



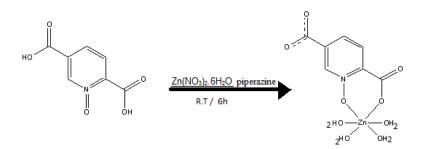
Azarbaijan Shahid Madani University, 3-5 Sep 2015, Tabriz, Iran

New complex of zinc metal ion including pyridine-2,5-dicarboxylicacid N-oxid through proton transfer

Masoud Mirzaei*, Hossein Eshtiagh-Hosseini, Peyman Hosseinpour

Department of Chemistry, Ferdowsi University of Mashhad, 917751436 Mashhad, Iran. (E-mail: mirzaeesh@um.ac.ir)

Supramolecular chemistry implies extended structures that are generated by means of noncovalent interactions, especially hydrogen bonding between discrete molecules. Hydrogen bond is able to control supramolecular structures because it is sufficiently strong and directional. Recently the combination of both coordination chemistry and hydrogen bonding has proved to be a particularly useful strategy for the self-assembly of complex structures and for controlling solid state chemistry. The area of solid state chemistry in terms of prediction of how molecules pack during crystallization by controlling all intermolecular forces that determine patterns in the crystal packing, refers to crystal engineering. In this context, here we described the syntheses of one proton transfer compound and its metallic complex of Zn(II) ion based on proton transfer mechanism which were characterized by elemental analyses, infrared spectroscopy, and melting point. The compounds chemical formulas are $(H_2pipz)(pydco)$ and $[Zn(pydco)(H_2O)_4]$ (pipz = piperazine; pydco = pyridine-2,5-dicarboxylicacid N-oxid).



Scheme 1. Preparative route of the complex

References

- 1 H. Eshtiagh-Hosseini, M. Mirzaei and N. Alfi, Review on Proton Transfer Metal Complexes, Lambert Academic Publishing GmbH & Co. KG., 1st edn, 2012.
- 2 H. L. Sun, X. L. Wang, L. Jia, W. Cao, K. Z. Wanga, M. Dub, *CrystEngComm.*, 2012, 14, 512-518.
- 3 S. Sheshmani, H. Aghabozorg, and M. Ghadermazi, Acta Cryst., 2007, E63, o2869.
- 4 H. Aghabozorg, Z. Derikvand, A. Nemati, Z. Bahrami and J. Attar Gharamaleki, *Acta Cryst.*, 2008, **E64**, m111