



Bionanopolys

HIGHLIGHTS NO. 5



WELCOME

Welcome to the fifth 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.

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WE DID IT!

THE INCORPORATION OF THE BIONANOPOLYS SINGLE ENTRY POINT

Written by Anthony Bochon (G&S)

On 17th February 2023, the Single Entry Point (SEP) of Bionanopolys has been incorporated under the name Bionanopolys in the form of an international non-profit association (AISBL) under Belgian law, with its registered seat in Brussels, Belgium.

The establishment of the SEP is the culmination of more than two years of work between the 20 core partners of the project through numerous online meetings, memoranda and questionnaires to better understand the partners' expectations and constraints and also the organisation of two legal workshops in Valencia, Spain on 31st January 2022 and on 8th June 2022. The SEP legal definition was led by G&S, with the support of other partners in the work package (AXIA, EBN, EBAN) and the project coordinator ITENE.

During these two years, the partners first had to agree on the SEP legal definition – for profit or non-profit entity – and also the country of establishment. At the end of the second legal workshop in June 2022, it was clear for the core partners that an international non-profit association under Belgian law was the best legal vehicle for most of the core partners.

The next step during the summer of 2022 was to define the business model, especially the relationship between the future SEP, its own members and the customers. The development of a consistent business model was challenging as the customers' demand was hard to predict. Core partners agreed that the SEP should be a broker of services putting the service providers in touch with the customers. The visibility of the SEP and its capacity of bringing together service providers who would otherwise not combine their forces are key elements of the SEP business model.

Governance rules have been adopted prior to the SEP in view of creating three categories of SEP members: founders, joining members and affiliate members. With these three levels of membership, the SEP will be able to rely on a large community of stakeholders.

With the expertise of its current members, the SEP has a great potential to achieve sustainability after the end of the Bionanopolys project.

The long process preceding its incorporation was a fantastic opportunity for all core partners to develop a common strategy for the marketing of innovative services to the industry and other stakeholders in general.



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

BIOMASS

WELCOME TO BIO BASE EUROPE PILOT PLANT!

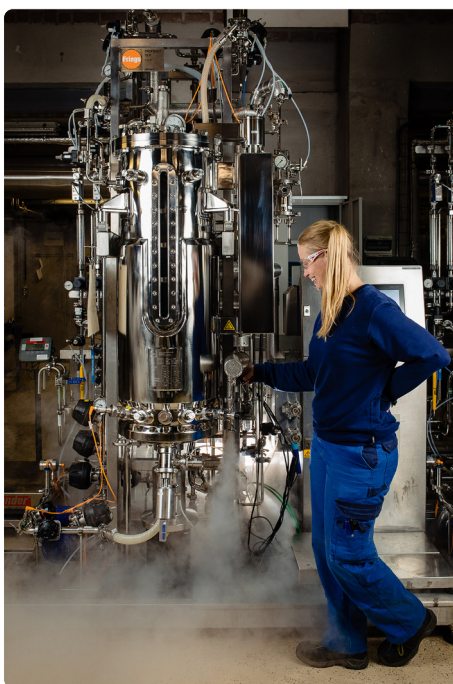
In 2023, a new partner joined our Bionanopolys team! The Bio Base Europe Pilot Plant (BBEPP) takes over the tasks of partner BPF, and we are happy to welcome the new colleagues from Ghent in Belgium!

Bio Base Europe Pilot Plant is an independent, state-of-the-art facility that operates from a laboratory level to a multi-ton scale. Bio Base Europe Pilot Plant is a service provider for process development, scale-up and custom manufacturing of biobased products and processes. A wide and flexible spectrum of modular unit operations

combined with the experience of highly competent engineers and technicians enables to translate a biobased lab protocol into a viable industrial process.

Bio Base Europe Pilot Plant offers the conversion of renewable feedstocks into biochemicals, biomaterials, biofuels and other bioproducts by using technologies such as biomass pretreatment, biocatalysis, (gas)fermentation, green chemistry and product recovery and purification. This can be enabled via bilateral collaborations or within European or nationally funded projects.

In the Bionanopolys project, BBEPP acts as the scale-up partner in the testbed for the biomass pretreatment. BBEPP is a facilitator for scaling up similar biomasses and on top of that the partner can also assist in larger scale fermentation if required.



COMPLEMENTARY SERVICES

SAFETY REGULATIONS AND LIFE CYCLE ASSESSMENT

written by Hector Torres Pierna and Jordi Palau (ITENE)

The analysis of compostability and recyclability is one of the services that are offered by the Bionanopolys team. For a sustainable approach it is important to characterize materials in terms of their biodegradation, disintegration behaviour and their compost quality.

WHAT DOES „COMPOSTABILITY“ MEAN?

It is the property of raw materials or products to be recovered organically through an aerobic process such as composting. It should be noted that composting is one of the three ways established by EUDirective 852 to achieve the 2030 objectives in which all packaging must be reusable, recyclable or compostable.

HOW IS COMPOSTABILITY OF BIONANO-MATERIALS CHARACTERIZED?

EN 13432 is the European reference standard for requirements for packaging recoverable through composting and biodegradation. For a product to be considered compostable it has to pass four tests: characterization, biodegradation, disintegration and final quality of the compost. Characterization assesses whether it is an organic product and what levels of heavy metals it contains. Biodegradability determines the ability of micro-organisms to use the organic carbon in the sample to respire and grow. The disintegration stage looks at how the material breaks down to pieces smaller than 2 mm. Finally, the final quality of the compost assesses the toxic effects on terrestrial plants.

WHY IS THIS AN IMPORTANT ASPECT IN THE HOLISTIC APPROACH OF BIONANOPOLYS?

When the biopolymers are composted at their end of life, they return to the value chain as composts and fertilizers for crops and plant growth. This not only reduces plastic waste pollution but also closes the supply chain to achieve a sustainable and green circular economy.





HIGHLIGHTS FROM THE PAST 6 MONTHS

In February 2023 our Open Call has launched! The launching took place in the frame of a virtual event, where the idea of Bionanopolys, the benefits and the application process have been explained.

You are interested in exploring your own idea within the Bionanopolys network?

[Watch the recording](#) and stay tuned about upcoming opportunities and calls.

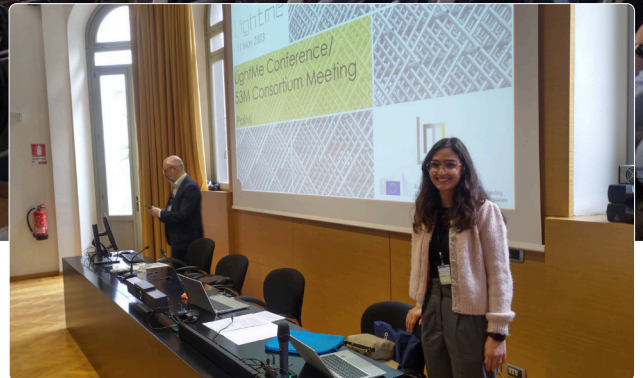
Furthermore, on 3rd May 2023 another virtual event of AXIA informed about the Bionanopolys opportunities and the Open Call procedures. [Watch the recording.](#)

News from our Bionanopolys Blog:

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

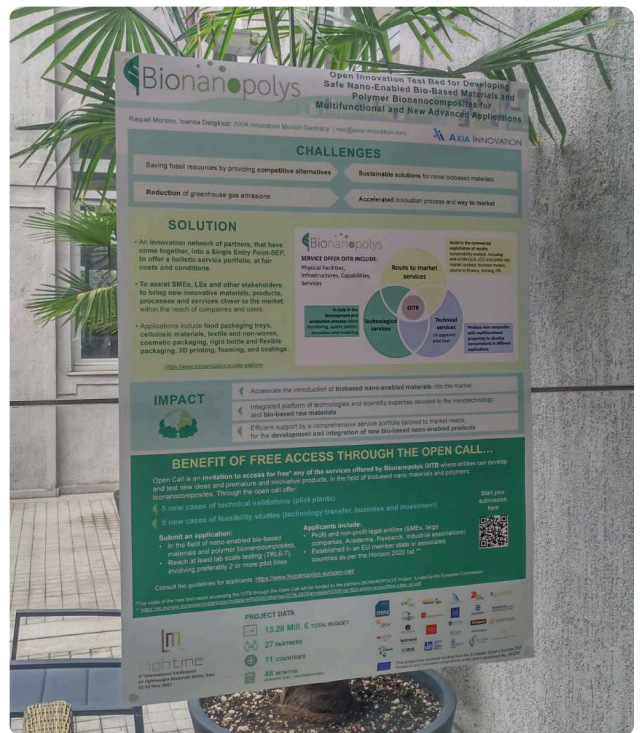
[Flexible plastic packaging: The challenges of producing biobased multilayer films or monolayers with bioadditives](#) or the service of [Biobased injection and 3D printing!](#)

The German partners met for a podcast interview about [Textiles and nonwoven fabrics](#) on a biobased product market for the ACIB corporate podcast “BioteXperts”.



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

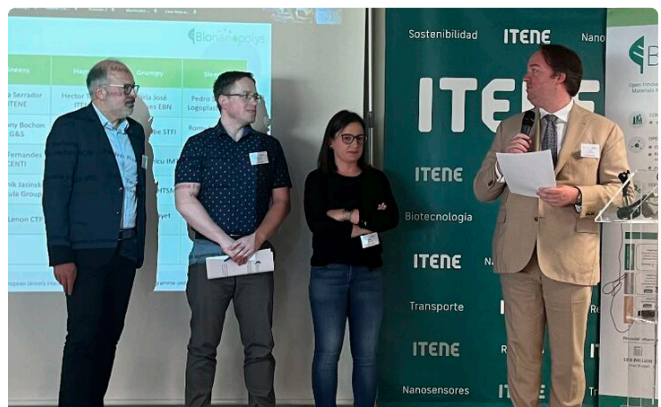
- EBAN Webinar “How to nail your sales pitch”,
- 19th January 2023, online Bionanopolys Virtual Open Day, 17th February 2023, online
- BIOMAC event “Upscale your bioeconomy innovations – Discover the opportunities offered by four open innovation test-beds funded by Horizon 2020”, 1st March 2023, online – Oral presentation from Carmen Sanchez, ITENE
- Physiochemistry of the phase boundary, 16th – 20th April 2023, Lublin, Poland (Presentation about “Stability and physiochemical parameters of nanocellulose in the presence of metal nano-particles” from Zygmunt Sadowski, Wroclaw Politechnika)
- [INDEX 2023](#) – Nonwovens exhibition, 18th – 21st April 2023, Geneva, Switzerland – Exhibition booth STFI
- JEC World, 25th – 27th April 2023, Paris, France – Exhibition booth STFI
- [ETP conference & iTechStyle Summit](#), 10th – 12th May 2023, Porto, Portugal – Personal interaction STFI
- [1st International Conference on Lightweight Materials](#), 11th – 12th May 2023, Milan, Italy – Poster AXIA
- [7th Green and Sustainable Chemistry Conference](#), 22nd – 24th May 2023, Dresden, Germany – Poster CENTI
- [38th International Conference of the Polymer Processing Society](#), 22nd – 26th May 2023, St. Gallen, Switzerland – Poster CENTI
- [EBAN Annual Congress 2023](#), 24th – 26th May 2023, Thessaloniki, Greece – First Bionanopolys Pitching Event





From 18th to 19th April, THE GENERAL ASSEMBLY MEETING

took place at the premises of ITENE in Valencia, Spain. The team discussed upcoming scientific milestones, the Open Call procedure and it developed appealing messages during a communication workshop held by EBAN.





**From 14th to 15th June,
COMPOUNDING WORD EXPO**



UPCOMING EVENTS



33rd IFSCC Congress

4th – 7th September 2023

Podium presentation “A safe by design approach to TiO₂-NPs based sunscreen filters” by Ambrosia Lab



International Conference on Composite Materials

30th July 2023

www.bionanopolys.eu



EDITORIAL TEAM

Coordinator: Carmen Sanchez, ITENE • **Communication Manager:** Katrin Weinhandl, acib GmbH • **Newsletter Text:** Various

Layout: Dietmar Cseh, acib GmbH • **Pictures:** Bionanopolys • **Contact:** katrin.weinhandl@acib.at

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