TUBAF
The University of Resources. Since 1765.

INSTITUTE OF ENERGY PROCESS ENGINEERING AND CHEMICAL ENGINEERING

PROFESSORSHIP OF ENERGY PROCESS ENGINEERING

PhosCOOR

Thermochemical phosphorous recovery in strongly reducing conditions considering the CO_2-balance

CHALLENGE

From 2029 onwards, many sewage treatment plant operators will be required to recover phosphorus from sewage sludge and return it to the economic cycle. In order to avoid emitting the contained carbon as CO_2 and instead return it to the carbon cycle, incineration of the sewage sludge is not an option.

OUR PROJECT

Fundamental studies on the combined recovery of phosphorus and carbon from sewage sludge using allothermal gasification. For this purpose, the necessary conditions for the release of phosphorus into the gas phase are identified, and an economically viable phosphorus recovery concept is developed, which is substantiated by laboratory studies and gasification experiments on a pilot scale.

PARTNERS

- RWE Power AG
- Thermische Apparate Freiberg (TAF) GmbH
- PreZero Pyral GmbH
- DBI Virtuhcon GmbH

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