SUPPLEMENTARY MATERIAL FOR THE ARTICLE

Synthesis, Structure, and Photomagnetic Properties of a Hydrogen-Bonded Lattice of $[Fe(bpp)_2]^{2+}$ Spin-Crossover Complexes and Nicotinate Anions

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Table S1. Enthalpy and entropy values for peaks observed in Differential scanning calorimetry (DSC) curves.

Compound	Curve	T/ K	ΔH/ KJ·mol^{-1}	ΔS/ J·mol^{-1}·K^{-1}
$[Fe(bpp)_2](nic)_2{\cdot}4H_2O$	1	334	147	450
	2	218/262/282	0.54/1.53/2.2	5.50/6.30/8.33
	3	229/264/289	1.0/1.28/3.1	5.50/5.24/10.4

Table S2. Intermolecular hydrogen bonds in the crystal structure of **1**·$4H_2O$.[a]

D···A	$d_{D\cdots A}$/ Å
N(1)···O(3W)	2.633(3)
N(5)···O(1)#1	2.662(3)
N(6)···O(4W)#2	2.671(3)
N(10)···O(4)	2.635(3)
O(1W)···O(3)#3	2.757(3)
O(1W)···N(11)	2.987(4)
O(2W)···O(2)#4	2.745(3)
O(2W)···N(12)#5	2.900(4)
O(3W)···O(2W)	2.722(3)
O(3W)···O(1)	2.749(3)
O(4W)···O(1W)	2.778(3)
O(4W)···O(4)#6	2.764(3)

[a] Symmetry transformations used to generate equivalent atoms:

#1 $x-1, y, z$ #2 $x-1, -y+1, z-1/2$

#3 $x, -y, z+1/2$ #4 $x, y+1, z$

#5 $x, -y+1, z+1/2$ #6 $x+1, -y, z+1/2$

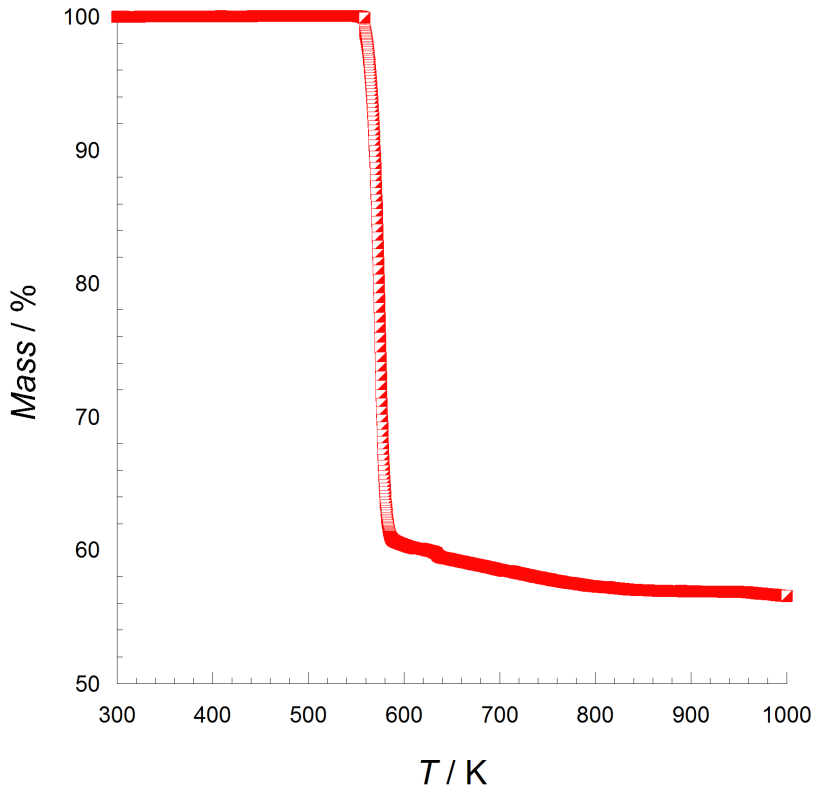

Figure S1. Thermogravimetric analysis of $Ag(C_6H_4NO_2)$. The plot confirms the anhydrous character of this salt.

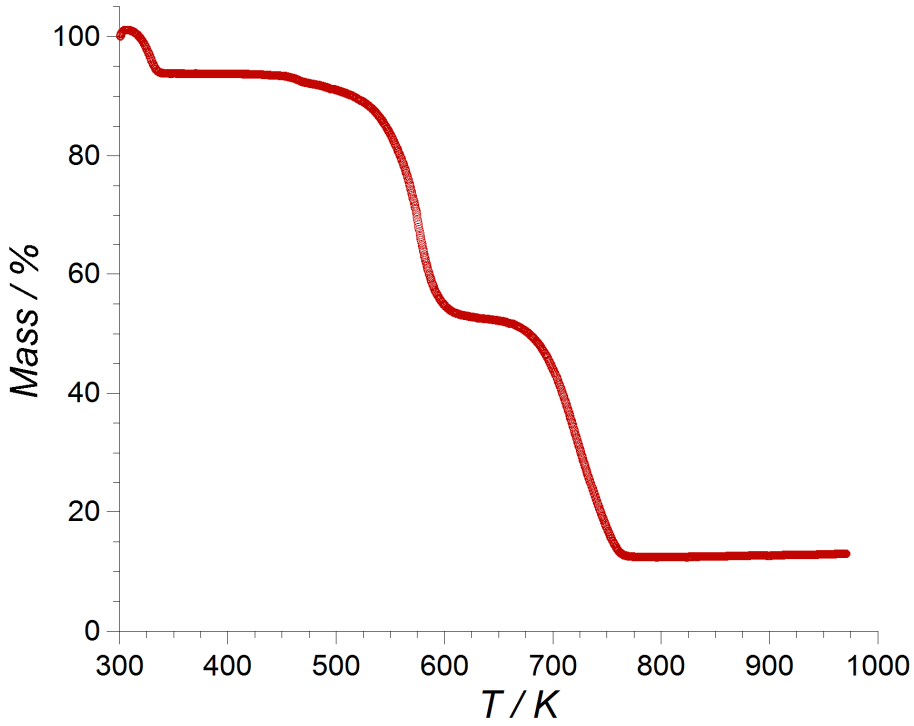

Figure S2. Thermogravimetric analysis of **1**·$4H_2O$.

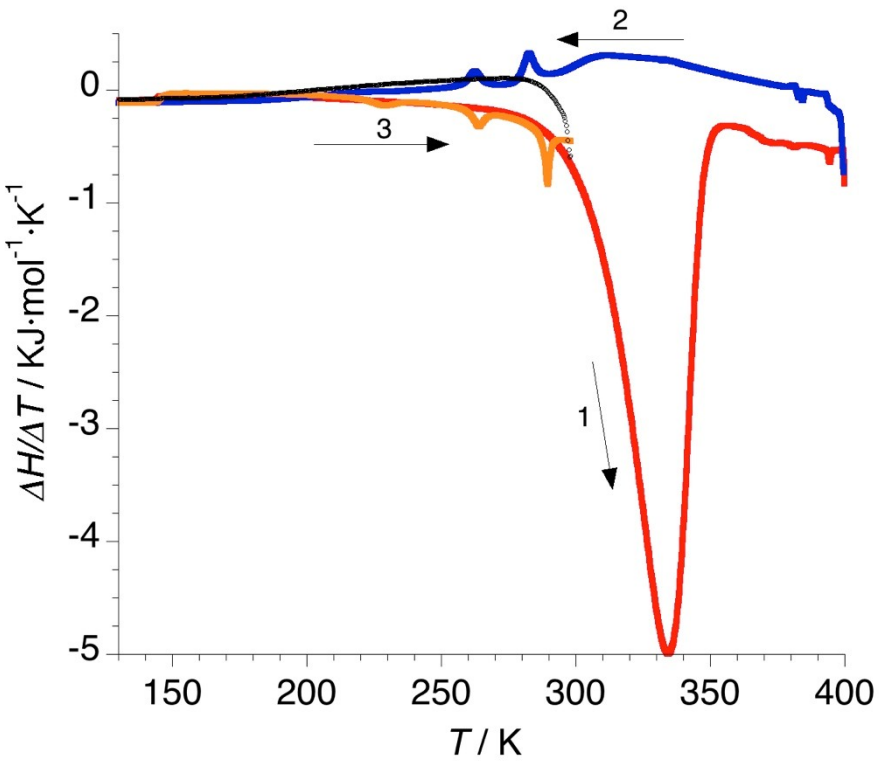

Figure S3. Differential scanning calorimetry of **1**·4H$_2$O. Black line: cooling down to 133 K. Curve 1: first heating (dehydration process). Curves 2 and 3: first cooling and second heating processes, respectively.

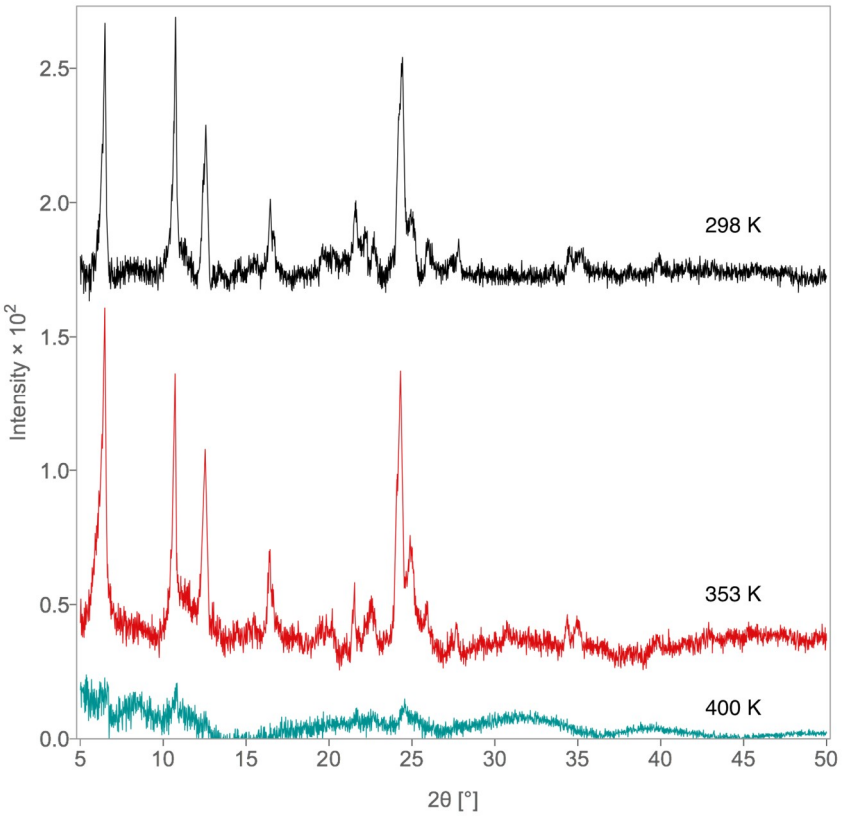

Figure S4. Powder X-ray diffractograms of **1** at different temperatures.

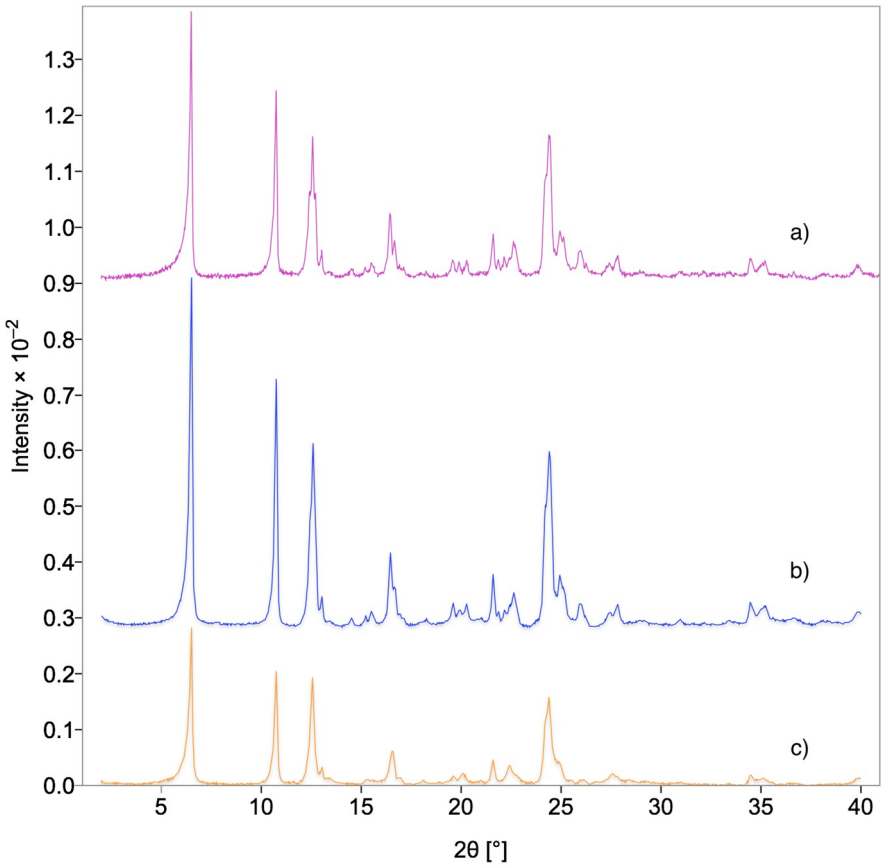

Figure S5. Powder X-ray diffractograms of **1**·4H$_2$O. **a**) original sample; **b**) after dehydration under vacuum at 400 K for 2 h and subsequent rehydration; **c**) after a second dehydration-rehydration cycle.