

عنوان مقاله:

MgCaFe-layered double hydroxide (LDH) for congo red dye removal in aqueous solution

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خلاصه مقاله:

In this work, the ability of the MgCaFe- Layered double hydroxide (LDH) for congo red (CR) dye removal in aqueous solution was investigated. Various parameters such as initial dye concentrations, temperature, adsorbent dosage, pH effect and agitation rate were examined and optimal conditions (10 mgL⁻¹ of the dye concentration, 25 °C of temperature, 0.5 gL⁻¹ of the adsorbent dosage, pH~7 and 450 rpm of agitation rate) were obtained. Moreover, the reusability of the adsorbent was investigated and promising result was obtained. Furthermore, the result showed the adsorption data on optimal condition was found to follow the pseudo- second order kinetic model with a high degree of correlation coefficient. Summary, this research illustrated that the MgCaFe-LDH can be used as efficient adsorbent for removing anionic dye in waste water.

کلمات کلیدی:

Congo red, removal, MgCaFe-LDH

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