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Catalytic Dehydration of Glycerol under Mild Condition: An Environmentally Benign Acrolein Production

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ABSTRACT

The increase of biodiesel production results in the accumulation of glycerol, which requires an increasing demand towards the study of chemical application of glycerol. Glycerol has to be transformed to other valuable chemicals, which can be used as starting materials for organic synthesis. With the final goal to find a reasonable solution for this problem we have studied the dehydration of glycerol in liquid phase using a supported HPA catalyst and developed an environmentally benign production of acrolein. Our method does not have any extreme conditions and produces a total conversion with high (93%) selectivity.

KEYWORDS

Consuming of Excess Glycerol, Production of Acrolein, Heterogeneous Method

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