

SYNTHESIS AND CRYSTAL STRUCTURE OF NEW Zn(II) COMPLEX WITH *N*-[BIS(BENZYLAMINO)PHOSPHORYL]-2,2,2-TRICHLOROACETAMIDE

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Abstract. The novel binuclear Zn(II) complex of general formula $[Zn_2(L)_4(CH_3OH)_2]$, where $L = \{Cl_3C(O)NP(O)(NHCH_2Ph)_2\}^-$ (*N*-[bis(benzylamino)phosphoryl]-2,2,2-trichloroacetamide), has been synthesized from a non-aqueous solution and characterized by elemental analysis, FTIR and NMR spectroscopies as well by the X-ray single crystal diffraction technique. This complex represents the third example of binuclear complexes with this ligand. It crystallizes in the triclinic *P*-1 space group $a = 11.1197(2) \text{ \AA}$, $b = 13.3545(2) \text{ \AA}$, $c = 15.4398(3) \text{ \AA}$, $\alpha = 106.9280(9)^\circ$, $\beta = 90.8146(9)^\circ$, $\gamma = 113.5503(9)^\circ$. The metal ion has distorted octahedral geometry; two deprotonated phosphoryl ligands in independent part are coordinated in bidentate chelate manner and joined in a dimer by the bridging oxygen atoms of the phosphoryl groups of the ligand molecules, the coordinated methanol molecule complete the coordination sphere of the central atom to six.

Keywords: carbacylamidophosphate, synthesis, zinc, complex, crystal structure.

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