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INSTITUTE OF ENERGY PROCESS ENGINEERING AND CHEMICAL ENGINEERING

PROFESSORSHIP OF ENERGY PROCESS ENGINEERING

CR-Waste2Products

"Waste-to-Products" via chemical recycling of mixed waste streams to establish feedstock as well as product flexibility

CHALLENGE

Economic development, urbanization and population growth combined with an increasing level of consumption have led to a rise in waste production, particularly in urban areas and mega cities. A sustainable management scheme for municipal solid waste is consequently of high priority, not only to prevent mega cities from drowning in waste but also to contribute to international efforts in climate change mitigation and environmental protection. Additionally, the availability of fossil feedstocks fluctuates and the pressure to find alternatives increases.

OUR PROJECT

The project CR-Waste2Products intends to bridge the gap between the challenges of sustainable waste management as well as the resource demand of the chemical industry using chemical recycling, thus tackling two challenges at once. Thermochemical conversion of locally available waste streams is investigated for the production of chemical feedstocks in order to reduce space demand for landfills and increase the independence of fossil feedstocks. This technology route is investigated in the Singaporean context considering the social, technological, economic, ecological and political dimension (STEEP-approach).

PARTNERS

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