

Silica-supported Ionic Liquid Catalyst for Improved Utilization of Glycerol

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The rapid increase of bio-diesel product during the last few years has led to a surplus of glycerol, a by-product of this industry. It is therefore an urgent task to find diverse methods for the conversion of this huge stack of relatively low price glycerol to valuable chemical products. The esterification of glycerol with acetic acid could be one of the possibilities of glycerol utilization. The products, monoacetin, diacetin and triacetin, have great industrial applications. In this work, we demonstrate that silica-supported ionic liquid catalysts catalyze esterifications with excellent catalytic performance. Various acidic anion exchanged catalysts have been tried under the same conditions.