Advances in Environmental Biology, vol. 8 (9), 2014, pages 501-503

Effects of synthesis Ni doped Tio2 on Photocatalytic degradation process

Abstract

Titanium is opropoxide, Ethanol, Acetic acid and nickel chloride hexahydrate were used as reagents. The objectives of this study is to synthesize TiO2 and Ni doped TiO2 powders by using reflux sol-gel method and to compare the removal percentage of azo dye solution on two synthesis powders suspension by using photocatalytic degradation process. And then the powders are characterized by SEM parameter. The photocatalytic degradation process not only decolorized the azo dyes but also mineralized the intermediate products completely using in the UV-Vis spectrophotometer. The kinetics of photocatalytic degradation was observed to follow the pseudo-first order according to Langmuir-Hinshelwood kinetics model.

Keywords

Kinetics_4; Photocatalytic degradation process_3; Reflux sol-gel method_2