Net Zero Emissions and Plastic Circularity: How do we get there?

Abstract:
The EU has set the goal to reduce CO_2 emissions by 55% until 2030 (vs. 1990). Innovation from the chemical industry is essential to reduce the emissions that come from heating buildings, from road traffic, or from the production of food. These three sectors alone account for 50% of global greenhouse gas emissions. Operations of the chemical industry are responsible for 6% of global CO_2 emissions and several concerted actions are needed to reach net-zero emissions in this sector. Drawing on the case study of BASF, this presentation illustrates the measures that the company takes to reach its 2030 target of 25% reduction vs. 2018 (roughly 60% reduction vs. 1990).

At BASF, the complementary measures include own investments into renewable energy, such as a 24% stake in the world's largest offshore wind farm under construction. Beyond decarbonizing own operations, life cycle emissions of chemical products need to be considered. Life cycle emissions of plastics play a prominent role as they account for over 3% of CO_2 emissions from human activities. Therefore, BASF invests in solutions for mechanical recycling, chemical recycling of plastics, and compostable plastics. These complementary recycling technologies are essential to reducing the CO2 footprint along the life cycle. The presentation showcases how innovation and mass balance approaches for renewable and recycled feedstock help to accelerate the necessary transformation towards net zero emissions in the chemical industry.