GreenSolRes

Deliverable 2.19

Report on Kilogram samples produced for network partners (GVL, MeBDO and 2-MTHF)

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

The project leading to this application has received funding from the Bio Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation programme under grant agreement No 720695

BBI JU

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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 most of them rely on sugar and starch crops for feedstock. 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 for the production of high added value adhesives and consumer products. This project was started in September 2016 and has a duration of five years.

Project Coordinator

Project Office

Consortium

About this document

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Publishable Summary

Molecular Catalysts systems for the hydrogenation of LVA to MeBDO via GVL have been developed within GreenSolRes. Moreover, the transformation of GVL to MeBDO could be optimized, enabling the effective production of MeBDO in kg scale. Here, we report on kg samples which have been prepared and shared within the GreenSolRes consortium. The product MeBDO has been produced and purified at 3 partner laboratories. In detail, more than 25 kg of MeBDO have been produced in total within the requested technical specifications for 2 partners of the consortium for product development and regulatory studies.