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Spectroscopy and structural study of Oxidative degradation Congo Red Dye under sunlight using TiO₂/Cr₂O₃-CdS nanocomposite

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Abstract : In this study, the photoactive degradation of TiO_2/Cr_2O_3 -CdS has been investigated in Congo red dye under sunlight. The nanoparticles of catalyst were successfully synthesized using photolysis method. The X-ray diffraction (XRD), UV-visible spectroscopy and Raman spectrum were used to characterized of nanocomposite of TiO_2/Cr_2O_3 -CdS. Several parameters were examined to get the optimum condition for degrading of dye and prove the activity of the catalyst. The mechanism of degradation was suggested by using mass spectrum. **Keywords :** photolysis, degradation, CdS, nanoparticles.

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