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BIORING

High-performance Biocoatings

Innovation in bio-based coatings

Dear [nome] [cognome],

Welcome to the European project BIORING – Engineering high performance biocoatings from renewable reactive building blocks.
We're writing you given your interest and activities on advanced materials, biobased solutions and safe and sustainable by design, to present BIORING and announce our **workshop on anticipatory LCA** (Dec 4th, 2024)**.**

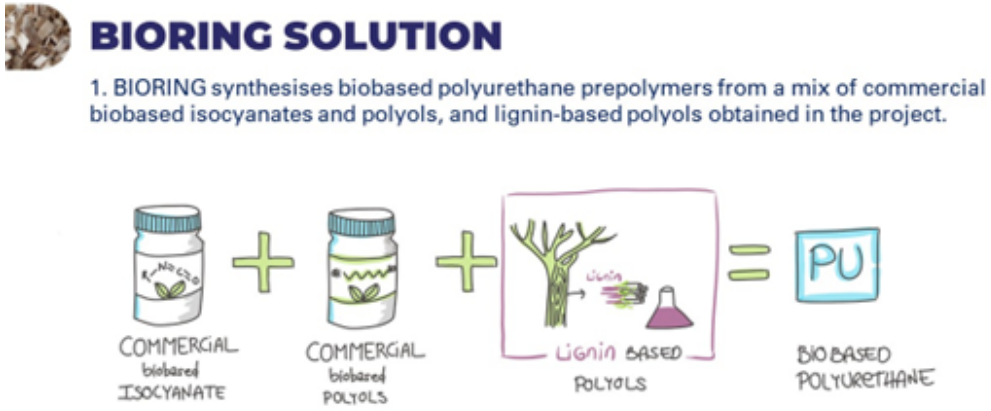
Bio-based solutions for UV coatings

We all need coatings: from automotive to furniture and construction, UV curable polyurethane coatings play a major role in a wide range of industries, due to their versatility, performances, energy-efficient production and application.
However, they are still largely fossil-based: do we have an alternative? Yes, biobased coatings, a small but emerging market. Yet, they still are applied only for low-demanding applications: we need new formulations for high-demanding sectors (industry, marine, automotive, wood, etc.) that combine high-performance and sustainability.

BIORING bridges the gap, developing **renewable formulations for UV-curable biocoatings**, with up to 95% biobased content from biomass-derived feedstocks while granting enhanced thermo-mechanical properties. Our goal is to offer both a **portfolio of formulations** for biobased building blocks, providing proof of improved performance, health & safety profile and end-of-life, and a **process modelling framework** to predict coating properties based on their formulation.

"We will not develop a process identical to existing fossil-based counterpart, but rather something similar and adaptable. We are developing a flexible platform, with which you will be able to use the BIORING solution, as well as building-blocks developed by others. That will make it faster and cheaper for companies to adopt our process. ***We aim to provide the closest***

possible to a drop-in solution", say our Coordinators Nicole Doelker and Manuel López Granados (Spanish National Research Council).



Want a quick overview of the project? Download our Project General Presentation

We are a team of fourteen partners and affiliated entities, ranging from large companies to SMEs to research centres and more, with expertise from material development to product manufacturing and use, Safe-and-Sustainable-By-Design (SSbD), and open science. Our aim is an effective, sustainable, and safe solution for the furniture, construction and automotive sectors, and beyond.



Anticipatory LCA to promote informed decision-making in bio-based product development

Online workshop, 4 December 2024, 11:00-13:00

Life Cycle Assessment has great value in biobased research and innovation. LCA helps in understanding environmental impacts and integrating them with other impacts since early stages of development, optimizing process and product development, and comparing biobased product sustainability with fossil-based ones.
However, implementing LCA at low TRL ("anticipatory" LCA) is hindered by limited information and data gaps (e.g. quality/purity of raw material and final products, yields of the processes, energy demand, etc.).

The workshop, in collaboration with SuperBark project, gathers experts in material science, safety and sustainability assessment, modelling and LCA to discuss and compare approaches and strategies to pursue effective and useful anticipatory LCA analysis.

READ THE AGENDA

This workshop follows our first Open Innovation Workshop, *Early sustainability assessment in innovation process*, where we tackled three main topics: challenges of early assessment; assessment & foresight tools; process and design modelling.

Register to the workshop

The devil is in the details



In sectors like automotive and furniture, developing and using polymers with a limited biobased content of is well known and feasible. However, increasing amounts while keeping similar performances and costs as conventional materials is a difficult challenge.

BIORING aims to do a step-forward in the synthesis of alternative, sustainable, and biobased chemicals addressing three main challenges: synthetise the building blocks; adapt the current polymer chemistry processes to the new building blocks; do it in a cost-effective way.

We discussed this and much more with the BIORING coordinators Manuel López Granados and Nicole Doelker (Institute of Catalysis and Petrochemistry of the Spanish National Research Council - CSIC).

Read the full interview here

Biobased solutions will save us



Europe has limited availability of raw materials, and biobased solutions could help. We need to be confident in our knowledge and capability, having technologies and expertise to break the predominance of fossils-based raw materials: Europe invented polyurethane, and it remains a top player in coatings research.

We're facing several barriers: providing robust and reproducible chemicals from biomass; do it in a cost-effective way; scaling it up. We need time and investments to adopt biobased alternatives, but we also need to apply different business models and change consumer attitude, enhancing sustainability.

A shared effort is fundamental: trust, collaboration and knowledge sharing are the way to improve faster and better.

We discussed this and much more with José Maria Cuevas, Gaiker and BIORING partner.

Read the full interview here

Our case studies: automotive & aerospace





Automotive industry is looking for new raw materials and processing technologies to reduce their carbon footprint, while maintaining the durability and quality of appearance of exterior and interior applications. BIORING fulfils this demand developing and validating new biobased high-gloss coating.

Architectural leading industries require wood-based environmentally friendly coatings. Since the market is dominated by interior wall applications, BIORING offers its biocoatings solutions for exterior wall coatings, worktop blacks and compact laminate custom worktops.

Discover more

Thank you for showing your interest in the BIORING project. Please, pass on this email to those who you think would like to join this growing community. We are looking forward to the journey ahead.

Subscribe here!

The project is supported by the Circular Bio-based Europe Joint Undertaking and its members. Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CBE JU. Neither the European Union nor the CBE JU can be held responsible for them.

You are receiving this email because we *think you and/or your organization might be interested in the topics addressed by the BIORING project. This is the first of a series of up to four informative emails sent during the 3 years BIORING's lifespan, to update and promote collaborations.*

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