In recent years, the design and synthesis of metal-ligand coordination have been attracted great interest during the past decades because of their potential applications in the fields of gas storage, molecular magnetism and luminescence.[1-3] A lot of works have been devoted to the design of suitable organic ligands to construct new coordination polymers. Among the reported studies, it is an especially attractive area that coordination polymers are built from organic ligands of polyazol groups because this ligands can adopt a variety of coordination modes.

A new Cd (II) coordination polymer with 2-pyridine tetrazolate ligand has been prepared by hydrothermal synthesis and characterized by single-crystal X-ray diffraction, IR, and elemental analysis. The compound, [Cd(pytz) azido H2O]n, is monoclinic, space group P21/n with a= 7.2919 (5)Å, b= 11.47 (5)Å, c= 11.953 (5) Å, β= 100.79- (5), V=981.9(9)Å3, Z=4.

Keywords: coordination polymers, X ray diffraction, Polyazols