

عنوان مقاله:

Preparing a novel Nano Catalyst (Fe-TiO₂- ZSM-5) For Degradation of Yellow-GX

محل انتشار:

دومین کنگره بین المللی علوم و فناوری نانو (سال: 1387)

تعداد صفحات اصل مقاله: 2

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خلاصه مقاله:

Textile dyes contain aromatic rings with some azo bonds (-N=N-) which form azo dyes that represent an increasing environmental danger [1, 2]. The most interest has been paid to removing such dangerous contaminants during the last decades. For this purpose, Advanced Oxidation Processes (AOPs), specially nano heterogeneous photocatalysis such as TiO₂ which were dispersed on various supports such as silica, alumina, zeolite, clay, has been used successfully [3-5]. In this research Fe doped on TiO₂-ZSM-5 composite was synthesized by hydrothermal method and degradation of Yellow -GX, an azo dye, (figure 1) under UV irradiation was investigated. The size of nano particles is calculated by Scherrer equation and also by TEM and SEM techniques. Investigation of the photocatalytic activity of TiO₂ (Deggusa) and Fe-TiO₂-ZSM-5 in degradation of Yellow -GX under UV irradiation was done at the λ_{max} of the dye (450.5 nm), to emphasize on the advantages of Fe-TiO₂-ZSM-5 with modified band gap as compared with TiO₂ (Deggusa).

کلمات کلیدی:

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