عنوان مقاله:

Performance of photocatalytic reactors using immobilizedglass wool fibers coated by N, S-TiO2 thin film for degradation of textile wastewater in the visible light

محل انتشار:

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خلاصه مقاله:

There is a challenge in the photocatalytic powder separation and filtration at the end of the Purification cycle that it is economically expensive and difficult and it haven’t been used in industrial scale The purpose of this study, for the first time is investigation for the Enhanced photocatalytic activity of N, S-TiO2 nano layers supported on glass wool fibers by sol-gel method for degradiation of waste water textile in visible light. In this study Titanium dioxide (TiO2) nano layers doped with S and N were these elements synthesized by sol-gel method and coated by immersion process on glass wool fibers and their photocatalytic activity in destruction azo dyes solution, was considered. The experiments showed that the photocatalytic degradation in visible light by mentioned nanolayers is almost 70-97.9% in 7 and 9 hours, respectively. During the investigation it was determined that glass wool fiber substrate coated with a nano thin .layer of photocatalytic used in photoreactor spiral model has the highest percentage of decomposition of azo dyes

کلمات کلیدی:

TiO2 thin film, Photocatalytic reactor, Sol gel, Glass wool, Azo dyes