Bionanopolys

HIGHLIGHTS NO. 6

WELCOME

Welcome to the sixth newsletter issue of the Bionanopolys Open Innovation Test Bed (OITB) project! Every six months we would like to keep you posted about our project activities, about previous and upcoming events, where to meet our consortium members and we invite you to gain insights into specific aspects of Bionanopolys implementation.

Enjoy reading, feel free to share this issue with your colleagues and don't hesitate to drop us a line in case you have any question or cooperation request.

CONTENT

DEVELOPMENT OF BIONANOMATERIALS FOR COMPANIES

ABOUT OUR SEP

Written by Àngels Almenar, SEP Manager (ITENE)

BIONANOPOLYS, through its innovative Single-Entry-Point (SEP), is playing a pivotal role in supporting companies in the development of bionanomaterials. This project, backed by an international partnership and funded by the Horizon 2020 programme, has been established with the aim of providing technical, legal, regulatory, safety, economic, and financial services to companies across the European Union.

OPEN INNOVATION ECOSYSTEM

The SEP, established as a non-profit entity, functions as a one-stop-shop to facilitate companies' access to a wide range of services necessary for the development of bionanomaterials. This approach aligns with the philosophy of an Open Innovation Ecosystem, where companies, regardless of their size, can benefit from shared expertise and collaboration.

REDUCING BARRIERS AND COMMERCIAL RISKS

BIONANOPOLYS' SEP plays a crucial role in reducing the risks and barriers to the commercial exploitation of biological materials and polymer bionanocomposites with nanotechnology. By offering integrated services covering technical and legal aspects, as well as regulatory and financial matters, the SEP acts as a facilitator, smoothing the path for the successful commercialization of bionanomaterials.

PROMOTING COLLABORATIVE OPEN INNOVATION

Through the SEP, BIONANOPOLYS fosters collaborative open innovation by providing centralized access to key services. This strategy not only benefits companies but also strengthens collaboration among different project partners, creating a network that drives significant advancements in bionanomaterial development.

CALL FOR INNOVATIVE PROJECTS

The SEP and BIONANOPOLYS partners will play a crucial role in evaluating projects submitted to the platform. The recently launched call seeks to select innovative projects from across Europe that will have access to free services for the development, testing, or scaling of bionanomaterials in the Open Innovation Test Bed (OITB) of BIONANOPOLYS.

In summary, BIONANOPOLYS' SEP not only acts as a one-stop-shop to streamline access to crucial services but also plays a vital role in building a European reference ecosystem for the development of bionanomaterials, fostering innovation and open collaboration in this emerging field.

LET'S SHED A LIGHT ON BIONANOPOLYS' PILOT PLANTS!

OUR TOP 3
TECHNICAL SERVICES
REQUESTED BY USERS & TEST CASES!

The Bionanopolys Open Innovation Test Bed is evaluated in two different ways: on the one hand, it implements a couple of use cases with partners that are beneficiaries of the project. On the other, Bionanopolys as a SEP is tested by external users, who applied during the open call and formed test cases for Bionanopolys. Taken all these use cases together, there have been identified some "most wanted" pilot plants that fit to many requests in the development of innovative biobased nanomaterials. Let's have a look at the ranking!

1ST – OBTAINING CELLULOSE NANOFIBERS, NANOCRYSTALS AND NANOLIGNINS

This technical service of pilot plant 2 has proven to be a crucial part for several industrial sectors: cosmetics, packaging, nano-diagnostics, textile and chemical industry – thanks to their unique properties, nanoparticles are of interest in many sectors, and this pilot plant service aims to produce nanofibers (CNF), nanocrystals (CNC) and nanolignin from biomass. The production is realized by mechanic, enzymatic or chemical treatments.

2ND – COATING APPLICATIONS

On the material sector, coating applications (pilot plant 14) with functional nanoadditives are of course a very important chance for improvement. Properties such as barrier, optical, mechanical, antimicrobial or water repellency characteristics seems to be required, especially by packaging, textile or manufacturing industries. The service is composed of coatings with bio-based functional liquid formulations, flexo and gravure coating, nanofiber-based coatings by electrospinning employing biopolymers, spray coating (2d and 3D shape substrates), paper and board coating, as well as textile coatings as hotmelt lamination and padding process.

3RD – BIOBASED NANODISPERSION

The third place in the ranking goes to the service of biobased nanodispersion (pilot plant 8), which again attracts lots of different industrial sectors. It is often required in combination with pilot plant 2, as it enables users to prepare stable dispersions of nanoadditives. Especially, packaging industry benefits from the polymerization by synthesis and the polymer-based dispersions with functional nanocapsules.

You are also interested in the Bionanopolys service portfolio? Of course our list of services offers much more opportunities.

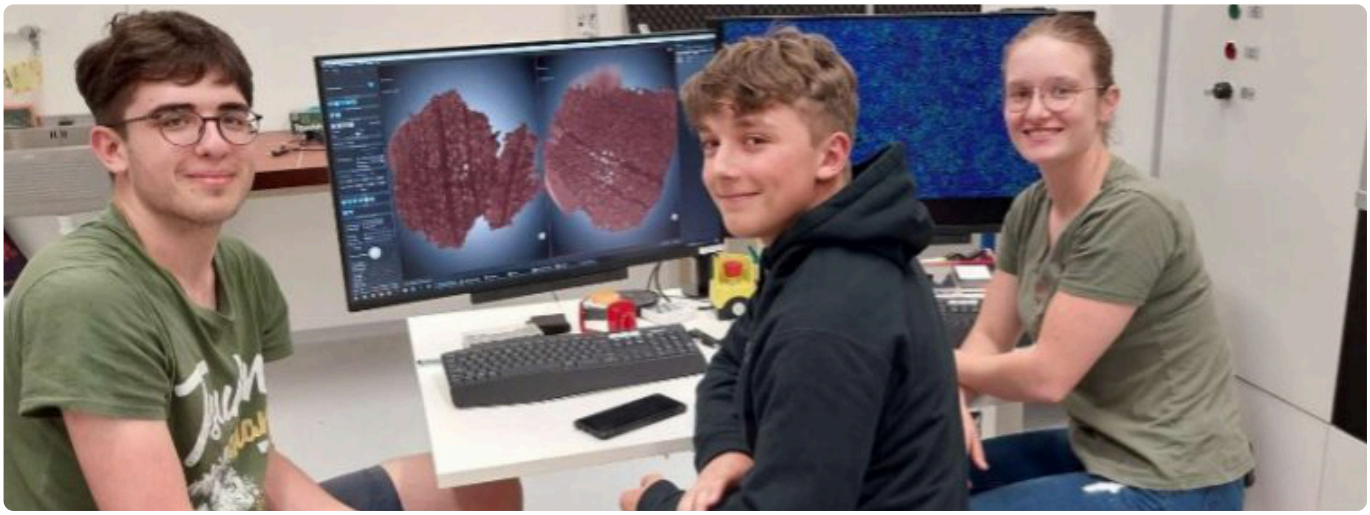
HIGHLIGHTS FROM THE PAST 6 MONTHS

The 17 Sustainable Development Goals of the UN are omnipresent and a project, such as Bionanopolys, offers an important contribution to achieve these goals.
We analysed in which areas Bionanopolys fits to the strategy and released an article about "**How Bionanopolys meets the UN Sustainable Development Goals**".

In general, Bionanopolys mainly addresses SMEs, companies and research groups that are dealing with the development of nanomaterials and bio-based solutions.

However, it is important to communicate to public as well and to involve the "next generation" as early as possible.

Bionanopolys welcomed some pupils from a school about wood and economics in Austria, and they gained a deeper look into the project concept during an internship. They even described their experiences in **a blog article**.



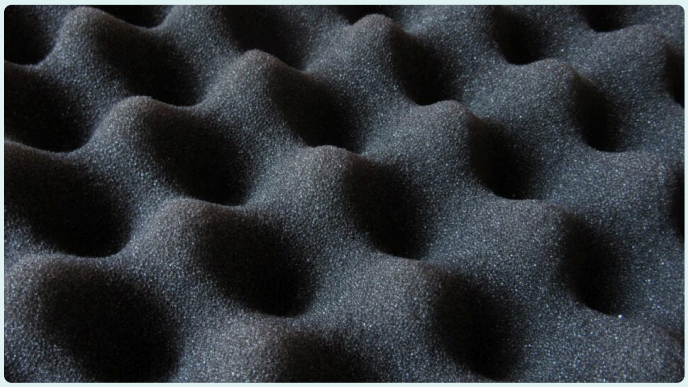
Picture credits: acib (Barbara Petschacher)

NEWS FROM OUR BIONANOPOLYS BLOG:

Our partners are eager to continuously present their facilities and services in our Bionanopolys blog.

Find out more about:

- **Biobased solutions for foam applications** (CELLMAT)
- **Organic waste valorization and up-cycling** (acib).



EVENTS:

Also in terms of events, the Bionanopolys team continued to communicate the project and to meet our stakeholder community:

- **Compounding World Expo 2023,**
  14th – 15th June 2023, Essen, Germany

Picture credits: ITENE

- **SURFBIO Policy Roundtable,**
  20th June 2023, online

- **Pitching session Bionanopolys at EBAN Congress,**
  25th September 2023, Brussels, Belgium

Picture credits: EBN

MERRY CHRISTMAS & HAPPY NEW YEAR

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