

Copper(II) coordination polymers with dimethyl(methylenoxyaryl) oxides-based ligands: Synthesis, structure and properties

Galina Gencheva¹, Daniela Tsekova¹, Paulina Gorolomova¹, Veselina Ilieva¹, Rositsa Petrova², Boris Shivachev², Tania Tosheva³, Emil Tashev³ and Sabi Varbanov⁴,

¹Faculty of Chemistry, University of Sofia, 1164 Sofia, Bulgaria.

E-mail: ggencheva@chem.uni-sofia.bg

²Institute of Mineralogy and Crystallography, Bulgarian Academy of Sciences, 1113 Sofia, Bulgaria

³Institute of Polymers, Bulgarian Academy of Sciences, 1113 Sofia, Bulgaria

⁴Institute of Organic Chemistry with Center of Phytochemistry, Bulgarian Academy of Sciences, 1113 Sofia, Bulgaria

The coordination polymers are polymers whose repeating units are metal complexes. Recently, research in the field of design and synthesis of novel coordination polymers with predictable properties received particular attention due to their application as novel materials in various areas of industry. The ligands used for the synthesis have a polydentate nature and their characteristics such as nucleophilicity of the donors, bond angles, ligand length, bulkiness, etc. play a crucial role in constitution of the supramolecular compounds. In addition, tendency of metal ions to adopt certain geometries also influences of the coordination polymer's structure and properties.

In the paper presented here, we describe the synthesis, single-crystal structure and physicochemical properties of three novel one dimensional copper(II) coordination polymers obtained with bis(dimethylphosphinylmethylenoxy)benzenes [1], Fig. 1.

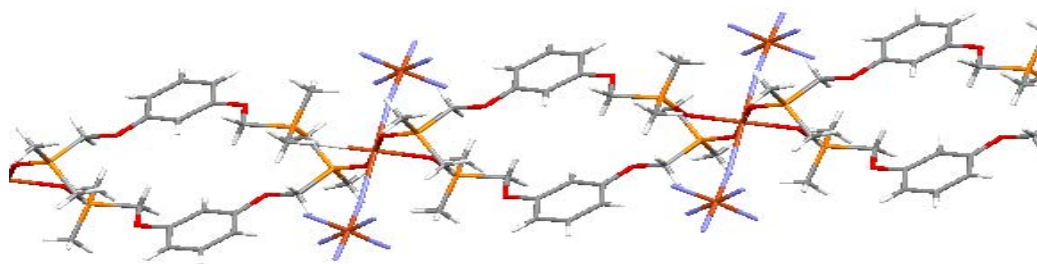


Fig. 1. Copper(II) coordination polymer of 1,3-bis(dimethylphosphinylmethylenoxy)benzene.

Acknowledgements

This work is supported by Bulgarian National Science Fund via contracts DRNF02/1

References

1. S. Varbanov, T. Tosheva, G. Borisov; *Phosphorus, Sulfur & Silicon* **63** (1991) 397-402.