Abstract:
Hydrogen is a clean and efficient energy source and is expected to take an important role in future energy demand. A possibly good route to produce hydrogen is by using cheap biomass as a source through thermochemical conversion technology. The paper addresses this topic, and particular attention is paid to the application of catalysts. Several types of catalysts have been investigated in our test rig at wide ranges of operating temperatures, and the results show that the catalyst has a positive influence on the yield of hydrogen rich gas. The hydrogen concentration of pyrolytic gas is considerably improved by some types of catalysts. The results obtained here can be very useful for scale production of hydrogen based on the biomass resource. (C) 2002 Elsevier Science Ltd. All rights reserved.

Zeitschriftenstitel: Energy Conversion and Managment
Jahr: 2003
Band: 44
Heft / Issue: 14
Seiten: 2289--2296
Volltext / DOI: doi:10.1016/S0196-8904(02)00254-6

Occurences: Einrichtungen > Fakultäten > Fakultät für Maschinenwesen > Institut für Energietechnik > Lehrstuhl für Energiesysteme (Prof. Spliethoff) > Publikationen > 2003