

polymeric chain through [010]. In addition, the silver(I) ions in 3 are four- and five-coordinated in individual polymeric chains. In 4, the inter-molecular N-H...O hydrogen bonds form one-dimensional polymeric chains through the *a* axis. These linear chains are inter-connected to each other by N-H...O hydrogen bonds. The molecular packing is also supported by π - π interactions, leading to a sheet structure parallel to *bc* plane. Complex 5 is a coordination polymer, in which the monomeric [Ag(dmpen)(sac)]_n units are linked by Ag...Ag interactions and the dmpen ligand acts as a bridge between the silver(I) ions, forming a two-dimensional network parallel to the plane (100). For all of the compounds, antimicrobial activity was studied against selected wild type and clinical microorganisms in vitro by using Minimum inhibitory concentration (MIC) and the disc diffusion method. MIC values of complexes 1-5 were determined in range 13.5-55 μ g/ml. These MIC values were approximately the same as those of standard medicinal antibiotics. Therefore, these complexes could be a new candidate for the treatment of microbial diseases.

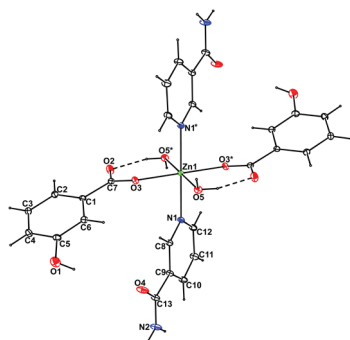
Keywords: saccharinate complexes; silver(I) complexes; antimicrobial properties

FA4-MS05-P07

Diaquabis(3-Hydroxybenzoato- κ O)Bis(Nicotinamide- κ N)Zinc(II). Onur Şahin^a, Orhan Büyükgüngör^a, Dursun Ali Köse^b, Hacı Necefoğlu^c. ^aDepartment of Physics, Ondokuz Mayıs University, 55139, Samsun, Turkey. ^bDepartment of Chemistry, Hacettepe University, 06800, Ankara, Turkey. ^cDepartment of Chemistry, Kafkas University, 06100, Kars, Turkey.

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The title compound, [Zn(C₇H₅O₃)₂(C₆H₆N₂O)₂(H₂O)₂], is a two-dimensional hydrogen-bonded supramolecular complex. The Zn^{II} ion resides on the centre of symmetry and is in an octahedral coordination environment comprising two pyridyl N atoms, two carboxylate O atoms and two O atoms from water molecules. Intermolecular N-H...O and O-H...O hydrogen bonds produce R₁¹(6), R₂²(7), R₂²(8), R₂²(16), R₂²(20), R₂²(22) and R₃³(30) rings which lead to a one-dimensional polymeric chains. An extensive two-dimensional network of N-H...O, O-H...O, C-H...O hydrogen bonds, and C-H... π interactions are responsible for crystal stabilization.



Keywords: zinc complex; crystal structure analysis; hydrogen bond

FA4-MS05-P08

Bis[μ -(acesulfamato-N,O)(acesulfamato-N,O)bis(2-methylpyridine)cadmium(II)]. Zarife Sibel Şahin^a, Hasan İçbudak^b, Şamil Işık^a. ^aDepartment of Physics, Ondokuz Mayıs University, 55139, Samsun, Turkey. ^bDepartment of Chemistry, Ondokuz Mayıs University, 55139, Samsun, Turkey.

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The title compound, (C₄₀H₄₄Cd₂N₈O₁₆S₄), is a three-dimensional hydrogen-bonded supramolecular complex, which crystallizes in the monoclinic space group C2/c with unit-cell parameters *a*=14.9475(12)Å, *b*=16.5004(11)Å, *c*=21.4067(15)Å and *Z* = 4. Within the dinuclear complex, two Cd(II) ions are bridged by two carboxylate O atoms. Each Cd(II) ion is coordinated by two N and three O atoms of the acesulfamato ligands and two N atoms of the 2-methylpyridine ligands, resulting in a distorted pentagonal bipyramidal coordination. Intermolecular C-H...O hydrogen bonds produce R₁¹(8) and R₂²(20) rings which lead to a two-dimensional polymeric chains. An extensive three-dimensional network of C-H...O hydrogen bonds, and π ... π interactions are responsible for crystal stabilization.

Keywords: cadmium complex; crystal structure analysis; hydrogen bond

FA4-MS05-P09

(E)-2-[(2-Chlorophenyl)iminomethyl]-4-Methylphenol. Özlem Deveci^a, Şamil Işık^a, Ferda Erşahin^b, Erbil Ağar^b. ^aDepartment of Physics, Ondokuz Mayıs University, Samsun. ^bDepartment of Chemistry, Arts and Sciences Faculty, Ondokuz Mayıs University, Samsun.

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The molecule of the title compound, C₁₄H₁₂ClNO, adopts the enol-imine tautomeric form, with an intramolecular O—H...N hydrogen bond. In the molecule, the two benzene rings are twisted with respect to each other by 30.6(2)^o. The crystal structure is stabilized by intermolecular C—H... π interactions.

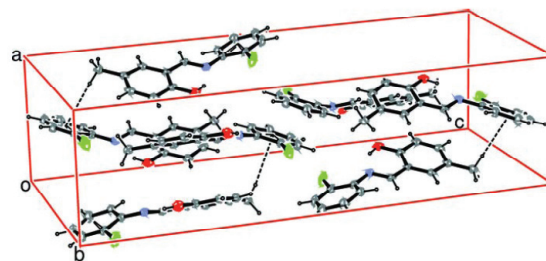


Figure 1. A perspective view of the molecular packing of compound. Dashed lines indicate hydrogen bonds and C-H... π interactions.

In STOE IPDS-II diffractometer system, diffraction data