



---

## ABSTRACT

This contribution provides a detailed overview on the synthesis, properties and applications of pure and doped NiO nanoparticles. Doped nanoparticles include Silver, Copper, Zinc and Ag/Zn/Cu doped Nickel Oxide NPs. Co-precipitation method has been used for the synthesis process. Photocatalytic characteristics have been checked through UV-Vis Spectrophotometer and Photoluminescence Spectrophotometer respectively. Structural analysis of synthesized nanoparticles was confirmed by some techniques like XRD and SEM. p-nitrophenol dye has been used as organic pollutant. The dye degradation was done by adding nanoparticles as catalysts and their initial and final absorbance have been observed by UV-Vis Spectrophotometer. Through Sodium Borohydrate, p-nitrophenol has been reduced to p-aminophenol.