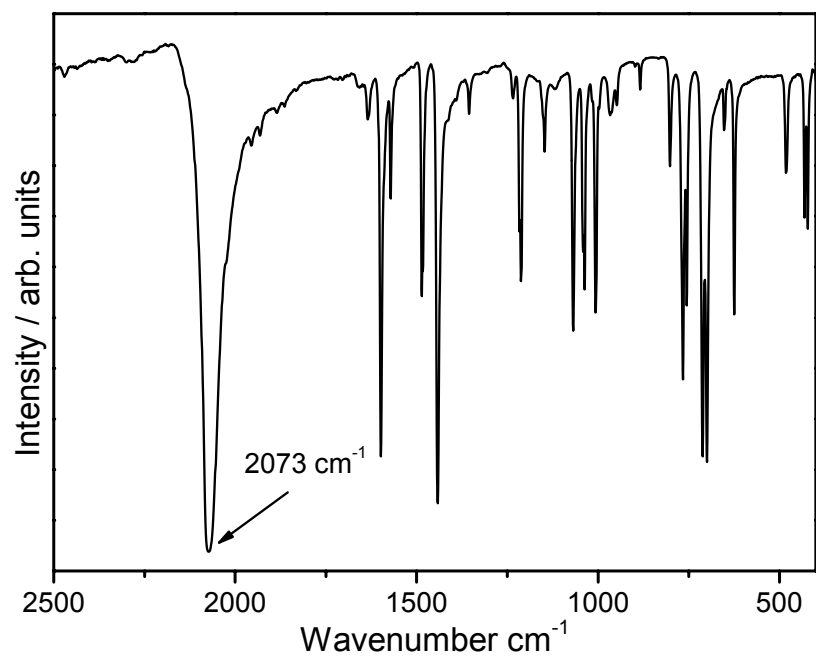


## Electronic Supplementary Information:

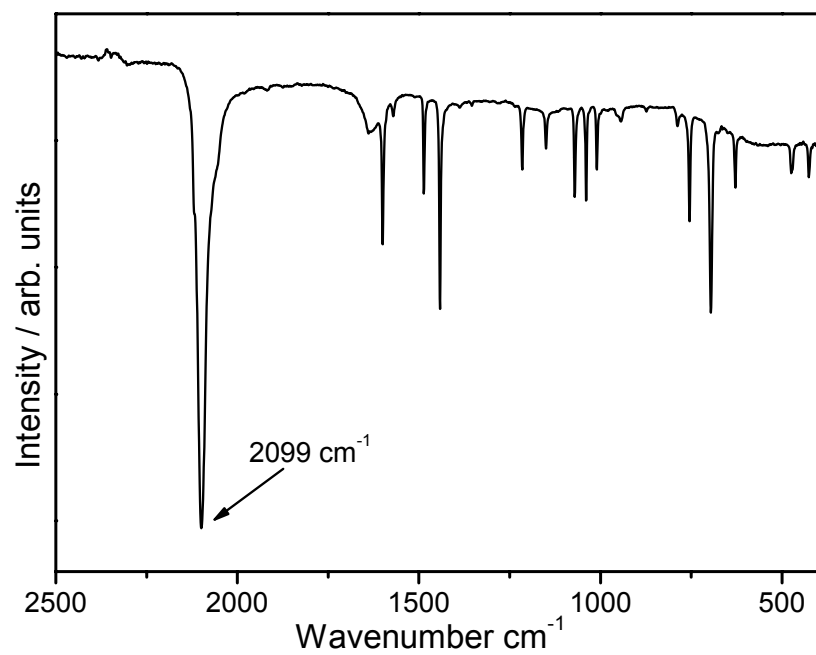
Solid-State Transformation of  $[\text{Co}(\text{NCS})_2(\text{pyridine})_4]$  into  $[\text{Co}(\text{NCS})_2(\text{pyridine})_2]_n$ : From Curie-Weiss Paramagnetism to Single Chain Magnetic Behaviour

Jan Boeckmann and Christian Näther\*

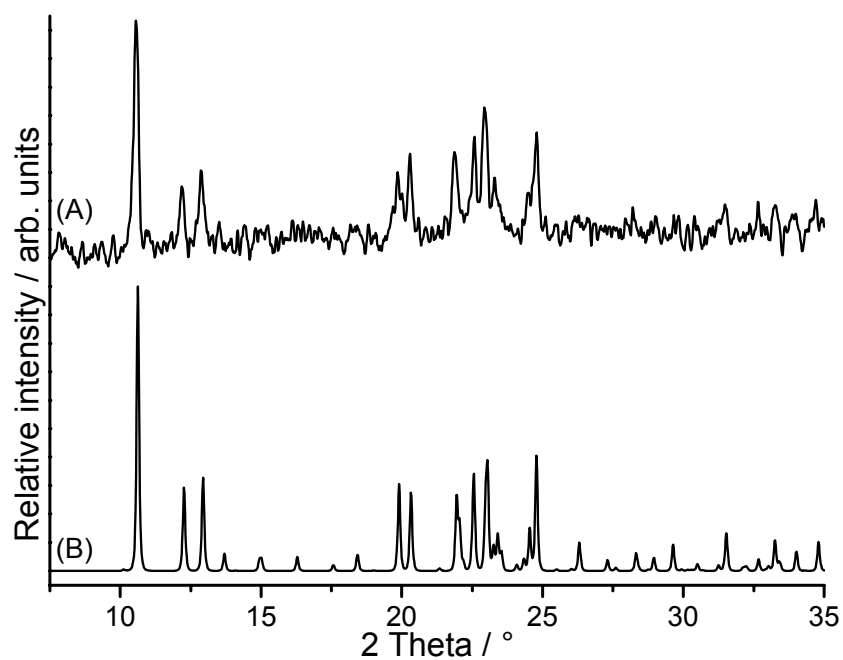
- ❖ IR spectra of compound  $[\text{Co}(\text{NCS})_2(\text{pyridine})_4]$  (**1**) and  $[\text{Co}(\text{SCN})_2(\text{pyridine})_2]_n$  (**2**).
- ❖ Experimental and calculated X-ray powder pattern for compound  $[\text{Co}(\text{SCN})_2(\text{pyridine})_4]$  (**1**).
- ❖ Results of the magnetic measurements for compound  $[\text{Co}(\text{NCS})_2(\text{pyridine})_2]_n$  (**2**) by plots of in-phase  $\chi_M'$  (black) and out-of-phase  $\chi_M''$  (red) ac magnetic susceptibility as function of frequency.



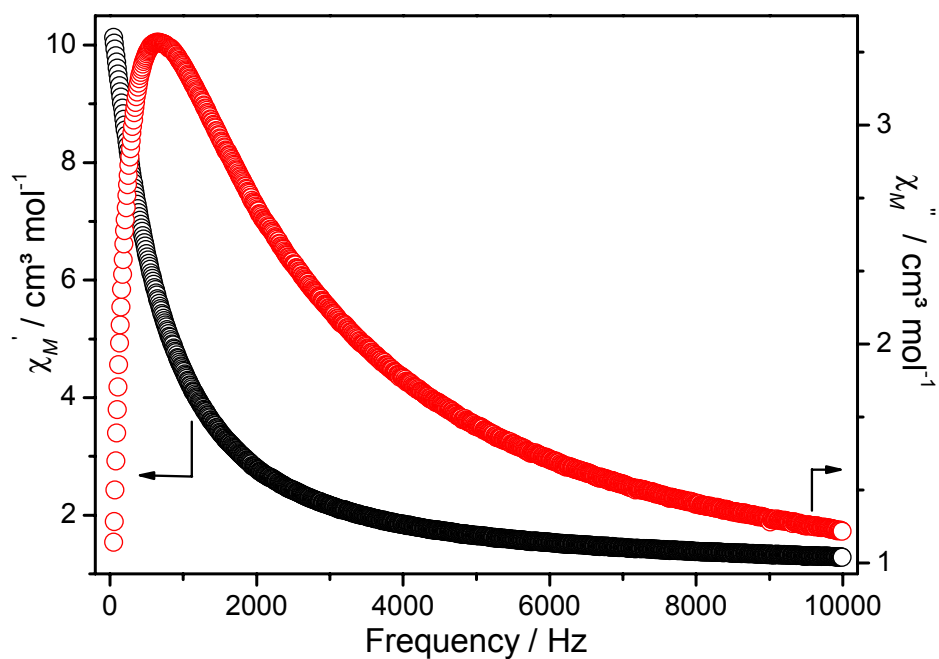
**Fig. S1** IR spectra of compound  $[\text{Co}(\text{SCN})_2(\text{pyridine})_4]$  (1).



**Fig. S2** IR spectra of compound  $[\text{Co}(\text{SCN})_2(\text{pyridine})_2]_n$  (2).



**Fig. S3** Experimental XRPD pattern of compound  $[\text{Co}(\text{SCN})_2(\text{pyridine})_4]$  (**1**) together with calculated XRPD pattern from single crystal data for compound **1**.



**Fig. S4** Results of the magnetic measurements for compound  $[\text{Co}(\text{NCS})_2(\text{pyridine})_2]_n$  (**2**) by plots of in-phase  $\chi_M'$  (black) and out-of-phase  $\chi_M''$  (red) ac magnetic susceptibility as function of frequency.