

Etherification of glycerol using alkali metal-acetates as homogeneous catalysts

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Glycerol has emerged as a significant worth bio-resource for the synthesis of polyglycerols which have various application fields. Diglycerol and triglycerol has been used as useful additives for food, cosmetic, and pharmaceutical emulsifiers. The etherification reaction of glycerol was conducted in the presence of alkali metal-acetate salts as catalysts. Alkali metal-acetate salts showed high catalytic activity with corresponding selectivities of diglycerol and triglycerol. The influences of various reaction variables including the nature of catalyst, the loading amount of catalyst, reaction time, and reaction temperature on the etherification of glycerol were investigated.