



Deliverable 2.10

Report on catalyst adaption/optimization for levulinic acid different streams from WP1

Demonstration of solvent and resin production from lignocellulosic biomass via the platform chemical levulinic acid

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About GreenSolRes

The need to establish economic and sustainable large-scale operations for the conversion of renewable resources to chemical building blocks is becoming increasingly urgent in the context of climate change and depleting fossil fuel reservoirs. Pathways for manufacturing of bio-based fuels and chemicals have been developed but often rely on sugar and starch crops for feedstock. The European Demonstration project - GreenSolRes aims at a sustainable and competitive industrial production of the platform chemical levulinic acid (LVA) from non-food lignocellulosic biomass. Further, the conversion of LVA and LVA esters into industry relevant building blocks γ -valerolactone (GVL), 1-methyl-1,4-butanediol (MeBDO) and 2-methyltetrahydrofuran (2-MTHF) will take place by new catalytic methods developed during the course of this project. Finally, these chemicals will be upgraded to solvents and resin monomers to produce high added value adhesives and consumer products.

Project Coordinator



Project Office



Consortium



About this document

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Publishable Summary

Recent investigations focused on the establishment of an active and stable catalyst system for the hydrogenation of levulinic acid (LVA) to γ -valerolactone (GVL) and 1-Methyl-1,4-butandiol (MeBDO) and the optimization of this process in laboratory scale. In the present deliverable, the LVA streams produced within WP1 were applied to the hydrogenation process. The convertibility of the substrate as well as the activity and the stability of the catalytic system were investigated in order to optimize the production process of LVA with respect to the formation of GVL an MeBDO.