

عنوان مقاله:

AgBr/nanoAIMCM-41 visible light photocatalyst for degradation of methylene blue dye

محل انتشار:

دومین کنفرانس بین المللی زئولیت ایران (سال: 1389)

تعداد صفحات اصل مقاله: 3

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خلاصه مقاله:

A novel photocatalytic material was synthesized by dispersion of AgBr in nanoAIMCM-41 material. The catalysts were characterized using XRD (X-ray diffraction), UV-visible diffused reflectance spectra (UV-vis DRS) and scanning electron microscopy (SEM). The photocatalytic activity and stability of the synthesized catalysts were evaluated for methylene blue (MB) degradation in aqueous solution in the presence of 200 W tungsten filament Philips lamp. Several parameters were examined, catalyst amount, pH and initial concentration of MB, AgBr loading. The effect of dosage of photocatalyst was studied in the range 0.05-1.00 g/L. It was seen that 0.1 g/L of photocatalyst is an optimum value for the dosage of photocatalyst. The support size was obtained about 9-100 nm. In the same way, the average size of AgBr nanoparticles was about 10 nm before visible radiation. After visible radiation the average size of AgBr nanoparticles was about 25 nm.

کلمات کلیدی:

Photocatalysis; mesoporous nanoCrystal; X-ray diffraction, Silver Bromide nanoParticles

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