

## Gasification and combustion kinetics of biomass and and pretreated RDF in thermobalance reactor

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Gasification and combustion kinetics of sawdust, sewage sludge and pretreated RDF chars has been determined in a thermobalance reactor (0.055 m x 1.0 m). RDF was used after pretreatment with superheated steam. The pyrolysis kinetics have been performed in TGA. The effects of combustion and gasification temperature (650°C–900°C) and partial pressure of O<sub>2</sub> and H<sub>2</sub>O (0.2– 0.8 atm) on combustion and gasification reaction rate have been determined in a thermobalance reactor. From the Arrhenius plot, the activation energy and the pre-exponential factor of chars are determined based on the various models.