

Photocatalytic Oxidation of Oil Contaminated Water Using TiO₂/UV

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Currently, oil is one of the most used energy sources all around the world, for example to make motor engines work. That prevailing usage of oil is the reason why water sources are under serious pollution risks with compounds that are hard to remove, such as hydrocarbons.

There are a few water treatment processes known as Advanced Oxidation Processes, which search for a way to treat polluted water with toxic refractory compounds, to make its reuse more feasible and to avoid or at least appease the injurious effects of pollution over ecosystems.

A heterogeneous photocatalysis water treatment technology, sorted as an Advanced Oxidation Process, which is intended to treat refractory compound polluted water by the use of TiO₂ and UV light, is presented in this investigation. The evidence about its efficiency in hydrocarbon removal from used motor oil polluted water, since it is an extremely important pollutant due to its complexity, toxicity and recalcitrant characteristics, is also presented through COD, Oil and Grease and Hydrocarbons analysis.