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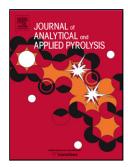
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Energy recovery analysis from sugar cane bagasse pyrolysis and gasification using

thermogravimetry, mass spectrometry and kinetic models

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Highlights

Heating rate effect of sugarcane bagasse pyrolysis on char yield

Product gas compositions during pyrolysis and gasification at different temperature ranges

Appropriate temperature range for optimum gasification conversion

Estimation of kinetic constants to different char production rates

Dependencies of kinetic parameters under various conversion levels

ABSTRACT: s

The energy recovery from biomass and it's utilisation as fuels and chemicals has been gained

interest in recent years. The production of syngas from sugarcane pyrolysis and gasification is

investigated. Pyrolysis studies of sugar cane bagasse are performed using thermogravimetry (TG)

at different heating rates (10, 20, 40, 100, 250 K/min). A mass spectrometry (MS) coupled with

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