The work described in this thesis focuses on the systematic study of the manganese complexes containing tridentate or tetradeionate Schiff base ligands, obtained from the 1:1 and 2:1 condensation of aliphatic or aromatic carbonyl moiety and several diamines, and N,N-donor spacers in presence of several auxiliary bridging groups e.g. carboxylates, pseudohalides, nitrate, nitrite etc as mentioned below. The proposed work also focuses on the structural diversity and functionality of the manganese complexes directed by Schiff-base ligands, N,N-donor linkers and anionic co-ligands. The thesis consists of five chapters of which Chapter I deals with an overview on the manganese complexes of Schiff base ligands and N,N donor spacers supported by various anionic co-ligands and in Chapter V the interesting observations are highlighted. The research works are presented in Chapters II - IV of the thesis.

The entire work was initiated in January 2009. In keeping with the general practice of reporting scientific observations, due acknowledgements have been made of the findings of other investigators. I take the responsibility of any unintentional oversights and errors, which might have crept in despite precautions.

PARAMITA KAR

Dated:
Department of Chemistry,
University of Calcutta,
92, P.C. Road, Kolkata- 700 009,
India.