Autothermal reforming of Propane over Hydrotalcite-like catalysts containing alkali-metal

박선영, 문동주[1], 김종호, 김영철, 신재순, 박남국*
전남대학교; [1]KIST
(ncpark@chonnam.ac.kr*)

The performance of hydrotalcite catalyst in autothermal reforming(ATR) of propane for hydrogen production was investigated in fix-bed flow reactor. Reactions were conducted with a feed stream of H2O/C/O2=3/1/0.37 in the temperature range of 300 to 700 °C. Catalysts were characterized by XRD, TGA and TEM methods. In the preparation of alkali metal modified hydrotalcite catalysts. The effect of the added of promoter were much smaller size of nickel particles by depressing Ni sintering. And coke formative rate lower than Ni hydrotalcite-like catalysts. When added the alkali metal of small quantity, the Ni particle size has an effect on degree of dispersion. These seem to be the alkali metal effects which determine the size and the registance th carbon deposition of the nickel particles.