عنوان مقاله:

Photocatalytic degradation of methyl green over CdS nanorods under visible light: Optimization and modeling by the RSM

محل انتشار:

چهارمین کنفرانس بین المللی شیمی و مهندسی شیمی (سال: 1401)

تعداد صفحات اصل مقاله: 12

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خلاصه مقاله:

In the current study, CdS nanorods were synthesized to be used for photocatalytic degradation of methyl green dye in aquatic solutions under visible light irradiation. The as-synthesized photocatalyst was characterized by multiple techniques, including XRD, FTIR, DRS, FESEM, and zeta potential measurement, and the characterization results implied that the CdS nanorods were synthesized successfully. Several experiments were designed by Box-Behnken design to optimize the operational parameters, including initial dye concentration, photocatalyst dosage, and solution pH. Furthermore, the significance of the individual parameters and their possible interactions were investigated by ANOVA. The maximum photocatalytic removal of methyl green on CdS nanorods was ۹۴.۱ %.

کلمات کلیدی:

Wastewater treatment, Photocatalyst, CdS, RSM, BBD.