

## عنوان مقاله:

Application of Nanotechnology in Oil and Gas Wastewater Treatment

## محل انتشار:

سومین کنفرانس بین المللی فناوری های جدید در صنایع نفت، گاز و پتروشیمی (سال: 1400)

تعداد صفحات اصل مقاله: 8

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## خلاصه مقاله:

Due to the increase in population and the expansion of industries, the need for water is increasing. Because water resources are limited, there is a greater need for ways to reuse water and wastewater. Wastewater from various industries, including chemical and oil and gas industries, emit large amounts of pollutants into the environment. Various methods are used for wastewater treatment such as flocculation, adsorption filtration, etc., but each of them has limitations such as low efficiency or high cost. The use of nanotechnology is one of the solutions that has recently been considered. This method improves performance by reducing the dimensions to nanometers. There are different types of nanomaterials that due to their unique properties such as larger surface area, ability to work at low concentrations, etc., have great potential for treating contaminated water very effectively. Studies show they can be used in various forms such as nano-adsorbents, nano-membranes, nano-filters and nanophotocatalysts to remove or reduce contaminants from oil and gas wastewater. In this review, we discuss the importance and application of nanotechnology in oil and gas wastewater treatment.

## کلمات کلیدی:

Nanotechnology, Oil and Gas Industries, Wastewater Treatment

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