Summer 4-20-2016

Transition metal coordinated complexes of imino-4-methoxyphenol thiazole derived ligands: Syntheses and structure elucidation

Sudhir Nayak

Scope of this work

The synthesis and characterization of metal complexes from Schiff base ligands have the common goal for the study of their electronic behavior and in favorable circumstances combine high degree of selectivity and specificity. There is a constant and continuous interest in the field of new complexes. Therefore, it was thought worthwhile to synthesize and characterize some metal complexes and study their applications in various fields.

Utilizing the modern techniques such as FT-IR, proton NMR, mass and UV-Visible spectroscopy. The author has carried out the synthesis and detailed investigations on the analyses, structural elucidation and thermal behavior of newly synthesized Schiff base ligands and their metal complexes. Specifically, the research objectives are:

1. Synthesis and characterization of new series of Schiff base ligands such as 3-((Z)-(5-nitrothiazol-2-ylimino)methyl)-4-methoxyphenol (**ntmp**) and 3-((Z)-(5-ethyl-1,3,4-thiadiazol-2-ylimino)methyl)-4-methoxyphenol (**etmp**).
2. Preparation and characterization of the VO(IV) complexes of the above prepared ligands and their characterization.