3. Poly(mercaptoimidazolyl)borates

Introduced by Reglinski in 1996, the tris(mercaptoimidazolyl)borates (Tm^R) are more polarizable ("soft") analogues of the ubiquitous Tp ligands. We have contributed several new members (e.g., R = Bz, Bu^t, p-Tol) to this family of ligands and have also synthesized sodium and thallium derivatives of the corresponding bis(mercaptoimidazolyl)borates (Bm^R). Recent advances in the coordination chemistry of these ligands include the syntheses of homoleptic derivatives M(Bm^R)_2 (M = Mn, Fe, Co, Ni, Zn, Cd, Hg, Pb) and the preparation of well-defined complexes (Tm^R)MX (M = Co, Zn, Cd, Hg) with a variety of monoanionic ligands X (halides, thiolates, dithiocarbamates, xanthates, etc.).

Molecular structures of Hg(Bm^Bu)_2 and (Tm^Bu)MBr.

Some relevant publications:


