Synthesis and Characterization of Lead(II) Complexes with the 4-Methoxybenzoyltrifluoroacetonate Ligand

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To investigate the intermolecular interactions of ligands in lead(II) complexes featuring stereochemical activity of the lone electron pair and noncovalent donor-acceptor interactions giving rise also to multidimensional networks, the compounds [Pb₂(phen)₂(mbta)₄] (1) and [Pb₂(dmp)₂(mbta)₄] (2) (phen, dmp and mbta⁻ for 1,10-phenanthroline, 2,9-dimethyl-1,10-phenanthroline and 4-methoxybenzoyltrifluoroacetonate ligands, respectively) have been prepared and characterized by elemental analysis and their crystal structures investigated. The structures show the coordination number of Pb(II) to be seven and eight, respectively. Supramolecular structures of 1 and 2 are realized by weak directional intermolecular interactions.

Key words: Lead(II), Crystal Structure, Intermolecular Interactions