Abstract

Present work aims to synthesize a Schiff base ligand bearing distinguishable properties in drug industry and medicinal activities. Metal complexes which were synthesized by the coordination of Schiff base ligand have wide range of applications in the field of pharmaceutical industries due to the presence of imine functional group, lesser toxicity in Schiff base derivatives and the -N-C=O linkage lead to the pharmaceutical potential. The Schiff base ligand (N-(4-nitrobenzylidene) aniline) was prepared via the combined action of benzaldehyde and 4-nitroaniline. For Synthesizing [Co (Ligand)], [Sn(Ligand)], [Mn(Ligand)], [Ni(Ligand)], [Fe(Ligand)], and [Cu(Ligand)] metal complexes, metals such as Co, Mn, Ni, Fe, Sn and Cu were reacted with the synthesized Schiff base to prepare the Schiff base M(N-(4-nitrobenzylidene) aniline), M= Cobalt, nickel, iron, copper etc. Synthesized Schiff base ligand and derivatives have been characterized using different methods, such as photoluminescence (PL), UV spectroscopy, FT-IR and Cyclic voltammetry (CV). To illustrate the antibacterial productiveness of synthesized Schiff base ligand and their derivatives, gram positive bacteria such as Staphylococcus aureus was utilized, whereas gram negative bacteria such as Klebsiella pneumoniae was employed.