

Transformation of methane under the influence nanoscale phases of clay minerals

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Abstract

The possibility of catalytic transformation of methane under the influence of clays of the sedimentary cover treated hydrochloric acid solutions at temperatures 3000 °C and pressures 8-10 atm. The catalytic activity of natural clays associated with the presence of nanoscale phases, whose formation may occur naturally, such as in areas of destructions of the crystalline basement and in the processing of clay sedimentary cover of aqueous solutions of hydrochloric acid. Methane conversion during the experiment is over 60% and the yield of hydrocarbons of about 1%.