

Abstract

The major purpose of this study was to use the Co-precipitation method to evaluate the parameters that can be effective on the photocatalyst degradation of MB dyes with nickel Vanadium oxide nanoparticles (NiO/V₂O₅-NPs). The behavior of multi-walled carbon nanotubes in this composite is one of the main focus of our research. In the presence of sunshine, NiO/V₂O₅ displays significant degradation of methyl blue 95 percent in 60 minutes, while adding multi-walled carbon nanotubes (MWCNTs) improves the efficiency of the composite NiO/V₂O₅ /MWCNTs to 95 percent in 50 minutes. The improved photocatalytic performance is most likely due to MWCNTs due to exceptional electron storing capacity, which makes it an efficient electron acceptor.