

CCPE Newsletter 1/2024



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 Elastomers perform important functions in a wide variety of technical applications. Elastomers, as cross-linked systems, pose a particular challenge in the plastics cycle, as the ecologically preferred mechanical recycling does not apply here. The Fraunhofer CCPE is therefore addressing this challenge in a multilateral approach: the focus is on the targeted degradation of elastomers using new devulcanization methods, the extraction and reuse of pyrolysis oils and the development of recyclable bio-based alternatives”

Prof. Dr.-Ing. Tobias Melz  
 Board of Management CCPE | Institutsleiter Fraunhofer LBF



Recycling rubber waste - rethinking elastomers




Elastomers can be found in many products and areas of application. In addition to their use in tires, many technical products such as seals, tubes, cable sheathing, gloves and much more are made from elastomers. Apart from used tires, which are collected and recycled separately, the recycling of elastomers is hardly possible in many cases, either economically or technically. New approaches and initial solutions for circular elastomers will be presented at our next Fraunhofer CCPE compact "Elastomers - Advanced technologies for recycling" on February 22, 2024 from 2 pm to 4 pm.

MORE INFO

News from the CCPE research

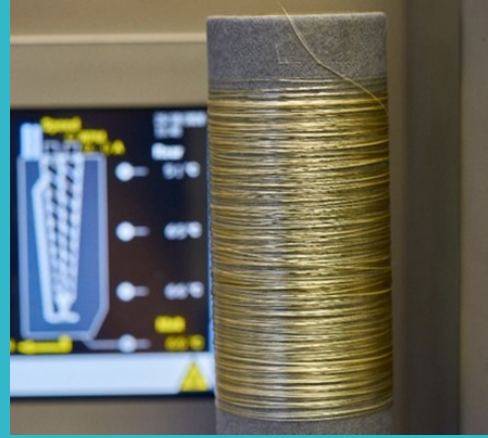
Challenges and requirements in the life cycle assessment of recycled plastics



High-quality fibers and films made from recycled plastics and biopolymers

Currently relevant for many companies, but hardly anyone knows how to do it (correctly): the comparative ecological assessment of plastics recycling. Comparative life cycle assessment studies are often accused of "greenwashing" or "misleading communication". In a new position paper, Fraunhofer CCPE researchers therefore identify ten challenges and requirements for a transparent and comparable life cycle assessment of recycled plastics.

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Sustainability requirements from society and regulators are now affecting every industry and are leading to a reassessment and further development of many products. Recycled materials and the use of renewable raw materials are playing an increasingly important role in plastics - at Fraunhofer CCPE, we are therefore rethinking the plastics cycle for biopolymer and recycled applications.

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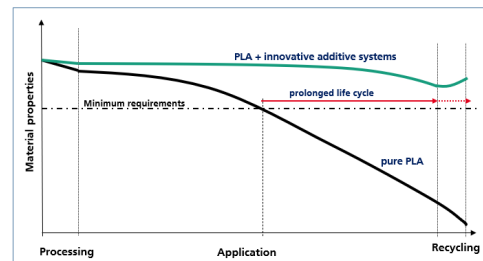
## New approaches in the purification of pyrolysis oils from chemical recycling



Adsorption and hydrogenation processes specially adapted to pyrolysis oils are required for mixed waste from plastics. The Fraunhofer CCPE has extensive equipment for the distillation, hydrogenation and testing of catalysts and adsorbents. It develops new processes for the optimal purification of pyrolysis oils in terms of quality and yield.

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## Bioplastics for long-lasting applications



Bioplastics made from renewable raw materials conserve fossil resources and reduce greenhouse gas emissions. However, undesirable hydrolytic degradation often stands in the way of their use in technical applications. Employees of the Fraunhofer CCPE are therefore investigating various plastic additives in order to modify the service life of bioplastics and expand their range of applications.

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You can meet us here

February 22, 2024

Fraunhofer CCPE compact:  
Elastomers – Advanced  
technologies for recycling

March 13 - 14, 2024

6th Forum Plastic Recyclates

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