

PROJECT TITLE: Profitable 2G-bioethanol plants – Parallel Use of Fractionated Lignin in Multiple Applications

PROJECT ACRONYM: PUMA

ABSTRACT

The PUMA project will increase the profitability of 2G-LCF biorefineries by enlarging the product portfolio in addition to main product bioethanol. PUMA will establish an innovative platform for identification and upgrading of lignin fractions by utilizing aromatic side streams in the most efficient and economical way. A major focus will be on catalytic conversion of so far untapped low molecular weight fractions. Mild/catalytic methods will be used for depolymerisation and refining in order to produce synthons for resins/polymers, composites, activated carbons/carbon foam and high-price bulk phenolics of broad and high industrial relevance and scale. For this, the PUMA consortium combines the essential expertise from biorefining, process design, industrial biotechnology and piloting in order to valorize an unused CO₂-neutral source for energy carriers and value-added bio-based aromatics and products.

Start date: 07/2020

End date: 06/2023

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