Complementary use of mechanical, physical and chemical technologies for the development of comparative recycling concepts for complex plastic-based automotive components (REMOTIVE)

Initiative: Zirkularität mit recycelten und biogenen Rohstoffen

Ausschreibung: Kooperationsprojekte

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The transfer from the linear to a sustainable circular economy model is associated with various challenges for the plastics industry. The selection of an appropriate recycling process like mechanical, solvent-based or chemical recycling and the optimization of the process parameters for a given product are non-trivial. It requires extensive knowledge and understanding of the effectiveness, limitations, efficiency and especially sustainability of the individual processes along the life cycle, i.e. resources, production, (re)use, recycling. Further, a lot of plastic products were designed for the linear economy and are not suitable for recycling. Therefore, the evaluation of different recycling processes should be considered together with a new 'Design for Recycling'. In the scope of the project, complex components, for which currently there is no recycling solution like e.g., underbody, engine compartment components (coextruded fuel pipes), interior parts (center armrest) and/or mixed shredder light fraction recycled from waste streams with a complex composition (composites, material combinations, biobased materials) will be used as an example for such practical system thinking.

Projektbeteiligte

Prof. Dr.-Ing. Hans-Josef Endres
Universität Hannover
Fakultät Maschinenbau
Institut für Kunststoff- und Kreislauftechnik
Garbsen

Prof. Dr. Klaus Kümmerer
Leuphana Universität Lüneburg
Fakultät Nachhaltigkeit
Institut für Nachhaltige Chemie und Umweltchemie
Lüneburg