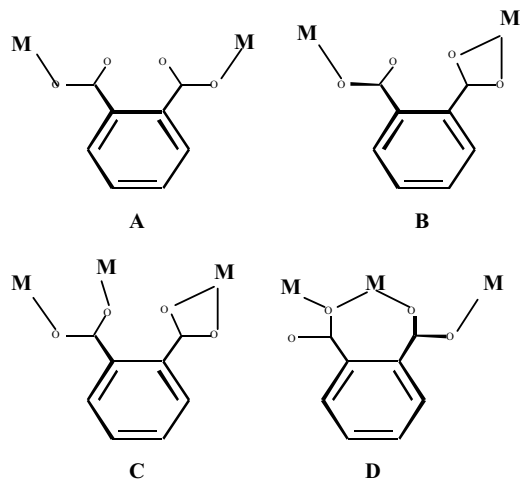


s9.m3.o5 Structure of Copper(II), Cobalt(II) and Zinc(II) Complexes with *o*-Phthalic Acid. Yu.A. Simonov, M. Gdaniec, P.N. Bourosh, I. Filipova, N.V. Gerbeleu, S.G. Baca, G.A. Timco, *Institute of Applied Physics, Academy of Sciences of RM, Chisinau, R. Moldova.* Faculty of Chemistry, A.Mickiewicz University, Poznan, Poland. Institute of Chemistry, Academy of Sciences of RM, Chisinau, R. Moldova

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A series of new copper(II), cobalt(II) and zinc(II) complexes with *o*-phthalic acid (H_2Pht) has been prepared and structurally characterized by X-ray analysis. These compounds have the general formula $[M(Pht)A_n]$ (where $M = Cu$, $n = 2$, $A = 4$ -methylpyridine (**I**) [$Cu_2(Pht)_2A_4 \cdot H_2O$]; $M = Zn$, $n = 2$, $A =$ pyridine (**II**), 3-methylpyridine (**III**), 4-methylpyridine (**IV**); $M = Zn$, $n = 1$, $A = 4$ -methylpyridine (**V**); $M = Co$, $n = 2$, $A = 2$ -methylimidazole (**VI**) and $[M(HPht)_2A_n]$ (where $M = Cu$, $n = 2$, $A =$ pyridine (**VII**); 4-methylpyridine (**VIII**)).

In compounds **I** – **VI** the 1,6-bridging modes of *o*-phthalic acid are realized and this unambiguously gives rise to the formation of polymeric structures. However, due to the nature of metal ion and stoichiometric and geometric specific features of the nitrogen-containing ligands, the different structural functions of the phthalate ligand are carried out:



While the first two types of bridges join two neighbouring metal atoms (compounds **I** – **IV** and **VI**), **C** and **D** types of coordination (compound **V**) demand three adjacent metal atoms for their organization. Type **D** of coordination was not found in other phthalate complexes so far. The structures of **VII** and **VIII** are composed of molecular complexes in which one of the carboxylic groups is neutral and the acid residue acts as a singly charged anion $HPht^-$ giving rise to a four-membered ring. In crystals the complexes are combined by intermolecular H-bonds.