

ZEOLITES FROM POWER PLANT ASH FOR WASTE WATER TREATMENT

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Abstract

The capitalisation of ash from power plant for obtaining zeolites is very interesting, because obtained products have high environmental applications. Zeolites may be easily obtained from ash by direct alkaline conversion processes, diffusion process and microwave. The zeolites have been researched for a variety of environmental applications in agricultural, they have remarkable properties: cation-exchange, adsorption, and molecular sieving properties.

From the types of zeolites which may be obtained, in this study are presented different zeolitic products for wastewater with high CEC. The zeolitic products which were obtained were analyzed as composition and properties. The synthesized products provide a significant increase of CEC and a high ability to adsorb heavy metal ions. The aim of this study is establish the experimental conditions for power plant ash zeolitization. On the base of their cation-exchange properties, zeolites can be use for cation-exchange in wastewater.

Key words: power plant ash, characterization, synthesis, zeolitization

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