

Abstract

The present invention relates to an organosilicon porous zeolite, preparation of the same, and use of the same. The organosilicon porous zeolite of the invention has the following composition on molar basis: $(1/n)\text{Al}_2\text{O}_3:\text{SiO}_{(2-m/2)}:m\text{R}:x\text{M}$, wherein $n = 5$ to 1000 , $m = 0.001$ to 1 , $x=0.005$ to 2 , R is at least one selected from the group consisting of alkyl, alkenyl and phenyl and connected to a silicon atom in the framework of the zeolite, and M is an organic amine templating agent, wherein a solid Si^{29}NMR spectrum of the zeolite has at least one Si^{29} nuclear magnetic resonance peak in the range of from -80 to $+50$ ppm, and wherein a X-ray diffraction pattern of the zeolite exhibits diffraction peaks corresponding to d-spacing of 12.4 ± 0.2 , 11.0 ± 0.3 , 9.3 ± 0.3 , 6.8 ± 0.2 , 6.1 ± 0.2 , 5.5 ± 0.2 , 4.4 ± 0.2 , 4.0 ± 0.2 and 3.4 ± 0.1 Å. The porous zeolite can be used as an adsorbent or as a component of a catalyst for the conversion of an organic compound.