Electrochemical Studies of hexamethyldibenzotetraaza Macro Cyclic Complexes of Co(II) and Ni(II)

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Abstract—*The importance of macrocyclic complexes is now well recognized. Macrocyclic chemistry in general represents a vast area of research as has been proved by seminal contribution of N.F. Curtis, D.H. Busch and L.F. Lindoy. Tetraazamacrocyclic systems are of great importance due to varying degree of unsaturation and cavity size that play an important role for their characteristic features. Dibenzotetraaza macrocyclic ligand adopts a saddle shaped configuration when coordinated to a metal center. In the present communication, the synthesis and electrochemical studies of hexamethyldibenzotetraaza macrocyclic complexes have been carried out. Electrochemical studies are in agreement with the one electron redox reaction. Cyclic voltammetric data of these macrocyclic complexes showed the stabilization of unusual oxidation state of metal ion along with the quasirreversible redox process which corresponds to peak separation (ΔE) and also supported by the ratio of i_{pa}/i_{pc} ratio which is close to unity.*

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