

Studies on ionic Ni(II) complex of $\{[\text{Ni}(2\text{-cpida})(2,2'\text{-bpy})][\text{Ni}(\text{bpy})_3]\}(\text{ClO}_4)\cdot 3\text{H}_2\text{O}$ based on N-(2-carboxyphenyl) iminodiacetic acid

문일식*, N. Palanisami

순천대학교

(reaction@sunchon.ac.kr*)

Ionic complex of $\{[\text{Ni}(2\text{-cpida})(2,2'\text{-bpy})][\text{Ni}(2,2'\text{-bpy})_3]\}(\text{ClO}_4)\cdot 3\text{H}_2\text{O}$ (1) (2-cpida = N-(2-carboxyphenyl) iminodiacetic acid, bpy = bipyridyl) has been synthesized and characterized with the aid of elemental analysis and infrared, ultraviolet, fluorescence and thermo gravimetric studies. The molecular structure of 1, determined by single-crystal X-ray diffraction studies, shows all the three carboxylate groups show monodentate mode. Complex 1 consists of discrete mononuclear $[\text{Ni}(2,2'\text{-bpy})_3]^{2+}$ cation, $[\text{Ni}(2\text{-cpida})(2,2'\text{-bpy})]^-$ anion, perchlorate anion and a lattice water molecules. Hydrogen bonding interactions lead to the formation of 1D polymeric structure in the solid state.