

عنوان مقاله:

Comparative study on photocatalytic degradation efficiency between ZnO and CdS using azo dye

محل انتشار:

کنگره توسعه همکاری های علمی منطقه ای علوم صنایع غذایی و کشاورزی (سال: 1397)

تعداد صفحات اصل مقاله: 14

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خلاصه مقاله:

The new azo dye [4-(4-hydroxy-2-methylnaphthyl)diazenyl]benzoic acid [N1] was synthesized by the reaction of 2-methyl-1-naphthol with p-amino benzoic acid. The photocatalytic degradation of this dye using ZnO and CdS was investigated. This degradation was achieved by the irradiation of aqueous suspended solutions containing different concentrations of this dye using 0.11gm/100ml of metal oxide (semiconductors) ZnO and CdS. Mercury lamp 125 Watts from external source inside a pyrex photoreaction cell of 100 ml at room temperature 298 K was used as an irradiation source. The photo activity using the two different catalysts was compared. In order to study the effect of the catalyst in Photocatalytic degradation of the prepared dye, several experiments were performed in various conditions to attain the best Photocatalytic degradation. These experiments include the effect of metal oxide masses and the effect of the dye concentrations. The irradiated solutions were studied using UV-Vis spectrophotometer. It has been seen from all experiments, that using zinc oxide as a photocatalyst is more effective than CdS to degrade [N1] from its aqueous solution

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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