

عنوان مقاله:

Synthesis of $\text{La}_2\text{MnFe}_2\text{O}_7$ and $\text{La}_2\text{CuFe}_2\text{O}_7$ Magnetic Nanocomposites (Nano Mixed Metal Oxides) as Efficient Photocatalyst for Organic Dye Removal

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خلاصه مقاله:

In this work, $\text{La}_2\text{MnFe}_2\text{O}_7$ and $\text{La}_2\text{CuFe}_2\text{O}_7$ photocatalysts were synthesized using a co-precipitation method. The surface morphology, structure, crystalline phase and magnetic behavior of the catalysts were investigated by TEM, FT-IR, XRD, DRS, and VSM. The photocatalytic activity of the $\text{La}_2\text{MnFe}_2\text{O}_7$ and $\text{La}_2\text{CuFe}_2\text{O}_7$ nanocomposites were appraised using the optical decomposition of malachite green oxalate (MG), methyl violet (MV), and Eriochrome Black T (EBT) beneath ultraviolet (UV) beam irradiance at different factors like the solution pH, dyes' concentration, catalysts' amount, temperature and time of UV light radiation. This research provided the synthesis of new composite magnetic photocatalysts and the study of their effectual in the field of photodegradation of dye pollutants.

کلمات کلیدی:

Photocatalysts, Malachite green oxalate, Methyl violet, Eriochrome Black T, Co-precipitation

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