

Abstract:

Metal complexes of Schiff base ligands (exhibit imine $-C=N-$ functional group) derived from semicarbazides have fascinated attention of researchers on account of excellent ambition for the amelioration of broad range of applications in a variety of fields from material sciences to biological sciences by the reason of accommodating N, and O donor atoms, chelating property, chemical adaptability, minimum toxicity owing to $-N-C=O$ linkage, structure topologies and diversity, polydentate ligands, aromaticity, extended conjugations and extensive pharmacological potential. Semicarbazone ligand and its metal complexes with Zinc, Nickel, Cobalt and copper were synthesized. Characterization of the compounds was carried out with FT-IR, UV-vis and photoluminescence. This thesis encompasses the synthesis, spectral studies and investigations that have been attempted for the refinement and screening of antibacterial, antifungal and antioxidant applications.