

ABSTRACT

PREPARATION AND CHARACTERISATION OF S/TiO₂ NANOCATALYST AND ITS ACTIVITY TEST FOR METHANYL YELLOW PHOTODEGRADATION

by

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This study was carried out to investigate the application of simultaneous sol-gel and sonication for preparation of S/TiO₂ nanocatalysts and application of the catalysts for photodegradation of methanyl yellow in water. The catalyst was characterized using XRD, SEM, and TEM techniques, revealing the existense of anatase phase. The surface of the sample is characterized by the presence of particle in the form of rectangular and bar of diffrent sizes, with the particle size in the range of 6-8 nm. Degradation test demonstrated the degradation of methanyl yellow up to 77,5% using UV irradiation and 86% using sunlight were achieved.

Key word : Sol-gel, nanocatalysts, fotodegradation, methanyl yellow.