

Abstract

The present work comprises the synthesis of Copper-Lanthanum and Copper-Cerium Bimetallic nanoparticles by Polyol Method. Desired nanoparticles were successfully prepared green color particles were formed. Particle Size analyzer and UV-Visible spectroscopy was utilized to check the particle size and optical characteristics respectively. The particle size of Copper-Lanthanum Bimetallic nanoparticles was in Nano range 5-7nm and that of Copper-Cerium was also 6-7nm. The Bimetallic nanoparticles were utilized for the photo catalytic activity. Different Dyes methylene blue, methyl orange, methyl green, 2-Nitrophenol and Congo red were employed as organic pollutant. Both Bimetallic nanoparticle Combination give best degradation efficiency for Congo Red. Cu-La shows Congo red degradation efficiency of 97% and for methylene blue is 98% in one hour and 15 minutes while Cu-Ce shows best degradation efficiency for Congo red and that is 98%. Both catalysts were best for the degradation of Congo red.