

Novel packaging films and textiles with tailored end of life and performance based on bio-based copolymers and coatings

Newsletter November-December 2022













Contents

BIOnTop 2022 annual meeting, 13 December 2022, Pisa and online
Are you following us on social media? 3
Open and long-term access to results
Features on BIOnTop results and collaborations 4
Feature 1: Workshop for early-stage researchers on "Results for Biobased, Compostable and Recyclable Packaging Films", in Pisa and online, 14 December 20224
Feature 2: BIO-MI encourages early career researchers in discovering bioplastics opportunities5
Feature 3: BIOnTop at the European Bioplastics 17 th Annual Conference, 6-7 December 20226
Policy updates
Policy Framework for Bio-based, biodegradable and compostable plastics7
The proposal for an EC Regulation on Packaging and Packaging Waste7
The revision of the EU rules on Food Contact Materials, and specifically the current open EC Consultation, until 11 January 2023 . 8
The proposed EC Regulation for Ecodesign8
Meet BIOnTop at these events9
BIOnTop Tech watch9

BIOnTop Key figures

Funded by the call topic: BBI.2018.SO3.R10 - Develop biobased packaging products that are biodegradable/ compostable and/or recyclable

Funded by: BBI JU Research and Innovation action: start at TRL 3-4, target by the end of the project is TRL 5-6

Start and end date: 1/06/2019 – 31/05/2023 Budget: 5,4M€ (BBI-JU contribution is 4,2M€)

Consortium: 21 partners (4 Research and Technology Organisations, 9 SMEs, 6 Large Industries, a consumers' association and a pan EU industry association)
7 Biobased Industries
From 8 EU countries

- +Advisory board
- + External Advisory Board "Dissemination and mobilisation of stakeholders"

BIOnTop is developing novel bio-based and compostable packaging and textiles through experimental research on copolymers and compounds with customized biodegradability and multifunctional coating solutions.

The 4-year research project gathers 170 experts from research institutes and private companies, spanning from mechanical engineering to food and packaging and including trade associations and experts in dissemination and technology transfer from 8 European countries.

BIOnTop 2022 annual meeting, 13 December 2022, Pisa and online

What are the key take home messages from the #biontop22 annual meeting? The meerting was held in Pisa on 13 December 2022 and online on MS Teams, and hosted by our local partner INSTM.

- In few months we are wrapping up the BIOnTop project. Our main goal remains to give
 the demos development a nudge, finalise the last activities and further collaborate with
 end users on the possible applications of the demos.
- At the same time, the teams are increasing the efforts in terms of technology transfer and dissemination of the results via workshops, events, external trainings and publications. For this reason, BIOnTop is focusing on an improved strategy for focused dissemination of results.



Picture 1: BIOnTop team at the Pisa annual meeting, 13 December 2022. Credits: C. Bearzotti (EUBP).

Are you following us on social media?

BIOnTop is providing information about the project's achievements and upcoming trainings and events via social media.

Are you following us already? If not, please connect with us.

www.linkedin.com/in/biontop-project





@BIOnTop Project



The project team recently set up a YouTube collection of talks and presentations: BIOnTop BBI project

The project will be publishing soon interviews with all partners on the BIOnTop results.

Across these channels, we use the hashtag #biontop for tagging contents and materials.

Open and long-term access to results

All our presentations and posters are uploaded to Zenodo for granting you all Open Acces, long-term, extending the life of the results well beyond the lifetime of the project.

Have you already checked what is available on Zenodo?

https://zenodo.org/communities/biontop/





Features on BIOnTop results and collaborations

Feature 1: Workshop for early-stage researchers on "Results for Biobased, Compostable and Recyclable Packaging Films", in Pisa and online, 14 December 2022

The integration of formal curricula with information on the latest research and innovation results is strategic. BIOnTop leading by example with a workshop for early-stage researchers in Pisa.

Partners INSTM, AIMPLAS, UNIPI, CENTEXBEL, ASU and EUBP joined forces to transfer results to early-stage researchers during a 3-hour workshop. The workshop was held online and in person from Pisa (IT) and it aimed at providing an overview on the work in BIOnTop, on the biobased, biodegradable, and recyclable materials for films and trays, on the biobased materials for textile packaging and its coating, and on surface modification of films.

Finally, an overview on the recent developments of policy making at EU level and its importance and effects on the bio based plastic industry and research was provided to the researchers.





Pictures 2 and 3: Announcement of the event and audience, Pisa 14 December 2022. Credits: C. Bearzotti (EUBP).

When: 14 December 2022

Location: online and in-person, Pisa (IT)

Link to the event: https://www.linkedin.com/events/workshop-resultsforbiobased-com7005514400769937408/about/ Training materials: will be made available in the BIOnTop Zenodo community in January 2023.

BIOnTop INSTM contact: Maria Beatrice Coltelli, maria.beatrice.coltelli@unipi.it

Feature 2: BIO-MI encourages early career researchers in discovering bioplastics opportunities

Partner BIO-MI was invited to give a talk at the Careers' Week of the University of Rijeka (Croatia), Faculty of Economics and Business

BIOnTop expert Ivona Miketa (BIO-MI) presented the work of the project to early-career scientists during this event. The goal of the event was to inform students about business opportunities, trends in the business environment and to connect them with potential

employers.





Picture 4: Ivona Miketa at the event. Credits: Organisers.

The whole week, experts from practice talked about current economic trends with the students. Representatives from industry and research organisations, through interesting lectures, brought closer current business challenges which they face every day, transfer their practical experiences to students and informed them about employment opportunities. Besides that, employers presented student jobs, internships, and grants they offer to students. The event was co-financed from the European Social Fund (ESF), Operational Program

"Effective Human Resources 2014 - 2020".

When: 7 November 2022 Location: Rijeka (HR)

Link to the event: https://www.efri.uniri.hr/en/career_week_2022/2822/325

BIOnTop BIO-MI contact: Ivona Miketa, <u>ivona.miketa@bio-mi.eu</u>

Feature 3: BIOnTop at the European Bioplastics 17th Annual Conference, 6-7 December 2022

Talk to the BIOnTop experts at the European Bioplastics 2022 annual conference



The annual EUBP conference is a meeting for all operators working in the field of bioplastics, in Europe and beyond Europe participants from the business and academic communities. BIOnTop organised a "BIOnTop Breakfast with the expert". Representatives of the industry were invited to listen to a short intro by Dr. Sergio Quesada (ENCO) and

BIOnTop expert Dr. Corina Reichert (ASU) and get and overview of the application scenarios of the latest BIOnTop results. We are planning to hold a series of digital workshops with the BIOnTop experts in the upcoming months, to make sure that results can be transferred efficiently to peers and users.

Grab a copy of the presentation from Zenodo: https://zenodo.org/record/7347740





Picture 5 (from top left to bottom right): BIOnTop presentation in Zenodo, Corina Reichert presenting, Sergio Quesada and Corina Reichert and the audience. Credits: C.Bearzotti (EUBP).

BIOnTop's poster was presented at the poster session, presented by Dr. Sergio Quesada (ENCO), our leader of the WP7 Dissemination and project exploitation.

When: 6-7 December 2022

Where: Maritim proArte Hotel, Berlin (DE)

Link to the conference: https://www.european-bioplastics.org/events/eubp-conference/

BIOnTop ASU contact: Corina Reichert, reichert@hs-albsig.de

BIOnTop ENCO contact: Sergio J. Quesada, quesada@enco-consulting.it

Policy updates

There's a lot happening in Europe right now with the EU's recent commitment to become climate neutral by 2050 and the required transition towards a circular economy and support for the bioeconomy. There is just so many relevant policy developments going on at the moment – from Taxonomy to Climate Law, Sustainable Products, Food Systems, Biodiversity, Plastics and Packaging, Waste – all of which affect bioplastics in one way or other, and what we are doing in BIOnTop.

On the Commission side we experience somehow contradictory positions where on one hand millions of Euros are invested in R&D related to bioplastics and where the advantage of biobased plastics over fossil-based plastics are recognized. But on the other hand, undifferentiated regulations on plastics, which sometimes completely negate the advantages of bioplastics, keep promising research results from entering the market. On the EU Member States side, we face a similar situation where positions on bioplastics also vary a lot.

A recap of the most important ongoing initiatives at policy making level is provided here below.

Policy Framework for Bio-based, biodegradable and compostable plastics

The non-binding Communication was published on 30 November 2022. The Communication for an EU policy framework on biobased, biodegradable and compostable plastics is not legally binding. It brings clarifications on biobased, biodegradable and compostable plastics and sets out the conditions to ensure that the overall environmental impact of their production and consumption is positive.

The main priority of the European Commission for these materials is to reduce, reuse and recycle. From this premise, as since there is currently no EU law in place applying to bio-based, biodegradable, and compostable plastics, the European Commission came up with this Policy Framework, which is part of the EU Plastics Strategy (2018) and was announced in the European Green Deal and the New Circular Economy Action Plan (both in 2019). The European Commission aims to contribute to a sustainable plastics economy by:

- Improving the understanding of materials and clarifying their potential environmental benefits.
- Guiding citizens, public authorities, and businesses, to inform their purchases, investments and policy making.
- Preventing differences at national level and the fragmentation of the market.

The Framework states that home composting for plastics should only be considered in the context of specific local conditions under the supervision of the authorities and provided that the use of such plastics has clear added value.

EUBP is preparing a policy brief and a more in-depth analysis will be made available in early 2023.

Link: https://environment.ec.europa.eu/publications/communication-eu-policy-framework-biobased-biodegradable-and-compostable-plastics_en

The proposal for an EC Regulation on Packaging and Packaging Waste.

This proposal. The Commission proposal for a Regulation on Packaging and Packaging Waste (short PPWR) has been published on 30 November 2022.

This revision was intended originally as a Directive, but the Commission change its mind and proposed a Regulation to repeal the Directive. The proposed Regulation aims at making all packaging on the EU market mandatory reusable or recyclable by 2030. In the few last weeks before its publication, several drafts were leaked that initially proposed a partial ban on compostable plastic packaging. The "ban" has been lifted in the published proposal and

compostable packaging solutions will continue to be allowed to be marketed and recycled in the EU. The PPWR proposal recognises the contributions of compostable plastics in increasing the volumes and quality of separately collected biowaste and reducing the contamination of (organic) waste streams. By making several packaging applications mandatory to be compostable in industrial composting facilities, including tea bags, filter coffee pods and pads, fruit stickers, and very lightweight plastic carrier bags, it is taking, we think, a first step in the right direction. However, prioritising recycled content and mechanical recycling, according to the industry, will not be enough to replace the EU's dependence on fossil resources and to stop the current trend of over-packaging and excessive waste in the EU. The PPWR falls short on promoting biobased content equally to recycled content through targets EUBP is preparing a policy brief and a more in-depth analysis will be made available in early 2023.

Link: https://environment.ec.europa.eu/publications/proposal-packaging-and-packaging-a

The revision of the EU rules on Food Contact Materials, and specifically the current open EC Consultation, until 11 January 2023

The European Commission is planning a review of the EU rules on Food Contact Materials (FCM). This process already started in 2020. First with a Roadmap and currently there is an Open consultation to gather feedback from stakeholders and citizens on the policy options and solutions the Commission has identified. The consultation will close on the 11th of January.

EUBP suggests all partners to answer to the consultation individually, for this reason, the EUBP team has prepared a background paper for the BIOnTop consortium and circulated it on 6th December 2022.

Link to the EC consultation: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12497-Revision-of-EU-rules-on-food-contact-materials/public-consultation en

The proposed EC Regulation for Ecodesign

The European Commission is planning an update of the policy framework for bioplastics and the Sustainable Products Initiative (SPI). SPI is the overarching key project bundling the EC's environmental policy. In contrast to other measures which focus on end-of-life phase, this policy aims at establishing sustainability throughout the entire product lifecycle. The Ecodesign for Sustainable Products Regulation (ESPR) proposal will be the cornerstone of SPI: it will have a major impact on product design and market access.

Some of the most relevant elements of the SPI are the:

- Use of PEF and LCA methods is seen critical when bio-based and fossil-based products are directly compared.
- The Digital Product Passport includes obligation for manufacturer to provide information on chemical composition of material.

It remains to be seen how far the Commission will come before the next European Parliament elections in 2024.

Link: https://environment.ec.europa.eu/publications/proposal-ecodesign-sustainable-products-regulation en

Questions on policy updates?

BIOnTop EUBP contacts: Chiara Bearzotti and Estela López-Hermoso euprojects@european-bioplastics.org

Meet BIOnTop at these events

- 22-25 January 2023, Pisa (IT): 30 years of INSTM: past, present, and future of the Consortium, meet the Planet Bioplastics and INSTM colleagues
- Q1/2023 (dates tbc) online: ARCHA Training on REACH Assessment, organized by partner ARCHA
- 20-21 April 2023, Gent (BE), 4th International Conference on Bio-based and Biodegradable Textiles and Plastics, meet the ASU team. The event is organised by partner CENTEXBEL.
- Save the date! 10 May 2023 at Interpack Fair, Düsseldorf (DE): Workshop on BIOnTop applications, organised by partner EUBP
- Save the date! 11 May 2023 BIOnTop final conference, Düsseldorf (DE), organised by partner ENCO

BIOnTop Tech watch

For other relevant news, have a look on the BIOnTop tech watch



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