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Investigation of conversion of carbon monoxide to carbon dioxide on the surface of mixed Nano-catalyst in initial trimmed of modification of radiation

Hasanov S H, Mustafayev I I and Mahmudov H M Institute of Radiation Problems, Azerbaijan

In this survey, the conversion of CO to CO₂ was researched in the mixed Nano-catalyst on the closed stream reactor which was refined initially in the radiation. Kinetic dependence on conversion was analyzed in predefined surface temperature and in partial pressure of carbon-monoxide. During the survey, the surface temperature of catalyst increased steadily, while the conversion speed rises accordingly. Thus, the share of conversion increases from 43% to 60% in various concentrations of carbon-monoxide in the temperature ranges on T= 80-250 °C. It is determined that the conversion speed is stable at the interval of partial pressure $\Delta PCO=1\div14$ mm Hg of carbon-monoxide in one atmospheric pressure of gas mixture on Nano-catalyst surface. The conversation rate was increasing is $\Delta_350/\Delta_80=1.62$ time, while the temperature has increasing in Nano-catalyst surface in this interval. The conversion reaction is take of more rapidly and the rate of conversion is increase in initial trimmed of modification of radiation on the mixture catalyst surface. Thus, the percent of conversion of carbon-mono-oxide to carbon-dioxide in different concentration are increase from 43% to 60% on the intervals of temperature from 80 to 250°C.

h_sadiq@mail.ru