

MACROCYCLIC COMPLEXES

A REVIEW

Introduction

Metal complexes of macrocyclic ligands have become an intensive area of research during the past decade and the studies span their syntheses, structures, reactivities, redox behaviour and biochemical properties. Metalloporphyrins and chlorins have generic relations to the naturally occurring substances corrins found as chromophores in haemoglobin, myoglobin and vitamin B₁₂. Metallophthalocyanins have attracted attention for their industrial applications. An extraordinary class of macrocyclic ligands reported in recent years have been employed as models for natural macrocyclic molecules because of their close resemblance in structural and functional characteristics and for wide ranging chemical behaviour.

The work described in the present thesis deals with the results of investigations on a series of nitrogen donor macrocyclic complexes, their syntheses, i.e., electronic spectra and electrochemical properties. In this chapter an attempt has been made to provide a brief review high-lighting the important aspects of macrocyclic complexes. The growth in this field has been mounting in nature, therefore only the works that have been accomplished in recent years and are of epoch making significance have been emphasised.