Complementary Paths in Plastics Recycling at Scale

The increasing urgency for sustainable waste management has led to the exploration of various recycling technologies, each with unique advantages and limitations. This talk will focus on the complementarity of re-monomerization and solvent-based recycling, highlighting their significance in advancing circular economy practices. We will present industry case studies that illustrate the successful application of these technologies, for example BASF has advanced numerous projects in the recycling of automotive plastics via mechanical recycling, solvent based recycling, depolymerization and high temperature recycling such as gasification, and has also pioneered PA6 textile recycling with their Loopamid® brand.

Through a comparative analysis of different recycling methods, we will assess their effectiveness in managing diverse waste streams, the quality of products generated, and the overall lifecycle impacts. This evaluation will provide insights into how these technologies can be integrated to enhance recycling efficiency and sustainability. By understanding the strengths of each method, we aim to promote a more holistic approach to plastic recycling, ultimately contributing to a more sustainable future.