

Thematic direction: Catalytic processing of fractions C₃-C₄ of refinery gases in high-octane components of gasoline. Part 1.

Design superacidic catalysts of oligomerization refinery gases

© **Rishat R. Shiryazdanov**,^{1*+} and **Yevgeny A. Nikolaev**²⁺

¹ *Faculty of technologies of oil and gas. Ufa state petroleum technical university. Cosmonauts St., 1. Ufa, 450062. Russia. Republic Bashkortostan. Phone: +7 (347) 243-15-35. E-mail: petroleum9@bk.ru*

² *Faculty of equipment of petrochemical factories. Branch of Ufa state petroleum technical university in Sterlitamak. Prospect October, 2. Sterlitamak, 453118. Republic Bashkortostan. Russia.*

Phone: +7 (3473) 29-11-30. E-mail: nikevan@rambler.ru

*Supervising author; ⁺Corresponding author

Keywords: *oligomerization, montmorillonite, acid-activation, heteropolyacids, nano-sized nickel powder, sulphated zirconium oxide.*

Abstract

The process of oligomerization of refinery gases requires superacidic catalytic systems based on sulfated zirconium oxide, mixed HPA and nano-sized nickel powder deposited on the acid-activated montmorillonite, which is capable of exhibiting high catalytic activity in the formation of isoolefins C₅-C₁₂.