عنوان مقاله:

Investigation of MnFe۲O۴@ZnO-GO and MnFe۲O۴@ZnO-rGO Magnetic Nanocomposites as an efficient Photocatalyst under visible light irradiation

محل انتشار:

هشتمین کنفرانس بین المللی شیمی ، مهندسی شیمی و نفت (سال: 1399)

تعداد صفحات اصل مقاله: 11

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خلاصه مقاله:

a facile hydrothermal synthesis route was used to synthesize MnFe۲O۴@ZnO–GO and MnFe۲O۴@ZnO–rGO nanocomposites at low temperature of ۱۸۰ °C for ۳h. Our synthesis of MnFe۲O۴@ZnO modified by the different weight percentages of GO and RGO. The assynthesized samples were investigated by techniques XRD, FE-SEM, TEM, BET. Magnetic studies demonstrated that the MnFe۲O۴@ZnO–GO and MnFe۲O۴@ZnO–rGO nanocomposites can be used as a magnetically separable photocatalyst. The photodegradation efficiency of the prepared materials Was evaluated by the decomposition of Congo Red (CR) in ۳۵ min of natural sunlight irradiation. Among the synthesized materials, the MnFe۲O۴@ZnO-GO photocatalyst showed maximum photocatalytic activity (۹۹.۵۴ %).

کلمات کلیدی:

MnFe۲O۴@ZnO–GO, MnFe۲O۴@ZnO–rGO, nanocomposite, photodegradation, Congo Red