

Direct Hydroxylation of Benzene Over Cu-Exchanged Hydroxy-Sodalite

Samia A Kosa*, Eman Z. Hegazy, Islam H. Abd Elmaksod and Laila M. Alhrbi
King Abdulaziz University, Saudi Arabia

Hydrosodalite was prepared by two different methods using normal hydrothermal heating and using a microwave assisted the other method. Some heavy metals were selected and their removed capacity was as a probe indicator for the properties of both methods. X-ray diffraction (XRD) was used for follow-up for the crystallinity and the degree of crystal destruction upon copper ion exchange. The copper ion exchanged zeolite was used in hydroxylation of benzene as probe reaction.

The results showed that the microwave assisted prepared zeolite had lower crystallinity. Also, it showed a higher stability toward the ion exchange and higher catalytic activity per active center.

Biography:

Samia A. Kosa is an Associate Professor of Physical Chemistry in the Chemistry Department, King Abdulaziz University (KAU), Jeddah, Saudi Arabia. She graduated from KAU with a BSc in Chemistry and a Ph.D. in Chemical Engineering and Advanced Materials, 2004, from University of Newcastle upon Tyne, United Kingdom. Presently her research is focused on the synthesis of catalyst and designed Photocatalytic and photoelectrocatalytic systems for the destruction of aqueous pollutants and water disinfection; investigation of photo-degradation of organic dyes and polymers.