

S6A-P038 CATALYSTS ON THE BASE OF NATURAL ZEOLITES FOR CLEANING OF WASTER GASESM.A. Sadenova¹, S.A. Abdulina², S.A. Tungatarova³

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Gas emissions are the major pollutants in large cities, where concentrated thermal power stations, industrial plants and a large number of vehicles. Catalytic methods are the most promising among the existing methods of deep cleaning of gas emissions. The efficiency of the catalyst depends on the nature and content of the catalytically active component, the presence of modifying agents and catalyst manufacturing technology. Natural zeolites can be used in the manufacture of effective and affordable catalysts for conversion of nitrogen oxides of waste gas. The physical and chemical results of natural and synthetic zeolites as well as data on their thermal stability, ductility and strength of compositions are presented. Morphology and particle size distribution of metals of the synthesized catalyst was studied. The mechanism of formation of polymetallic clusters was examined. Study of composition and properties of natural materials showed that their initial crystal structure is not thermostable. However, the data show that this problem can be solved by introducing a variety of modifying components into the zeolite lattice that enables high stability of samples. Natural zeolites can be successfully used to manufacture of catalysts for gas purification.

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