

Turkish Journal of Chemistry

Turkish Journal

of
Chemistry

Pore structure and surface acidity evaluation of Fe-PILCs

Suna BALCI, Elif GÖKÇAY
Gazi University, Engineering and Architecture Faculty, Chemical Engineering Department
06570 Maltepe-Ankara TURKEY
e-mail : sunabalci@gazi.edu.tr

 [Keywords](#)
 [Authors](#)



chem@tubitak.gov.tr

[Scientific Journals Home](#)
[Page](#)

Abstract: Fe-PILCs via different conditions using smectites from Hancili (Turkey) and Wyoming (USA) were synthesised. Presaturation had little effects on the basal spacing values while it had important effects on thermal stabilities of the products. Products having basal spacing (d_{001}) around 1.30 nm and surface area up to $160 \text{ m}^2 \text{ g}^{-1}$ were obtained. The thermal behaviour, X-ray diffraction (XRD) patterns, and nitrogen adsorption/desorption experiments confirmed that thermally stable and micro-mesoporous products were obtained although at elevated calcination temperature. Delaminated sample with basal spacing value of 2.79 nm was obtained. Surface acidity of clay was enhanced by pillaring. Chemically sorbed pyridine Fourier transform infrared spectroscopy (FTIR) bands were preserved at elevated desorption temperatures.

Key Words: Pillared clays, delaminated clays, characterisation, surface area, surface acidity.

Turk. J. Chem., **33**, (2009), 843-856.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Chem.,vol.33,iss.6.](#)