as $Pb(OAc)_2 \cdot 3H_2O$, $Cd(OAc)_2 \cdot 2H_2O$, $Zn(OAc)_2 \cdot 2H_2O$, $Hg(OAc)_2$, $Ca(OAc)_2 \cdot H_2O$, $Cu(OAc)_2 \cdot H_2O$, NaOAc, $CaCO_3$, CaO, $ZnSO_4 \cdot 7H_2O$, and sulfated zirconia, has been investigated. The reactivity of the catalysts in the reaction progress has been studied and compared. It was found that, hydrated cadmium acetate and sulfated zirconia were reactive catalysts to this reaction. The extent of transesterification of methyl ester groups reached up to 93% and 85.6% using these catalysts, respectively.

关键词 transesterification dioctyl terephthalate heterogeneous catalyst plasticizer solvent-free reaction

分类号

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