The Synthesis, Molecular Structures and Supramolecular Architecture of Amine Adducts of Bis(pentafluorophenyl)zinc

Andrew J. Mountford, Simon J. Lancaster,* Simon J. Coles, Peter N. Horton, David L. Hughes, Michael B. Hursthouse and Mark E. Light

A series of eight adducts of the form $(RR'R''N)_2 \cdot Zn(C_6F_5)_2$ have been prepared and their solid state structures determined to investigate the role of intermolecular interactions involving pentafluorophenyl substituents in determining supramolecular architectures. A number of both intra- and inter-molecular non-covalent interactions are observed including phenyl-pentafluorophenyl stacking (I), X-H···F-C contacts (II) and offset face-to-face contacts between pentafluorophenyl rings (III), giving rise to one-, two- and three-dimensional supramolecular structures.