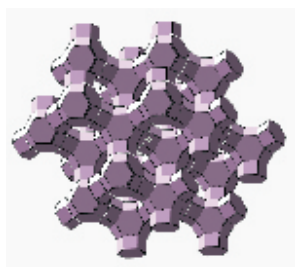




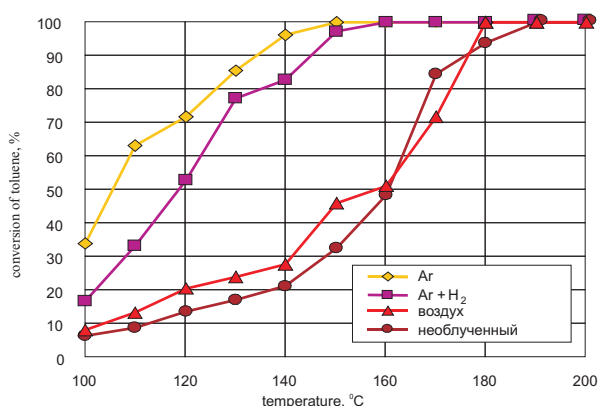
Developed in collaboration with the Institute of Organic Chemistry by N.D. Zelinsky (RAS), Moscow.



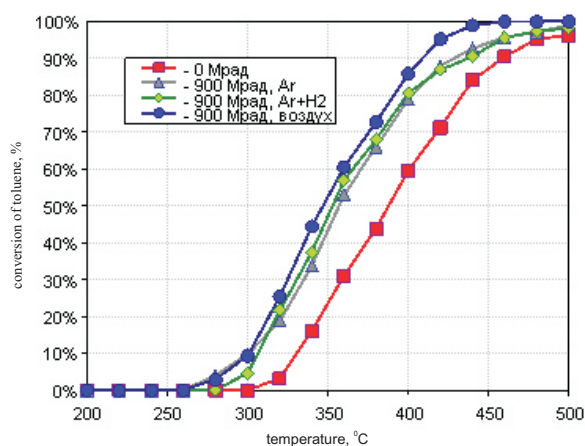
Ceolite structure

Application area: chemical and petrochemical industry

Preliminary ex-situ irradiation of applied platinum and palladium catalysts based on ceolites substantially increases their activity



The effect of gaseous medium at electronic irradiation (900 MRad) on the activity of catalyst Pt/ZSM-5 in the reaction of gas-phase toluene hydration.



Conversion of cyclohexane versus temperature for 1% Pt/HZSM-5 before and after irradiation by the beam of accelerated electrons of 900 MRad intensity in different media

Follow-up joint studies are welcomed

Catalytical effect depends both on the **dose of electronic radiation**, and the **composition of gaseous medium**, in which electronic processing is done

Confirmed positive catalytic effects, caused by preliminary electronic activation of catalysts, **depend on the type of catalytic reaction** and proved to be stable

High catalytic activity of irradiated samples persists within 20 hours at 160°C in the reaction of gas-phase hydration of toluene

Electronic accelerator LU 10-20, developed in RFNC-VNIIEF is implemented for activation of catalysts

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