

\* DVL ĵ FDWLRQ F KDUDFWHULVWLFV RI YDULRXV ELRPDVV RQ W

Yuya SAKURAI, Hiroki NOSE, Hiroki NOSE and Jun KOBAYASHI  
Kogakuin University, JAPAN

In order to suppress greenhouse gas emission and avoid global warming, utilization of biomass energy as a substitute for fossil fuels has attracted attention in recent years due to its renewability and carbon neutrality. Biomass gasification and pyrolysis has been investigated as one of the technologies for efficient utilization of biomass energy. However, gasification characteristics of biomass varies according to the types of that. It is necessary to clarify the gasification characteristics of biomass due to practical use of various biomass. Here, the effects of various biomass on gasification behaviors are discussed. In this study, pyrolysis and gasification experiments were carried out using a batch type tubular reactor. Cedar and cypress of coniferous trees, eucalyptus of hardwood and bamboo of grass-type biomass were used as biomass feedstock. These biomass were pulverized and sieved to 0.5 to 1 mm. The sample was put on the ceramics boat and installed in the reactor. The reaction temperature was electrically controlled and set from 600 to 900°C. Reaction atmosphere was inert only or both inert and steam, and the products were removed from the reactor by carrier gases. The experimental results showed that each biomass species had a different characteristic.  $\text{CO}_2$  (s) 11.2 (l) 7.3 (r) 1.5 (ra) 13 (e) 6 (ac) 7 (i) 6 (ac) 7 nct 2g 10

Notes: