## Accepted Manuscript

Synthesis, Characterization and Properties of nicotinamide and isonicotinamide complexes with diverse dicarboxylic acids

Mürsel Arıcı, Okan ZaferYeşilel, Ersin Acar, Necmi Dege

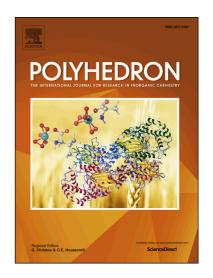
PII: S0277-5387(17)30123-7

DOI: http://dx.doi.org/10.1016/j.poly.2017.02.013

Reference: POLY 12480

To appear in: Polyhedron

Received Date: 27 November 2016 Revised Date: 6 February 2017 Accepted Date: 9 February 2017



Please cite this article as: M. Arıcı, O. ZaferYeşilel, E. Acar, N. Dege, Synthesis, Characterization and Properties of nicotinamide and isonicotinamide complexes with diverse dicarboxylic acids, *Polyhedron* (2017), doi: http://dx.doi.org/10.1016/j.poly.2017.02.013

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Synthesis, Characterization and Properties of nicotinamide and isonicotinamide

complexes with diverse dicarboxylic acids

Mürsel Arıcı<sup>a</sup>, Okan ZaferYeşilel<sup>a,\*</sup>, Ersin Acar<sup>b</sup>, Necmi Dege<sup>b</sup>

<sup>a</sup>Department of Chemistry, Faculty of Arts and Sciences, Eskisehir Osmangazi University,

26480 Eskişehir, Turkey

<sup>b</sup>Department of Physics, Faculty of Arts and Sciences, Ondokuz Mayıs University, 55200,

Samsun, Turkey

**Abstract** 

Five nicotinamide and isonicotinamide complexes with diverse dicarboxylic acids,

 $\{[Cu(\mu_2-ida)(na)]\cdot H_2O\}_n$ (1), $[Cu(oda)(H_2O)_2(ina)]$  (2), [Zn(oda)(H<sub>2</sub>O)<sub>2</sub>(na)]

 $[Zn(oda)(H_2O)_2(ina)] \cdot H_2O$  (4) and  $[Zn(tda)(H_2O)_2(ina)] \cdot 2H_2O$  (5), [ida: 2,2'-iminodiacetate,

2,2'-oxydiacetate,  $O(CH_2COOH)_2$ 2,2'-thiodiacetate,  $NH(CH_2COOH)_2$ , oda: tda:

S(CH<sub>2</sub>COOH)<sub>2</sub>, na: nicotinamide and ina = isonicotinamide] were synthesized and

characterized by elemental analysis, IR spectroscopy and single crystal X-ray diffraction. In

all complexes, ina and na ligands connected to metal centers from pyridyl nitrogen atom. In

complex 1, ida ligand acts as a bridging ligand to form 1D chain while in the other complexes,

oda and tda act as chelating ligands. In all complexes, three dimensional (3D) supramolecular

network are generated through the O-H···O and N-H···O hydrogen bonds. Moreover,

thermal, photoluminescence and optical absorption properties were studied.

Keywords: Isonicotinamide; nicotinamide; iminodiacetate; oxydiacetate; thiodiacetate.

\*Corresponding Author: E-mail: yesilel@ogu.edu.tr

Tel: +902222393750, Fax: +902222393578

1. Introduction

1

## Download English Version:

## https://daneshyari.com/en/article/5154528

Download Persian Version:

https://daneshyari.com/article/5154528

Daneshyari.com