

PRESS RELEASE

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Fraunhofer CCPE at the ACHEMA 2024

Sustainable geosynthetics and advanced recycling – circular plastics economy

For the first time, the Fraunhofer Cluster of Excellence Circular Plastics Economy CCPE will present the topic ‘Sustainable Geosynthetics for Landscaping’ at ACHEMA 2024 alongside the topic ‘Advanced Recycling’. We cordially invite you to visit us at the trade fair in Frankfurt (Hall 6.0 – Research and Innovation | Booth D49).

Is it possible to produce plastics for landscaping from bio-based polymers? Can products be manufactured without environmental problems and with controlled degradation? Fraunhofer CCPE is precisely addressing these questions, which are important for a wide range of commercial products, in its new research focus ‘Sustainable geosynthetics for landscaping’.

From June 10 to 14, 2024, our specialists will use our exhibit at ACHEMA 2024 to show how innovative and sustainable materials can be designed for use in complex environments. Geosynthetics are already being produced for various applications based on renewable raw materials, both biopolymers and natural fibres, for example. The aim here is to fulfil challenging requirements not only initially, but also over a predefined period of use, while at the same time being completely biodegradable for many applications. The Fraunhofer CCPE has many years of experience with biopolymers such as polylactide (PLA) and polybutylene succinate (PBS), as well as with all the necessary process steps with a focus on the production of high-quality fibres from PLA and PBS. These are flanked by studies on time-defined degradation in soils and aquatic environments as well as ecotoxicological assessments of the new developments in order to ensure rapid transfer to application.

Fraunhofer CCPE will also be exhibiting ‘Advanced Recycling’ at ACHEMA. It is often a challenge to find the right process for waste that is difficult to recycle. With the CCPE recycling cascade for plastic waste, which consists of a combination of three innovative Fraunhofer technologies, high-quality plastic recyclates with optimised product yields can be produced. This waste includes, for example, mixed packaging waste, shredder residues or composite materials that can no longer be recycled using conventional mechanical processes. The input materials are pre-sorted and then treated using a combination of three innovative recycling technologies: solvent-based process, solvolysis and iCycle® process.

Further information:

www.ccpe.fraunhofer.de

RedaktionKristiane von Imhoff | Fraunhofer Cluster of Excellence Circular Plastics Economy CCPE | Telefon +49 208 8598-1443 | Osterfelder Straße 3 | 46047 Oberhausen | www.ccpe.fraunhofer.de | kristiane.von-imhoff@umsicht.fraunhofer.de

FRAUNHOFER CLUSTER OF EXCELLENCE CIRCULAR PLASTICS ECONOMY CCPE**Fraunhofer CCPE**

The transformation from a linear to a circular plastics economy can only succeed with a multi-stakeholder approach. The Fraunhofer Cluster of Excellence Circular Plastics Economy CCPE combines the competencies of six institutes of the Fraunhofer-Gesellschaft and cooperates closely with partners from industry. Together, we work on systemic, technical and social innovations and keep an eye on the entire life cycle of plastic products.

The following research institutes have joined forces under the leadership of the Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT: the Fraunhofer Institute for Applied Polymer Research IAP, the Fraunhofer Institute for Chemical Technology ICT, the Fraunhofer Institute for Material Flow and Logistics IML, the Fraunhofer Institute for Process Engineering and Packaging IVV and the Fraunhofer Institute for Structural Durability and System Reliability LBF.

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Kristiane von Imhoff | Fraunhofer Cluster of Excellence Circular Plastics Economy CCPE | Telefon +49 208 8598-1443 |
Osterfelder Straße 3 | 46047 Oberhausen | www.ccpe.fraunhofer.de | kristiane.von-imhoff@umsicht.fraunhofer.de

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Geosynthetics - Sustainable landscaping with bio-based polymers
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With the CCPE recycling cascade for plastic waste, consisting of a combination of three Fraunhofer technologies, high-quality plastic recyclates can be produced with an optimised product yield.
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