

New Ni(II) complexes with 2-aminomethylbenzimidazole, preparation and characterization

Vladimír Kuchtanin, Rudolf Varga, Ján Pavlik, and Ján Moncol

Slovak University of Technology in Bratislava, Bratislava, Slovak Republic, Radlinského 9, Bratislava, Slovakia

An important class of heterocyclic compounds in many natural and synthetic compounds for the development of new drugs are benzimidazoles [1]. Use of benzimidazoles can be found in liquid crystal materials due to their special physicochemical properties based on fluorescence modulation mechanisms [2]. The benzimidazole moiety involves in a variety of biological processes. For example, N-ribosyl-dimethylbenzimidazole is part of the chemical structure of vitamin B₁₂ [3]. Benzimidazole derivatives are of intensive researches due to their coordination ability besides their biological importance [4].

New Ni(II) complexes of general formula NiL_xY_z have been synthesized, where L is 2-aminomethylbenzimidazole and Y are inorganic anions such as Cl⁻, Br⁻, ClO₃⁻, ClO₄⁻, NO₂⁻, N₃⁻, SCN⁻, SO₄²⁻ as well as organic anion CH₃COO⁻. All newly prepared complex compounds were characterized by X-ray structural analysis and by spectral techniques such as infrared spectroscopy and UV-VIS spectroscopy. Magnetic measurements were also performed for some compounds.

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