00/20

Poster 4

^{51}V Solid State NMR Studies of V_2O_5 Supported on TiO_2-ZrO_2

Eun-Hee Park, Sung-Won Lee, Man-Ho Lee
Dept. of Industrial Chemistry, Kyungpook National University

A series of vanadium oxide supported on TiO_2-ZrO_2 was prepared by drying powdered $Ti(OH)_4$-$Zr(OH)_4$ with ammonium metavanadate aqueous solution followed by calcining in air at high temperature. The characterization of prepared catalysts was performed using ^{51}V solid state NMR and Fourier transform infrared(FTIR). In the calcined catalysts ^{51}V NMR studies indicated the peaks corresponding to distorted tetrahedral vanadia species at low V_2O_5 contents and octahedral vanadia species at high vanadia loadings. The overtone bands corresponding to V=O were seen only at higher vanadia contents in the FTIR spectra of the catalysts.