A Review
Application of Schiff bases and their metal complexes

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Abstract: Schiff bases are versatile ligands which are synthesized from the condensation of an amino compound with carbonyl compounds. These compounds and their metal complexes are very important as catalysts in various biological systems, polymers, dyes and medicinal and pharmaceutical fields. Their use in birth control, food packages and as an O2 detector is also outlined. This review summarizes the applications of Schiff bases and their complexes.

Keywords: Schiff bases, metal complexes, biological activity, nonlinear optical properties.

Introduction

Schiff bases derived from an amino and carbonyl compound e an important class of ligands that coordinate to metal ions via azomethine nitrogen and have been studied extensively . In azomethine derivatives, the C=N linkage is essential for biological activity, several azomethines were reported to possess remarkable antibacterial, antifungal, anticancer and diuretic activities. Schiff bases have wide applications in food industry, dye industry, analytical chemistry, catalysis, fungicidal, agrochemical and biological activities . With the increasing incidence of deep mycosis, there has been increasing emphasis on the screening of new and more effective antimicrobial drugs with low toxicity. Schiff-base complexes are considered to be among the most important stereochemical models in main group and transition metal coordination chemistry due to their preparative accessibility and structural variety .A considerable number of Schiff-base complexes have potential biological interest, being used as more or less successful models of biological compounds. Not only have they played a seminal role in the development of modern coordination chemistry, but also they can also be found at key points in the development of inorganic biochemistry, catalysis and optical material.