

# EFCE Spotlight Talks

Working Party on  
Polymer Reaction Engineering

13  
November  
2024

14:00-17:00  
CET



## Circularity and sustainability in the light of polymer reaction engineering

*In 2022 more than 400 Mt of polymers were produced worldwide.<sup>1</sup> At the same time, fossil-based raw materials have to be replaced by renewables. This demonstrates the pressing need to establish a circular and sustainable economy for plastics. Research and development are progressing fast in this area. This includes investigation of various recycling technologies, like mechanical or chemical recycling, which finally have to be realized on huge scales. Moreover, bio-based materials as additional feedstock are of interest as well as biodegradable materials for specific applications. This Spotlight Talk Series presents current research activities in that field from the polymer reaction engineering community.*

*1 - Plastics Europe, Plastics – the fast facts 2023.*

### PROGRAM

- 14:00      **Welcome and introduction**  
Markus Busch, Chair Working Party on Polymer Reaction Engineering, TU Darmstadt - Germany  
Boelo Schuur, EFCE Scientific Vice-President
- 14:10      **Enabling sustainable polymers at scale**  
Hannah Mangold, BASF SE - Germany
- 14:40      **Lignin and celluloses oxidation reactions – A new approach to reduce diffusional limitations**  
João Moura Bordado, IST – Lisbon University - Portugal
- 15:10      **Progress in sustainability-driven polyolefin reaction engineering**  
Pingwei Liu, Zhejiang University - China
- 15:40      **Mathematical modeling for biodegradable polymers**  
Alexandr Zubov, UCT Prague - Czech Republic
- 16:10      **Polyolefin solutions for a sustainable future**  
Ugur Agkün, LyondellBasell - Germany
- 16:40      **Panel discussion and final remarks**  
Markus Busch, Chair Working Party on Polymer Reaction Engineering  
Kristina Zentel, Secretary Working Party on Polymer Reaction Engineering

[REGISTRATION](#)

*free of charge but mandatory*

Contact: [martine.poux@toulouse-inp.fr](mailto:martine.poux@toulouse-inp.fr)  
[kristina.zentel@pre.tu-darmstadt.de](mailto:kristina.zentel@pre.tu-darmstadt.de)