

Solid Catalysts for the Selective Use of Glycerol as Natural Organic Building Block

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In this lecture, the selective use of glycerol as safe organic building block for organic chemistry will be discussed. Indeed, conversions of glycerol to higher value added chemicals offer attractive solutions since the resulting products are mostly dedicated to lower tonnage processes more compatible with the production capacity of glycerol manufacturers. In this context, we will present an overview of the different heterogeneous catalytic routes developed by chemists for the successful and friendly use of glycerol in sustainable organic chemistry. In particular, we tried here to discriminate between all different catalyst structural parameters in order to clearly highlight how catalysis can help organic chemists to overcome all drawbacks coming from the use of glycerol as safe organic building block. In all discussed reactions, we wish to show that heterogeneous catalysis offer efficient routes for bypassing the traditional use of highly toxic and expensive intermediates often used as glyceryl donor in organic chemistry as well as solvents or severe experimental conditions.