

عنوان مقاله:

Isomerization of n-heptane on zirconium-modified hexagonal molecular sieve supported platinum catalysts

محل انتشار:

دومین کنفرانس ملی ژئولیت ایران (سال: 1394)

تعداد صفحات اصل مقاله: 2

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خلاصه مقاله:

Pt/Zr-HMS catalysts with different molar ratios of Si/Zr (5, 10, 20 and 35) has been prepared and compared as a function of zirconium (Zr) contents. Also, the effect of various temperatures on the products preference and conversion level was investigated, which could provide good guidance on enhancing the n-heptane Isomerization. The prepared catalysts were characterized by XRD, NH₃-TPD, FTIR, Py-IR, SEM, nitrogen sorption and TGA (for investigating the thermal stability) techniques. Catalytic performance of samples was investigated at the temperature range of 200–500°C and P=1 atm in a continuous fixed-bed microreactor packed with 1.0 g of catalyst. Reaction kinetics measurements for the conversion of n-heptane in the vapour phase were also carried out over Pt/HMS and Pt/Zr(x)-HMS catalysts. The behaviour of these catalysts shows the higher the Si/Zr ratio, the better the results with conversions near to 100%.

کلمات کلیدی:

Isomerization; Thermal stability; Catalytic performance; Reaction kinetic

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