

## W0348

**A Closer Look at the Hydrogen Bonding Patterns in Metal Dicarboxylates.** G. Díaz de Delgado, A. Briceño, J. Contreras, T. González, M. Gutiérrez, L. León, J.M. Delgado. Laboratorio de Cristalografía-LNDRX, Dept. de Química, Facultad de Ciencias, Univ. de Los Andes, Mérida 5101, Venezuela.

Metal carboxylates prepared in aqueous solutions very often incorporate water molecules as lattice solvent and/or in the coordination sphere of the metal atom. The solvent molecules participate in extensive hydrogen bonding. When a dicarboxylic acid is used, appropriate stoichiometric ratios may produce acid salts and complexes with additional possibilities for hydrogen bond interactions. An examination of the structures of several metal dicarboxylates reveals common trends in the hydrogen bonding patterns. For example, in the series of  $Mg^{2+}$ ,  $Ca^{2+}$ ,  $Sr^{2+}$ , and  $Ni^{2+}$  hydrogen citraconates common graph set symbols can be identified for motifs that play an important role in the connectivity between metal centers and in the assembly (1D, 2D and 3D) of the units. Motifs with graph set symbols  $R^2_2(8)$  and  $R^2_4(8)$  are particularly common in these compounds. These and other metal dicarboxylate structures will be discussed in detail.

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