

## Abstract

Schiff bases have revolutionized the field of drug and medicine. A new base ligand was synthesized by taking aromatic(Benzamide) and aldehyde(4-dimethylaminobenzaldehyde) compound. The product obtained in this condensation process was N-(4-(dimethylamino)benzlidene)benzamide. This ligand was condensed with different metals to prepare strong chelated compounds. In this work Ni (II), Co (II), Pb (II) and Zn (II) metals were used. These complexes were tested for different spectral and biological studies. The techniques used for characterization were UV-VIS, FT-IR and photoluminescence (PL). The complexes showed excellent results in antibacterial activity. The bacteria like *E.coli*, *Staphylococcus aureus*, and *Bascillus subtilis* were used in ligand and complex study. In antioxidant assay, ABTS and DPPH solutions were accommodated to measure scavenging activities of free radicals that are the reasons of many dangerous diseases like malarial fever, cancer, liver damages etc. The reason to study this paper is that it throws light on the ligand and metal complexes which are the pillar of coordination chemistry.