

PROJECT TITLE: Bio-Electric Syngas Technology for the Production of Biomass Derived Biofuels and Platform Chemicals

PROJECT ACRONYM: BesTECH

ABSTRACT

The overall aim of BesTECH is the development of an electrically enhanced bioconversion process to establish a biotechnological platform for the sustainable, safe and environmentally friendly provision of biofuels and –chemicals on a biomass basis. First step is the conversion of low cost waste-biomass feedstocks of varying or minor quality into syngas or biogas. Thermal biomass conversion into syngas and biological conversion via anaerobic digestion are well-established processes that can handle a broad spectrum of biogenic materials. Subsequent gas fermentation in combination with the new and highly promising technology of microbial electrosynthesis enables an upcycling of low-quality biomass to high-quality products via the novel conversion route of microbial electrosynthesis. Thus, BesTECH allows to de-novo build targeted products from previously decomposed carbon building blocks and uniquely attributes a circular waste biomass-based economy.

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End date: 03/2023

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