GreenSolRes

Deliverable 3.2

Industrial standard adhesive prototype based on P2-MTHF-polymer

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

Bio-based Industries Consortium

BIO-BASED INDUSTRIES Public-Private Partnership

Horizon 2020 European Union Funding for Research & Innovation

About GreenSolRes

The goal to establish economic and sustainable large-scale operations for the conversion of renewable resources to chemical building blocks is becoming increasingly important 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 lignocellulosic wastes and residues originating from forestry and agricultural sector. Further, the conversion of LVA 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 four years.

Project Coordinator

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SYNCOM

Hybrid Catalysis

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About this document

Deliverable №:	3.2	
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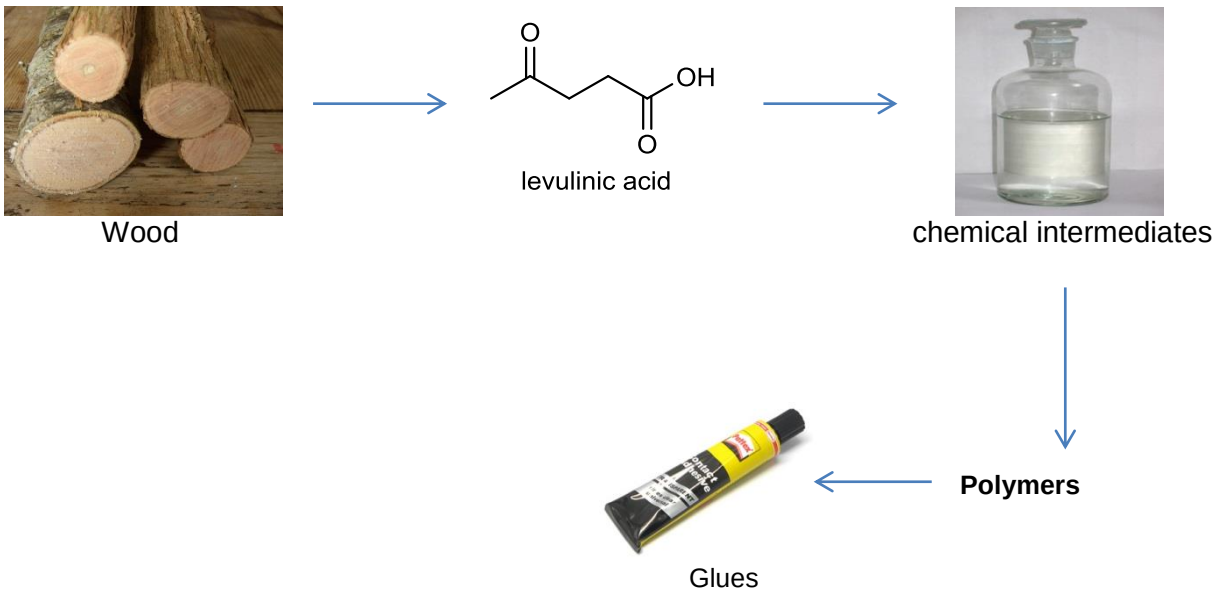

Scheme 1. General scheme available for public.

The processes of production of levulinic acid from wood, as well as the synthesis of chemicals from levulinic acid are very well established (first 2 steps in the scheme above).[1,2] The goal of this project was to prepare polymers from these intermediates, which could be used for production of glues. One kilogram of the polymer was fabricated as deliverable 3.1 (step 3 in Scheme 1) and delivered to Henkel who have examined the use of this polymer in glue formulations.