

عنوان مقاله:

Photocatalytic degradation of 4-nitrophenol in aqueous solution By ZnO encapsulated inside HZSM-5

محل انتشار:

همایش بین المللی ژئولیت ایران (سال: 1387)

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خلاصه مقاله:

Nanometric ZnO clusters confined in HZSM-5 were prepared with different ZnO loadings and characterized by Diffuse reflectance spectroscopy (DRS), XRD, TEM. The photocatalytic degradation of 4- nitrophenol in aqueous solution was carried out by using HZSM-5 and supported ZnO on HZSM-5 under UV light. The experimental results demonstrated that the presence of zeolite enhances adsorption as well as degradation of 4-nitrophenol. The higher activity of ZnO /HZSM-5 is mainly due to fine dispersion of ZnO and hydrophobicity of support. It is suggested that encapsulating the semiconductor cluster in the porous support is a possible way to inhibit or to retard the electron-hole recombination.

کلمات کلیدی:

ZnO, HZM-5, 4-nitrophenol

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