

Corporate Innovation Challenge Template

Challenge Name: BRG2 – Modification of depolymerized lignins to produce replacements for fossil based performance and platform chemicals

Code Name: BIOECONOMYVENTURES-2022-OC2-BRG-2

Challenge Domain:

- Platform and Specialty Bio-based Chemicals
- Bio-based Fragrances, Cosmetics and Personal & Home Care

Description of the Corporate innovation Challenge

The company see a business opportunity chemically modification and upgrading of depolymerised lignins (Kraft lignins, hydrolysis lignins og lignosulfonates). The challenge is to separate the depolymerised lignins into monomers, and oligomer fractions (some pure “monomer” compounds and some blended fractions of oligomers) and potentially to chemically modify these fractions and upgrade to performance chemicals, platform chemicals and intermediates.

- Novel process
and/or
- Establishing a collaborative R&D or research project


The depolymerisation process is another challenge. Here, the downstream process of converting the depolymerised blend into valuable and functional products is the challenge.

Expected results

The company aim to produce aromatic compound from lignins, either for direct sales or as an intermediate to be further modified by the company and sold as bio-based performance chemicals and/or precursors for plastics, adhesives, binders, polymers, surfactants, and functional additives.

Corporate Innovation Challenge Template

<p>Types of Collaboration</p> <p>Collaborations like R&D collaboration (funded projects or not), licencing technology/knowledge sharing/Tech transfer, purchasing equipment, corporate venturing.</p>
<p>Participation confirmation</p> <p>I confirm Borregaard's availability and participation in the BioeconomyVentures programme. This confirmation allows BioeconomyVentures the right to publicly disclose the company's name, challenge information, logo and website for the purpose of dissemination and attracting new innovators to the programme.</p>

<p>Company Information</p> <p>Company Name: Borregaard AS</p> <p>Challenge owner name and last name: Gudbrand Rødsrud</p> <p>Challenge owner email: Gudbrand.rodstrand@borregaard.com</p> <p>Company information:</p> <p>Borregaard is a leading biorefinery with commercial manufacturing of more than 700 different chemicals from wood grouped into</p> <ul style="list-style-type: none"> • specialty cellulose (high purity, high Mw, used by our customers for thickeners, filters, plastics etc.), • high purity microfibrillated cellulose, • lignosulfonate performance chemicals (hardwood, softwood), • vanillin from wood and, • high purity bioethanol from hemicellulose (20 mill litres/y). <p>Borregaard also have developed a process for co- production of lignosulfonates and cellulosic sugars (3 different grades of purity 90-99%), a process for production of high purity mannose and extractives from spruce and from side streams from sulphite pulping of spruce.</p> <p>Borregaard continuously develop their biorefinery model to produce more and higher value products from wood, and also looks into ventures into biorefining of other biomass sources and production of bio-based chemicals.</p>


Corporate Innovation Challenge Template