

10th International Conference on

EMERGING MATERIALS AND NANOTECHNOLOGY

July 27-29, 2017 Vancouver, Canada

The effect of preparation conditions on the ion-exchange properties of LTA zeolite prepared from local silica**Samia A Kosa**

King Abdulaziz University, Saudi Arabia

In this study LTA, zeolite was prepared from Saudi white silica as a main source of silica. The effect of ultrasonic irradiation on the crystal structure and ability to ion exchange of some heavy metals were studied. Many techniques were used to characterize the prepared zeolite includes XRD with crystal lattice analysis, EPR and finally ion exchange isotherm of some heavy metal ions. The results showed that the ultra-sonicated zeolite exhibits different behavior towards ion exchange with increasing its capacity. The ultra-sonicated zeolite showed little increase in the lattice parameters with increasing in the crystal size. Fitting adsorption isotherms on the metal adsorbed showed an observable change in the behavior of ultra-sonicated zeolite towards the metals exchanged.

Biography

Samia A Kosa has completed her PhD in Chemical Engineering and Advanced Materials, 2004, from University of Newcastle upon Tyne, United Kingdom. Presently, she is working as an Associate Professor at the Chemistry Department, King Abdulaziz University in Jeddah Saudi Arabia. Her research is focused on Materials Chemistry, Nanochemistry and Nanotechnology, synthesis of catalyst and designed photocatalytic and photoelectrocatalytic systems for the destruction of aqueous pollutants and water disinfection; measurement of photo-degradation of organic dyes, paints and polymers.

skousah@kau.edu.sa

Notes: