

Cell-U-Value

Publieke samenvatting / Public summary

Aanleiding

Chemical industries are in need of alternatives for fossil resources. Biomass is the only available alternative for more complex molecules and can be derived from waste and other residual stream which are not in conflict with food. Based on the low cost, its high abundance in waste and its readily available cellulose chains, the use of tertiary cellulose as a feedstock for chemicals is an attractive opportunity. Additionally, the value of this concept reaches even further, since a (temporary) carbon sink is created when waste is used as a resource for new products instead of energy. The main challenge is to optimise the conversion of tertiary cellulose to market quality glucose via hydrolysis in an economical way. A second challenge is the target to converse glucose into acetic acid. To reach the highest impact the core partners enable the value chain by bringing together supply, demand and (knowledge on) conversion technology processes and are able to disseminate the knowledge broadly.

Doelstelling

Cell-U-Value aims to develop and utilize the capabilities of tertiary cellulose as a feedstock for biobased and sustainable chemicals to its fullest potential, and also to tackle and overcome the challenges coinciding with these processes.

Korte omschrijving

In the different work packages the partners jointly work on:

- Functional production process for glucose from tertiary cellulose on technical level, proven at pilot-scale (10 ton/year)
- Lab-scale feasibility demonstration on the tertiary cellulose (via glucose)

Projectinformatie / Project information

Projectnummer / Project number

TEEI118002

Subsidiebedrag / Grant amount

€ 851.154,00

Algemene informatie / General information

Penvoerder / Secretariat

Stichting ISPT

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conversion to acetic acid by fermentation integrated with reactive extraction • Strong perspective towards full scale value chain, both economically and environmentally • Broad dissemination of the knowledge to the value chain and network

Resultaat

- Conversion & purification of tertiary cellulose to glucose, method selected and proven within functional pilot plant (10 ton/year)
- Conversion & purification of cellulose (via glucose) to acetic acid on lab-scale
- If applicable IP-claim(s)
- Insight in economics and environmental performance of full scale system (commercial scale)
- Look into a follow-up project to realize a pilot plant for acetic acid
- Shared public knowledge of the outcome of the project
- Prepared and committed consortium to start Phase 2 (and 3), including additional partners in the value chain (suppliers and customers)

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.

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Voor meer informatie over de TSE / Energie-Innovatie regelingen die RVO aanbiedt, ga naar www.rvo.nl/tse.