

## Abstract

Modernization and advanced technology have escorted a substitute in human life. With easy access to facilities regarding lifestyle and health, to maintain life status human has gone beyond confine and effect badly to environment. Industrial wastewater is discarded in lakes, rivers, and oceans in huge quantities. Wastewater is very harmful to the survival of life. There are different methods involved in removing pollutants from wastewater including physical and chemical methods. While photocatalytic degradation is a very easy and cost-effective method to degrade the pollutant from wastewater. Using the photocatalytic process, metallic nanoparticles are used as photocatalysts to degrade the organic pollutants at an efficient rate. Following this method there are several advantages including time savings, no secondary pollutants generated, cost-effectiveness, and high potential to remove toxic organic compounds from wastewater. Green synthesized Cu-Sn-O has an excellent range starting from 200-2500nm in UV-visible spectroscopy. Biosynthesized nanoparticles also have a high potential to degrade the toxic pollutants present in water. Biosynthesized nanoparticles were characterized by using a UV-visible spectrophotometer, Fourier Transform Infrared Radiation, and photoluminescence. The degradation of pollutants depends on the photocatalyst efficiency as well as pH and time interval. At pH 4 which is acidic and pH 9 which is basic gives excellent results and degrades the ciprofloxacin more than 95%. While the biosynthesized Nano catalyst has excellent performance against DPPH and ABTS assay.