

derivatives seem to be good candidates to obtain new materials because of the versatile behaviour of this metal[2]. For this reason, our research has been focused in the synthesis and characterization of hybrid vanadates with aromatic and aliphatic amines[3]. In this work we present the comparative study of a hybrid vanadate, $\text{Co}(\text{pym})(\text{VO}_3)_2$ (pym=pyrimidine) and an inorganic one $\text{Co}(\text{H}_2\text{O})_2(\text{VO}_3)_2 \cdot 2\text{H}_2\text{O}$ with closely related structures.

The three-dimensional $\text{Co}(\text{pym})(\text{VO}_3)_2$, **1**, has been synthesized under mild hydrothermal conditions. The crystal structure of **1** was solved using single-crystal X-ray diffraction data, taking into account that the crystals are twins of two components. Compound **1** crystallizes in the monoclinic system, space group C2/c, $a = 12.899(5)$ Å, $b = 9.899(2)$ Å, $c = 7.051(1)$ Å, $\beta = 111.41(3)^\circ$, $Z = 4$. The crystal structure is built up from edge sharing VO_5 trigonal bipyramid double chains and $[\text{CoO}_4\text{pym}]_n$ chains. This resembles to the structure of the $\text{Co}(\text{H}_2\text{O})_2(\text{VO}_3)_2 \cdot 2\text{H}_2\text{O}$ compound[4], **2**. For this reason a comparative study of their properties was carried out.

Magnetic measurements of **1** reveal the existence of a ferromagnetic transition. This fact was confirmed with magnetization measurements. The ferromagnetic transition was also studied by specific heat measurements. However, **2** shows an antiferromagnetic behaviour with a metamagnetic transition at low temperature. The comparative study of the magneto-structural correlations reveals that the magnetic interactions in **1** are propagated via pyrimidine molecules, while in **2** the unique magnetic exchange pathway is the one extended by the vanadate groups.

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Keywords: Organic inorganic hybrid materials, Magnetic properties, Structure-magnetism relationships.

FA4-MS33-P04

Magneto-Structural D-Correlations in Metal Complexes. Ján Titiš^a, Roman Boča^{a,b}, ^a *University of SS Cyril and Methodius (FPV) in Trnava, Slovakia*, ^b *Slovak University of Technology (FCHPT), Slovakia*
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Determination of the molecular and crystal structure by X-ray diffraction is an important step in the course of the characterization of new molecule-based magnetic materials. In addition to determination of molecular geometry, in some cases a detail analysis of the structural properties can give relevant information on different magnetic phenomena itself. For example, the correlation of the isotropic exchange coupling constant J with the bridging angle in dinuclear complexes is well-known [1]. However, the relationship between structural properties and single-ion magnetic anisotropy of metal complexes is also of a great interest. Nevertheless, such correlation has not yet been clearly formulated.

Unlike magneto-structural J-correlations, our new magneto-structural D-correlation interrelates the zero-field splitting parameter D withdrawn from the magnetic data with the

structural tetragonality D_{str} . The possibility of correlating these parameters has been outlined gradually [2, 3].

The correlation allows to predict that negative zero-field splitting occurs for the tetragonally compressed nickel(II) complexes. Cobalt(II) complexes in octahedral ligand-field have high-spin ground state with a distinct spatial symmetry and thus such a correlation shows a substantially different structure-magnetism relationship. Mn(II)/(III) complexes and systems with angularly distorted chromophores have been also investigated.

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Keywords: metal complexes, magnetic anisotropy, magneto-structural correlations

FA4-MS33-P05

The structure of poly[di- μ_3 -acesulfamato-O,O';O':O,O-di- μ -acesulfamato-O,O';N-di- μ -aqua-dicalcium(II)]: a two dimensional coordination polymer. Güneş Demirtaş^a, Necmi Dege^a, Hasan İçbudak^b, Ömer Yurdakul^b, ^a *Ondokuz Mayıs University, Faculty of Arts and Sciences, Department of Physics, 55139 Samsun-Turkey*, ^b *Ondokuz Mayıs University, Faculty of Arts and Sciences, Department of Chemistry, 55139 Samsun-Turkey*
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The crystal structure of the title compound, $\text{C}_{32} \text{H}_{40} \text{Ca}_4 \text{N}_8 \text{O}_{36} \text{S}_2$, determined at 293 K. The structure contains Alkali Earth Metal, Ca, and acesulfam ring. The crystal that is two dimension coordination polymer contain three intramolecular hydrogen bonds, but no signification intermolecular hydrogen bonds. The structure consists of sheets in the bc plane. The crystal structure with acesulfam ring and Ca ion is first polymeric structure.

Keywords: Alkali Earth Metal, Acesulfam

FA4-MS33-P06

Non-triglyceride structuring of edible oils and emulsions. Ruud den Adel^a, Arjen Bot^a, Eli Roijers^a, Echard Flöter^a, ^a *Unilever Research & Development Vlaardingen, The Netherlands*
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The structure of oil-continuous products, such as margarine or butter, is based on a network of small crystallites of triglycerides (also known as triacylglycerols or TAGs). Low molecular weight structuring agents that can serve as an alternative to crystallising triglycerides in edible oils have raised considerable interest in recent years. The requirement that potential structurants should at least hold the promise to be allowed in food applications is a severe limitation. Nevertheless, several systems have been identified [1], amongst which the class of γ -oryzanol + sterol organogelators is the most intriguing representative [2].