

Electronic supplementary information

Heteronuclear, mixed-metal Ag(I)–Mn(II) coordination polymers with bridging *N*-pyridinylisonicotinohydrazide ligands: synthesis, crystal structures, magnetic and photoluminescent properties

Rahman Bikas^a, Hassan Hosseini-Monfared^{a,*}, Vera Vasylyeva^b, Joaquín Sanchiz^c, Javier Alonso^d, Jose Manuel Barandiaran^d, Christoph Janiak^{b,*}

^a Department of Chemistry, University of Zanjan 45195-313, Zanjan, I. R. Iran. Email: monfared@znu.ac.ir

^b Institut für Anorganische Chemie und Strukturchemie, Universität Düsseldorf, D-40204 Düsseldorf, Germany. Fax: +49 211 8112287; Email: janiak@uni-duesseldorf.de

^c Departamento de Química, Universidad de La Laguna, 38206 La Laguna, Tenerife, Spain. Email: jsanchiz@ull.es

^d Department of Electricity and Electronics, University of the Basque Country (UPV-EHU), P.O. BOX 644, 48080, Bilbao, Spain Email: manub@we.lc.ehu.es

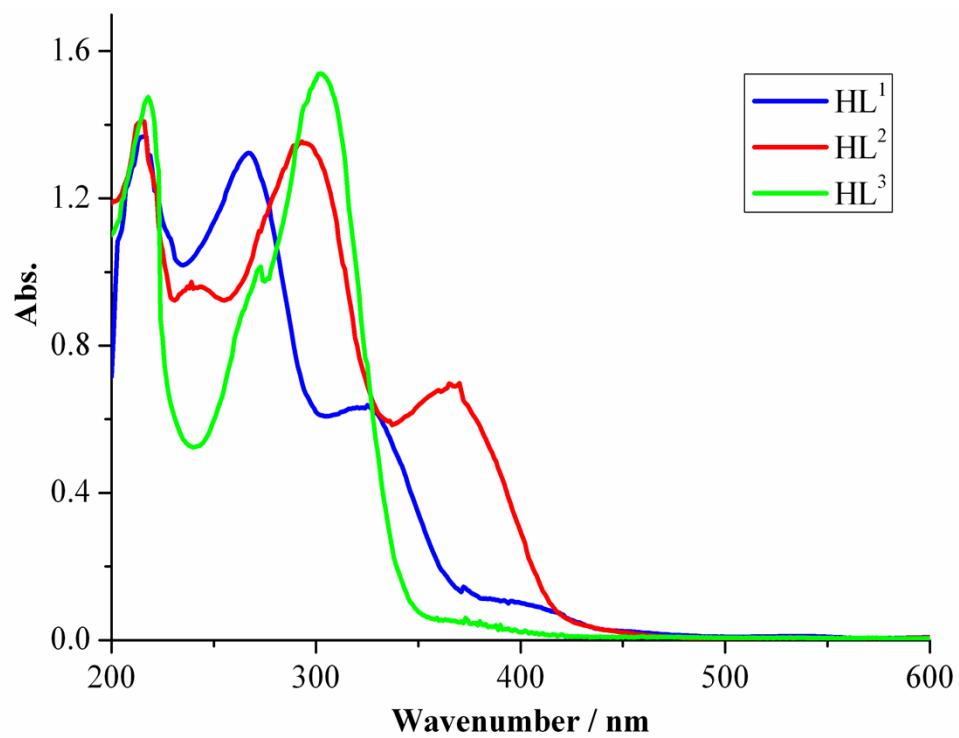


Fig. S1. Electronic absorptions of the ligands in methanol ($c = 2.5 \times 10^{-5}$).

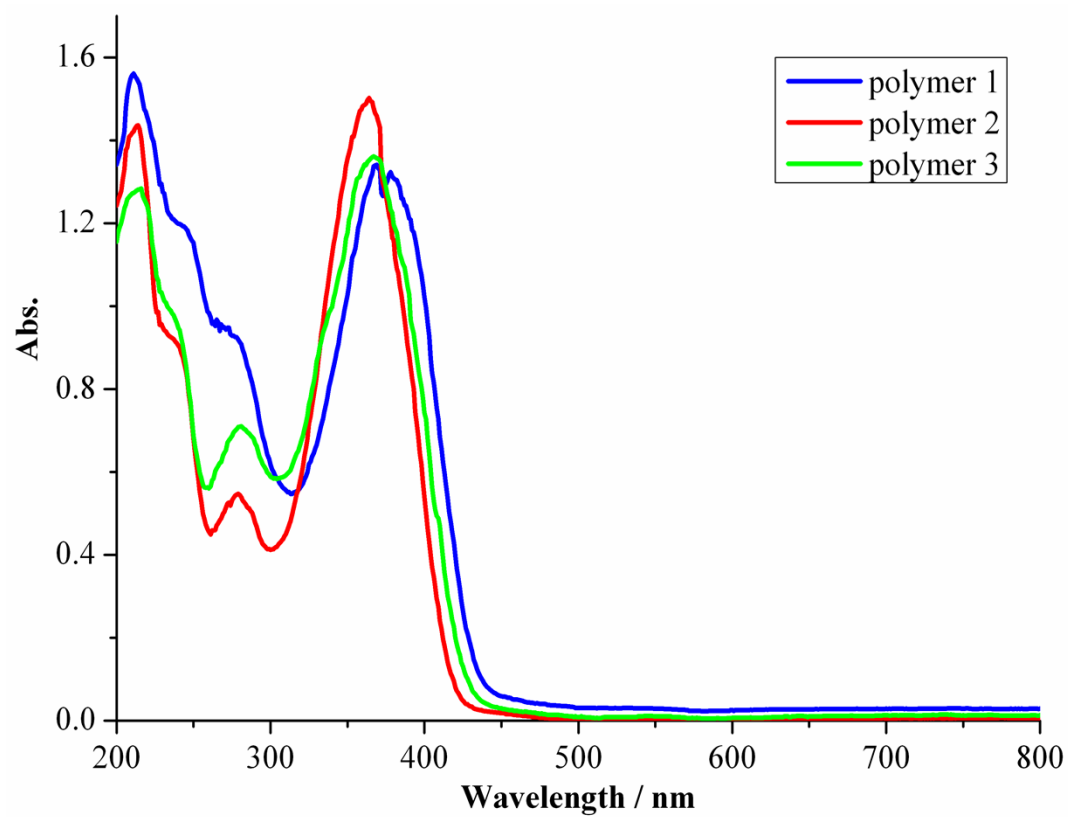


Fig. S2. Comparison of electronic transitions of coordination polymers **1-3** in methanol ($c = 2.5 \times 10^{-5}$).

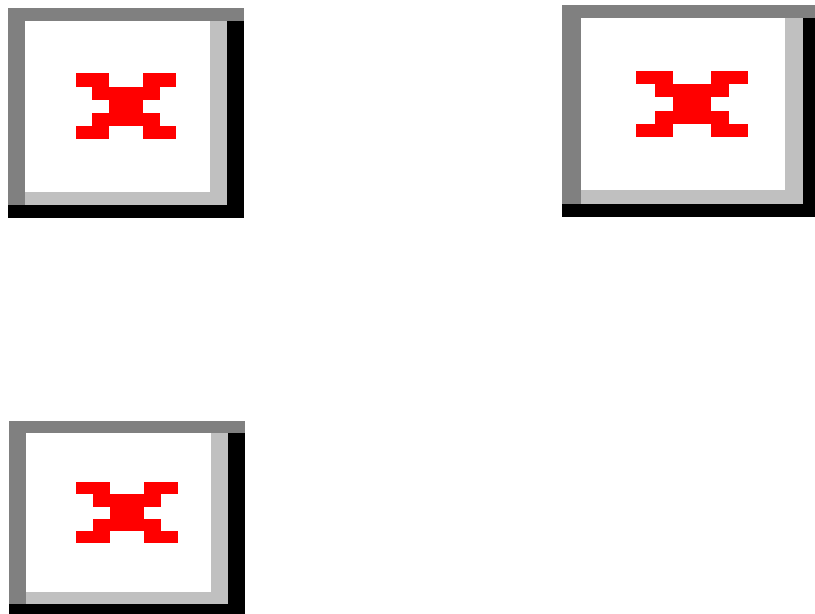


Fig. S3: Magnetic field evolution of M for the compounds **1-3** at 2 K.

Magnetic properties of **3**

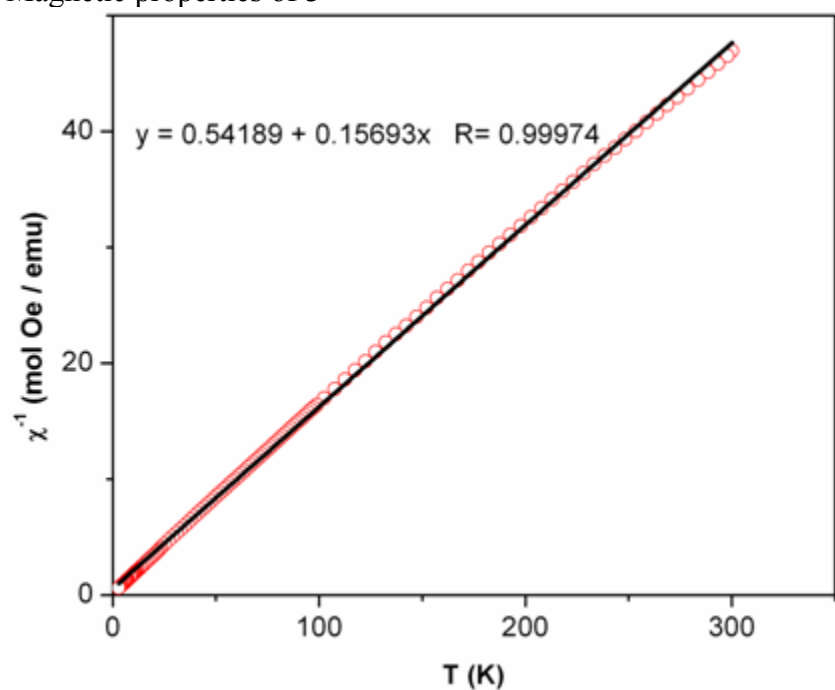


Fig. S4 Temperature evolution of χ^{-1} for the compound **3** and the fittings to a Curie-Weiss law.

A Curie constant of $C = 6.37 \text{ emu mol}^{-1} \text{ K}$ is obtained in agreement with 1.5 high spin Mn(II) ions per formula. A Weiss constant of -3.44 K indicates some antiferromagnetic interactions.

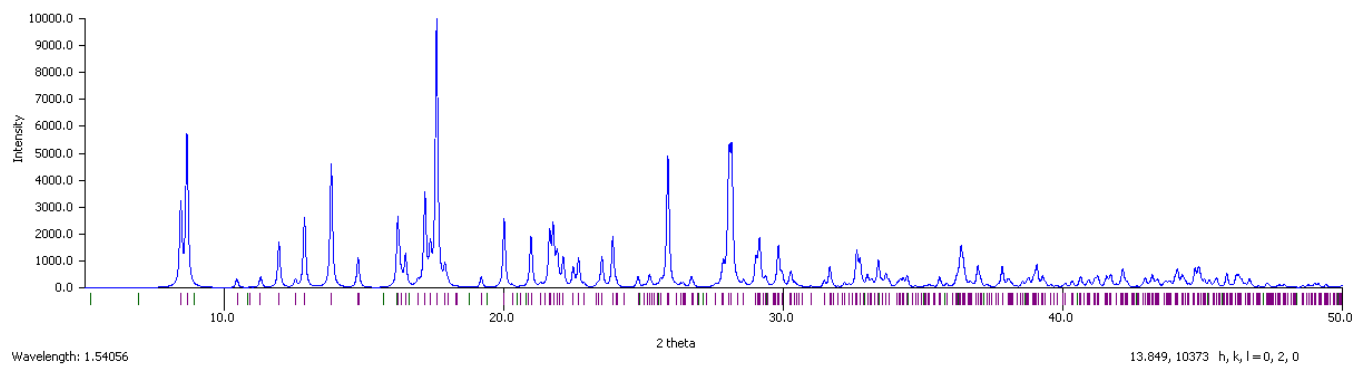


Fig. S5. XRD pattern of compound **1**.

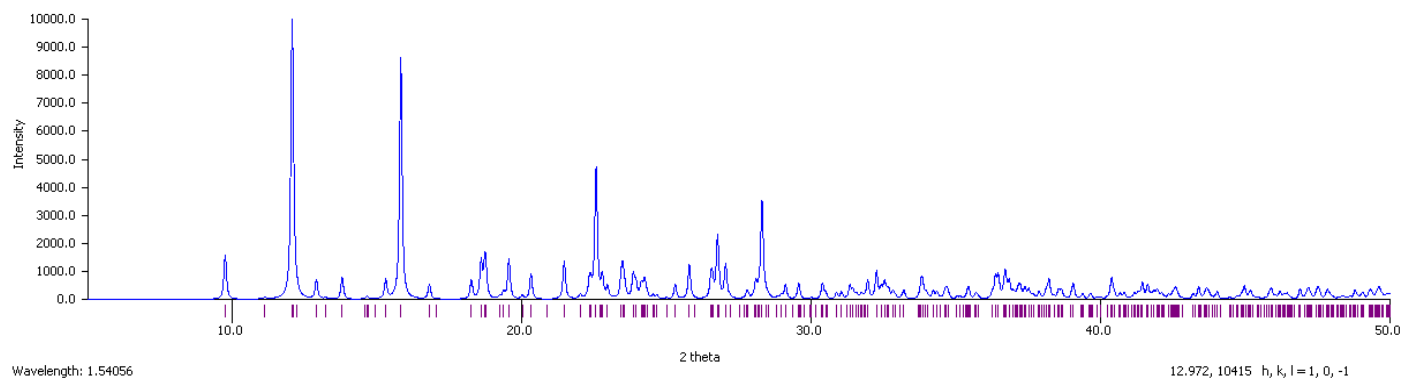


Fig. S6. XRD pattern of compound **2**.

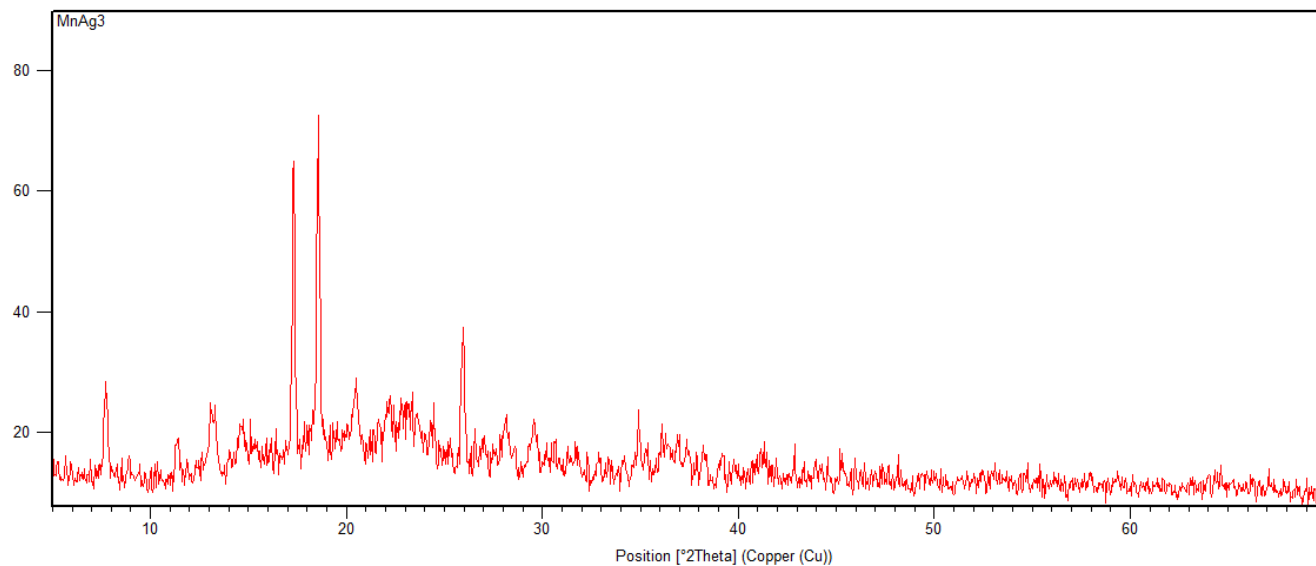


Fig. S7. XRD pattern of compound **3**.