

Synthesis of Zeolite from Rice Husk Ash

Abstract

Rice husk ash (RHA) is used as the starting material for the synthesis of zeolites. In this study, alkaline hydrothermal treatment has been chosen for the zeolite conversion. Sodium hydroxide solution is used as the activation for the synthesis of zeolites. Two parameters affecting the hydrothermal synthesis of zeolites were investigated, including sodium hydroxide concentration (1 and 2 M) and reaction temperature (60, 80, and 100 °C). The produced samples' chemical composition and crystalline phase were investigated using XRF and XRD. The result showed that the zeolite obtained from 2 M of NaOH solution under 80 °C of reaction temperature was gismondine.

Keywords

Hydrothermal; Rice husk ash; Zeolite