Chemical Recycling of End-of-Life Poly(lactide) via Zinc-Catalyzed Depolymerization and Polymerization

What prompted you to investigate this topic/problem?
The negative effects that the global use of plastics has on ecology, economy and society, for example, through the emission of greenhouse gases such as carbon dioxide, global warming and the creation of waste. In this regard, chemistry can contribute to a transformation from a linear towards a more environmentally friendly, sustainable and circular economy.

What is the most significant result of this study?
The high catalyst activity and catalyst robustness, which allow the conversion of a variety of different poly(lactide) goods within short times. Moreover, the application of one kind of catalyst for the depolymerization as well as for the polymerization process.

In one word, how would you describe your research?
Recycling

How would you describe to the layperson the most significant result of this study?
From old to new plastics supported by chemistry.

What aspects of this project do you find most exciting?
The robustness of the catalyst in the depolymerization of everyday plastic objects containing poly(lactide).