Contribution ID: **36** Type: **Poster**

Optical and Photocatalytic applications of green synthesized nickel doped manganese oxide nanoparticles prepared via microwave assisted Combustion method.

Abstract:
Curd was used as fuel in the microwave aided combustion technique to synthesize nickel-doped manganese oxide nanoparticles. The prepared nanoparticles characteristics were examined using XRD, FTIR, SEM, EDAX, PL, and UV-VIS spectroscopy. XRD studies revealed that the synthesized nanoparticles, average crystalline size and lattice parameters decreases with increase in nickel doping. Vibrational stretching modes of metal-oxygen sites were confirmed by FTIR. Further SEM analysis revealed that nanoparticles are agglomerated with nano flakes like structure. Elemental composition was revealed by EDAX spectroscopy. From UV-Vis Spectroscopy analysis band gap of synthesized nanoparticle is observed which shows decrease in the band gap as nickel doping was increased. Luminescence spectra expose the decrease in the luminescence intensity with increase in nickel doping. Photodegradation of MB dye was carried out under visible light irradiation in presence of nickel doped manganese Oxide nanoparticles as photocatalyst.
(POSTER PRESENTATION)
Keywords: Nanoparticles, Green synthesis, Combustion, photodegradation.

Author: B K, JEEVAN KUMAR

Co-author: BHOJYA NAIK, H S

Presenter: B K, JEEVAN KUMAR

Track Classification: Chemical Sciences