

New Catalytic Materials for Biodiesel Production

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Hydrolysis of Triglycerides plus Esterification of Fatty Acids, the so called, hydroesterification process primarily produces biodiesel and a pure glycerol (98-99%). Both reactions can be promoted by heterogeneous catalysts and high activity ones are presented. Moreover, this pure glycerol can be used to several reactions, including liquid reforming producing hydrogen. Hydrogen can be used to improve yields towards valued fatty acids as well as production of fatty alcohols or even hydrocarbons by means of catalytic decarboxilation. Biorefinery elements from hydroesterification process are discussed under biofuels/oilchemistry industrial consortium perspectives.