

WASTE4FUTURE: From Waste to resource – green molecules for the chemical industry

Energy- and resource efficient steering of the plastic cycle

Abstract International Conference for Resource Chemistry 2021

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Waste for future is a recently started Fraunhofer lighthouse project with the aim to reduce the fraction of energetically used plastic waste. In Germany each year about 3.6 million metric tons (57%) of the upcoming plastic waste are burned to produce energy [1]. This not only increases the CO₂ footprint, but also leads to a loss of valuable materials. With a combination of advanced sensor technology and an intelligent digital evaluation model, Waste for Future aims at maximizing that fraction of the upcoming plastic waste that can be kept in the materials cycle to be reused either mechanically or chemically. As decision criteria next to environmental, economic and technical parameters an innovative entropy-based model shall be developed and integrated into the evaluation model. The project started in the beginning of 2021 and lasts a maximum of 3 years.

[1] Kurzfassung der Conversio Studie Stoffstrombild Kunststoffe in Deutschland 2019, Hrsg.: Conversio Market & Strategy GmbH, Mainaschaff, August 2020