

## KINETIC LAWS OF THE REACTION OF OBTAINING NANO-CARBON AND HYDROGEN FROM THE PROPANE-BUTANE FRACTION

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### ABSTRACT

*In the study, the process of obtaining monoglycerides and hydrogen from the propane-butane fraction was studied in the presence of a catalyst containing 15% Ni· 5% Co·5% Fe·5% Cu·2% Mo/HSZ with high catalytic activity and selectivity. The work aims to create catalysts with high catalytic activity for the production of nano-carbons and hydrogen from carbon compounds and to study the catalytic activity of this catalyst. The assessment of the effect of technological parameters of the process on the specific yield of the product and the properties of the obtained materials was carried out by the gravimetric method under isothermal conditions. IR-spectroscopy, X-ray phase analysis, benzene adsorption methods studied the pre- processing and subsequent structural characteristics of the first high-silicon zeolite and modified samples, the acidic properties of the catalysts - temperature- programmed desorption of ammonia. The qualitative and quantitative composition of the reaction products were analysed by the gas-liquid chromatographic method. The size and morphology of the catalyst were determined by illuminating electron microscopy, scanning electron microscopy, adsorption (BET) methods. Mesogeneity was assessed based on the study of texture characteristics.*

**KEYWORDS:** Carbon-Retaining Compounds, Catalyst, Temperature, Contact Time, Nanocarbon, Hydrogen.

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