



## Formation of Bimetallic Bis(dithiocarbamate) Macrocylic Complexes

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | The work deals with the synthesis and characterisation of a range of dithiocarbamate ligands and their macrocyclic bis(dithiocarbamate) complexes. Multistep synthetic procedures were used to obtain ligands. This was based on the preparation of the Schiff-bases. Subsequently, reduction of the Schiff-bases resulted in the formation of amine precursors that reacted with CS<sub>2</sub> in presence of KOH to get the free ligands (L1-L4). On the other hand, we were unable to isolate L5 and L6 and a one pot template reaction approach was implemented to obtain complexes. The reaction of the ligands with some metal ions resulted in the formation of macrocyclic complexes of general formula [MII(Ln)]<sub>2</sub> (M= Fe(II), Co(II), Ni(II), Cu(II), Zn(II), Cd(II); Ln= L1-L6). Compounds were fully characterised by CHNS, melting points, FTIR, UV-Vis, mass spectroscopy magnetic susceptibility and NMR spectroscopy (1H, 13C, DEPT, 1H-1H COSY, 1H-13C HMQC). Physico-chemical characterisation confirmed a bidentate coordination mode of the CS<sub>2</sub> moiety to the metal ion and complexes exhibit four coordinate structures in the solid state. However, in solution, the Ni(II) and Cu(II) complexes exhibit six coordinate structures. | Format: Paperback | Language/Sprache: english | 308 pp.

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