

عنوان مقاله:

A Novel Super Adsorbent of a Fabric Coloring Dye (C. I. Reactive Blue 250) Based on a Nanocomposite Comprising of Graphene Oxide/Ceramic Carbon

محل انتشار:

دومین کنفرانس بین المللی یافته های نوین پژوهشی در شیمی و مهندسی شیمی (سال: 1395)

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خلاصه مقاله:

The objective of this study is to investigate the feasibility of using adsorption method for the removal of Reactive Blue 250, a toxic dye, from wastewater by GO- carbon ceramic composites (GO/CCC), have been prepared by facile sol gel. The response surface methodology was used to optimize the operation parameters for the absorption of Reactive Blue (RB) dye on GO/CCC. For this purpose, optimum operating conditions of four experimental factors (initial pH of solution, contact time, initial dye concentration, and amount of GO/CCC) on dye adsorption were studied. ANOVA analysis was also studied to know the interaction effect of dye and adsorbent. The optimum ranges of variables were: 4.0 for pH, 1.63 g/L for [GO-CCC], 0.004 mg/L for [RB 250], and 90 min for the contact time. The results predicted by .CCD were found to be in good agreement ($R^2 = 94.76\%$) with those obtained by performing experiments

کلمات کلیدی:

nanocomposite, carbon ceramic electrode, adsorbent, grapheneoxide, respond surface method

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