عنوان مقاله:
Photocatalytic degradation of Acid Red 283 in aqueous solution by UV/ZnO process

محل انتشار:
دومین کنفرانس بین المللی یافته های نوین پژوهشی در شیمی و مهندسی شیمی (سال:1395)
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خلاصه مقاله:
In this research, the photo catalytic degradation of Acid Red ۲۸۳ (AR۲۸۳) has been investigated by the UV/ZnO process in a batch photo reactor. The experiments revealed that the ZnO nano catalyst and UV light had a slight influence when they were used separately. The impact of various factors such as initial pH, the initial dosage of dye and catalyst on the rate of reaction has been investigated. The degradation and mineralization of AR۲۸۳ were calculated by HPLC and COD tests. In optimum conditions (0.3 g/L of catalyst, pH at 8 and initial concentration of AR۲۸۳ at 50 mg/l), 99.0% of AR۲۸۳ were degraded and 88.8% of COD removed in 60 and 121 min of reaction, respectively. The kinetics of the removal of AR۲۸۳ can be explained in terms of the Langmuir–Hinshelwood model and the pseudo-first-order kinetics and the apparent rate constant (k): 

کلمات کلیدی:

لینک نتیجه نهایی مقاله در سیویلیکا:
https://www.civilica.com/Paper-CHCONF02-CHCONF02_645.html