

FEMS EUROMAT23

03 - 07 Sep 2023 (Frankfurt)

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FEMS EUROMAT is the most important international congress in materials science and technology in Europe. It continues a successful congress series promoting the transfer of knowledge and the exchange of experience between academia and industry. **Submission deadline: 31 January 2023**

Area H: Materials for Circularity and Sustainability

H05: Carbon-Capture Technologies, Polymeric and Bio-Based and Biodegradable Materials in Circular Economy

Growing social environmental awareness about the hazards of the plastic pollution in nature and high emissions requires a systematic introduction of the circular economy into the plastics industry. Similarly, as in nature, this approach aims for a technically regenerative system, where the waste generated during the production (post-industrial or pre-consumer) as well as after the service life of products (post-consumer) can be recycled and reused as effectively as possible. The economic and ecological basis for post-consumer recycling is products and materials designed both to fulfill consumer needs during the service life and for subsequent recycling (design for recycling).

However, the above-mentioned approaches are still not sufficient to reduce the overall environmental impact and meet net-zero emission targets. Carbon-capture is a crucial technology to mitigate climate change and reduce carbon emissions produced by various industries, transportation, etc. The captured CO₂ can be used as a resource or stored, providing the basis for carbon removal from the atmosphere.

At the same time, the practical realization of these approaches needs close international collaboration between scientists, industry, and relevant authorities and agencies. In this context, the symposium offers a platform for a better understanding of the challenges and innovative solutions in the field, as well as scientific and personal exchange with colleagues.

Contributions for oral presentations and posters should include but are not limited to the following:

- Advanced bio-based, biodegradable, and synthetic polymers and composites
- Design for recycling of plastics and plastic-based products
- Recycling of synthetic and biobased composites
- Advanced characterization techniques for recycled materials and recyclability
- Innovative recycling technologies and processes
- Green production
- Carbon capture, storage, and its utilization approaches
- Circular carbon approaches (combination with industrial processes)
- Circular bio-economy
- Regulatory framework required for a sustainable circular economy

Symposium Organizer



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