Supporting Information for

Iron(II) Spin Crossover Complexes with diaminonaphthalene-based Schiff base-like Ligands: Mononuclear Complexes.

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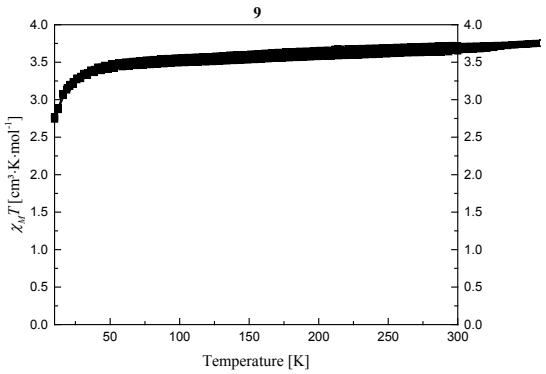
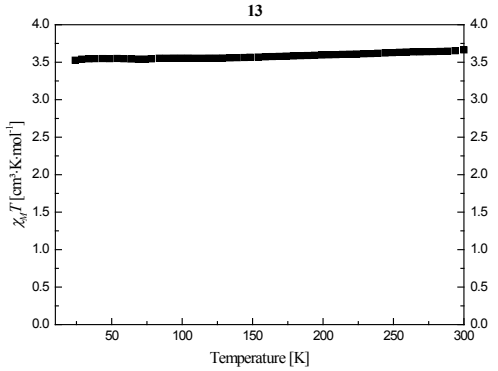
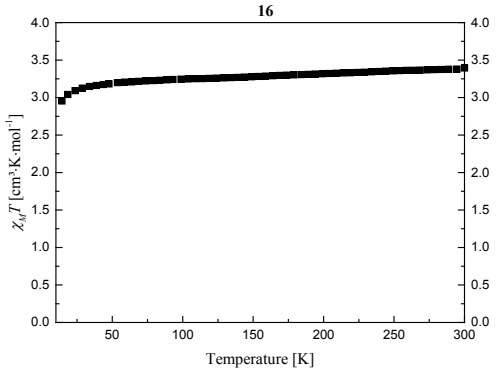
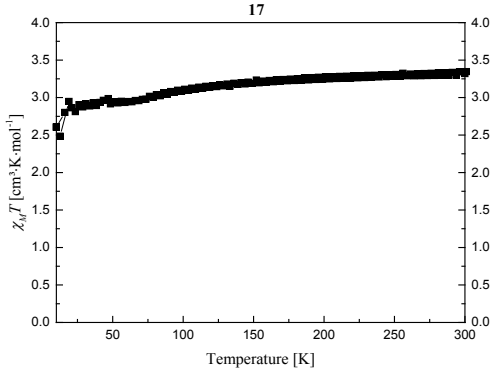
Figure S1: Magnetic susceptibility measurements of compounds **9**, **13**, **16**, **17** and **18**, displayed between 10 K and 300 K.









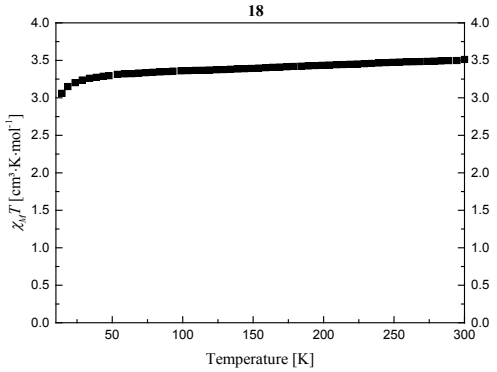


Figure S2: TGA measurement of sample **11**.

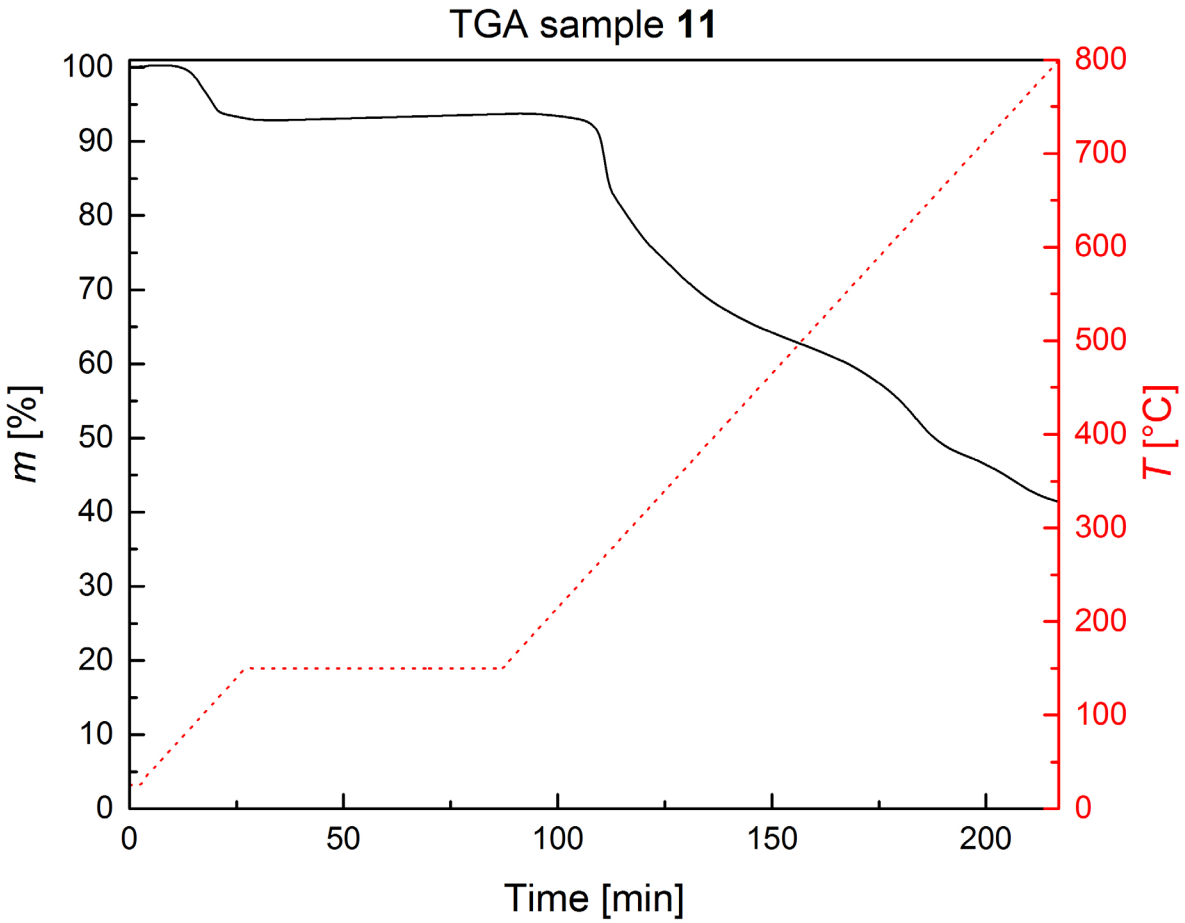


Figure S3: Powder diffraction patterns of sample **6** as bulk material (black line, room temperature and simulated powder diffraction pattern from the crystal structure of **6** (red line, 133 K).

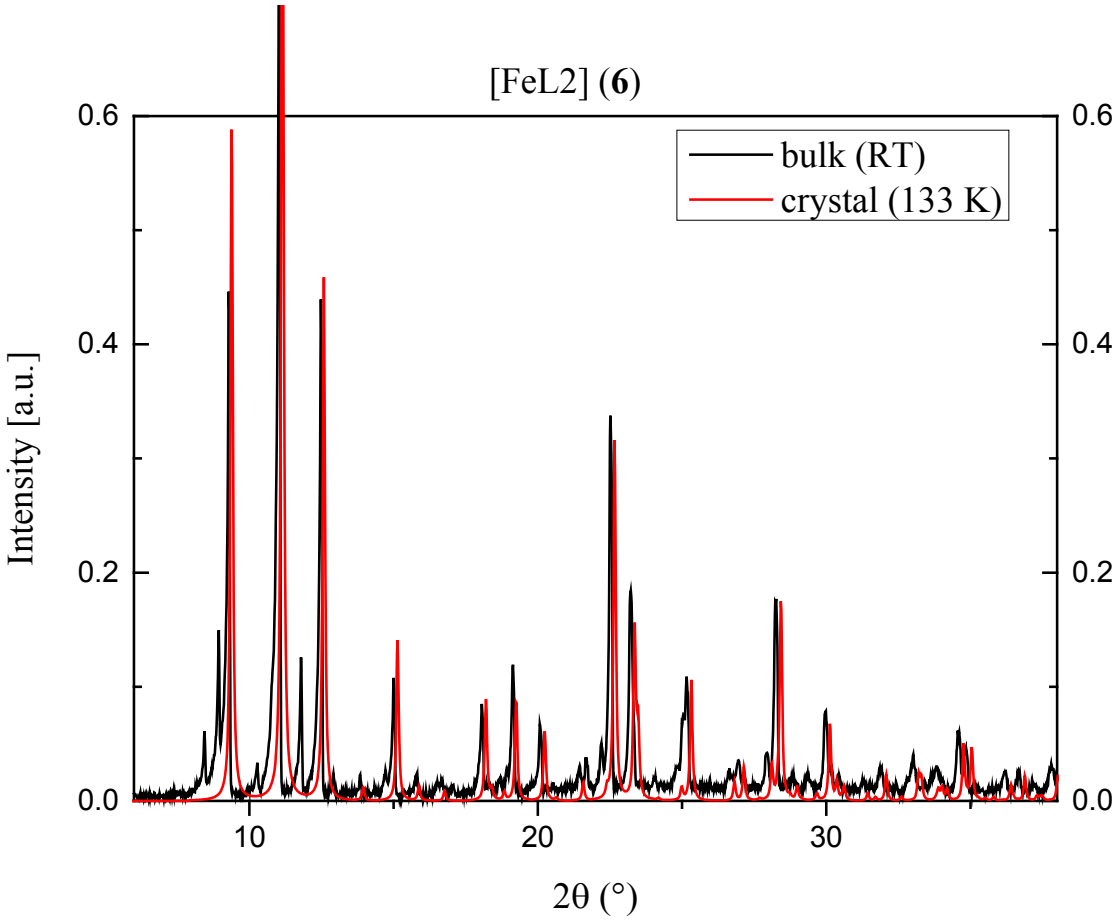


Figure S4: Powder diffractograms of compound **14** in HS state (red line, RT) and in LS state (blue line, 133 K).

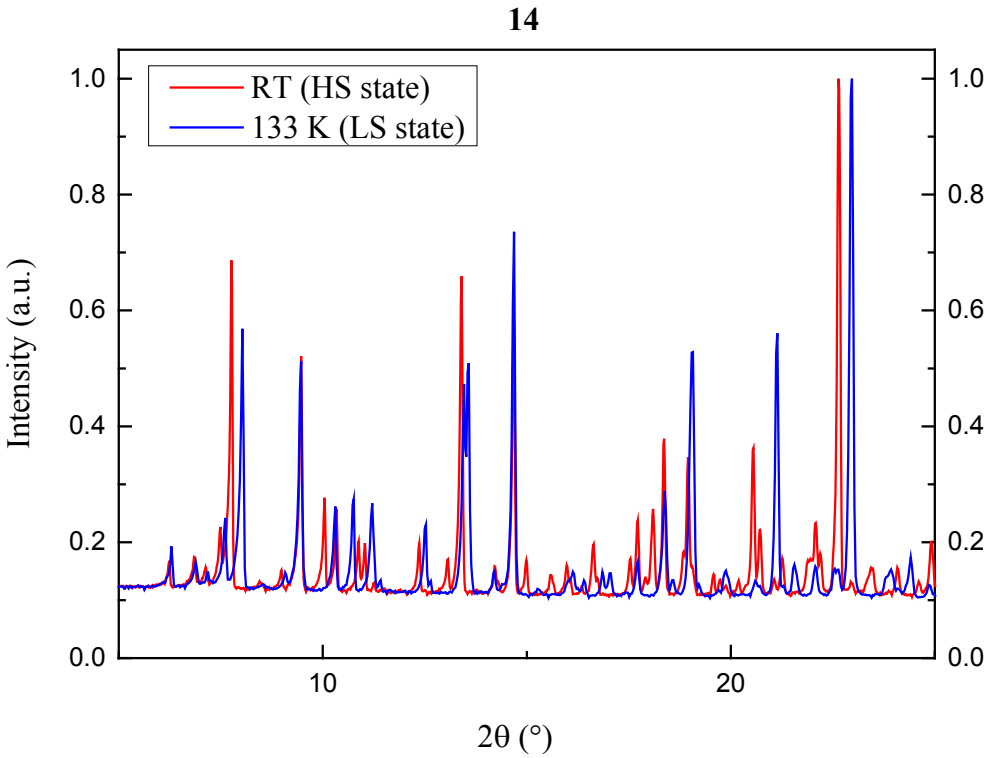
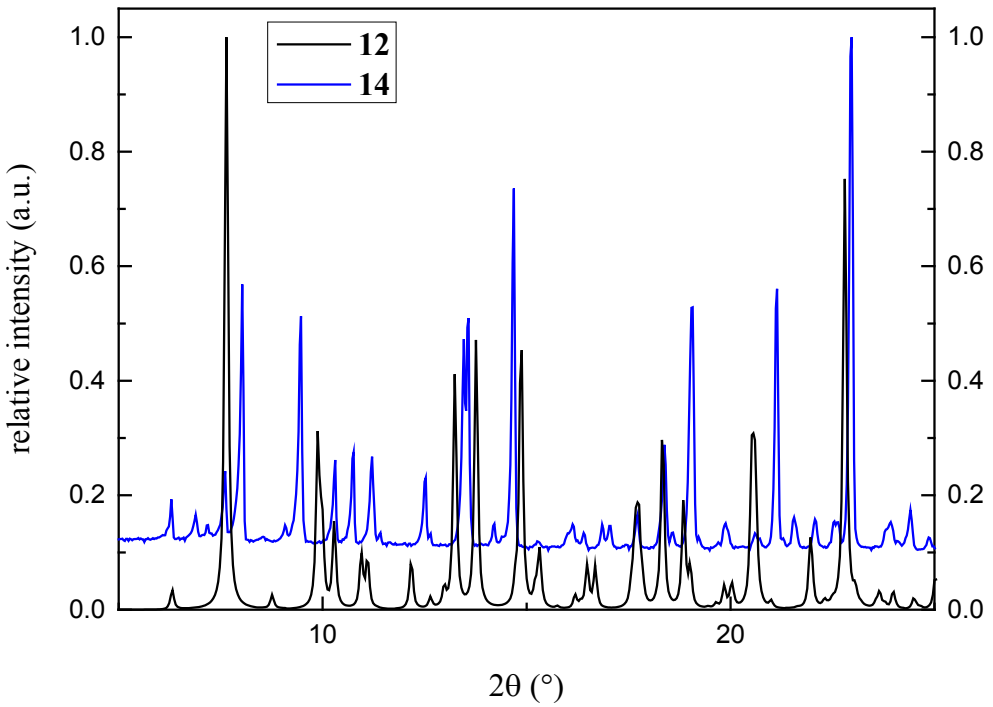


Figure S5: Comparison of powder diffractograms of compound **12** (black line, calculated at 133 K), and compound **14** (blue line, measured at 133 K).



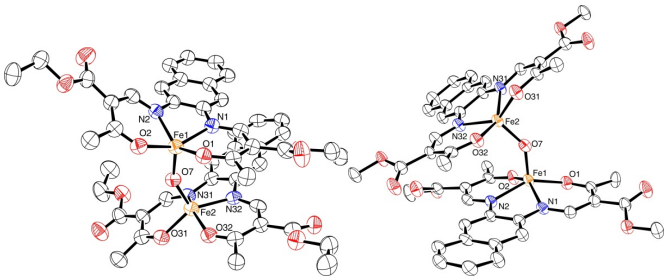


Figure S6: ORTEP drawing of **19** (left) and **20** (right). The thermal ellipsoids are shown at the 50% level. Hydrogen atoms and non-coordinating solvent molecules were omitted for clarity reasons.

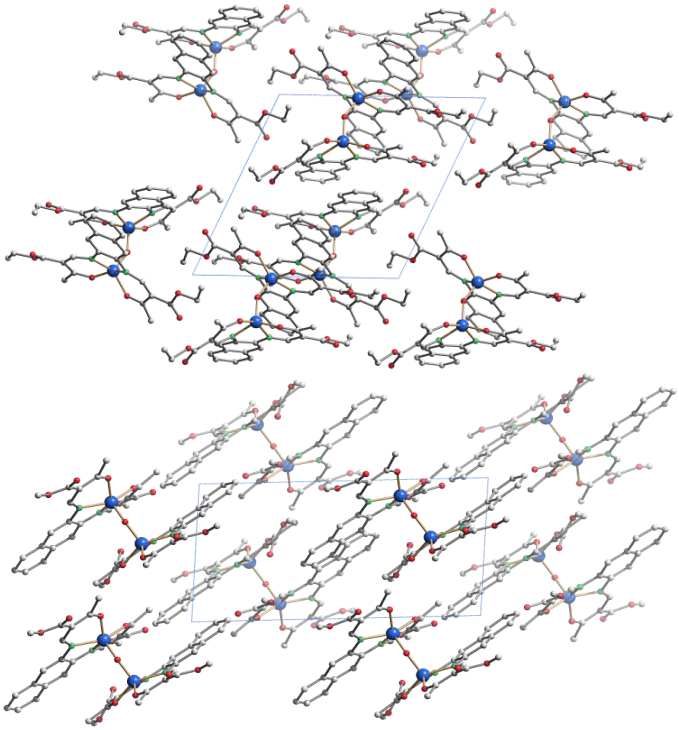


Figure S7: left: crystal packing of **19** along [100], hydrogen atoms for clarity reasons. Right: crystal packing of **20** along [010], hydrogen atoms for clarity reasons.

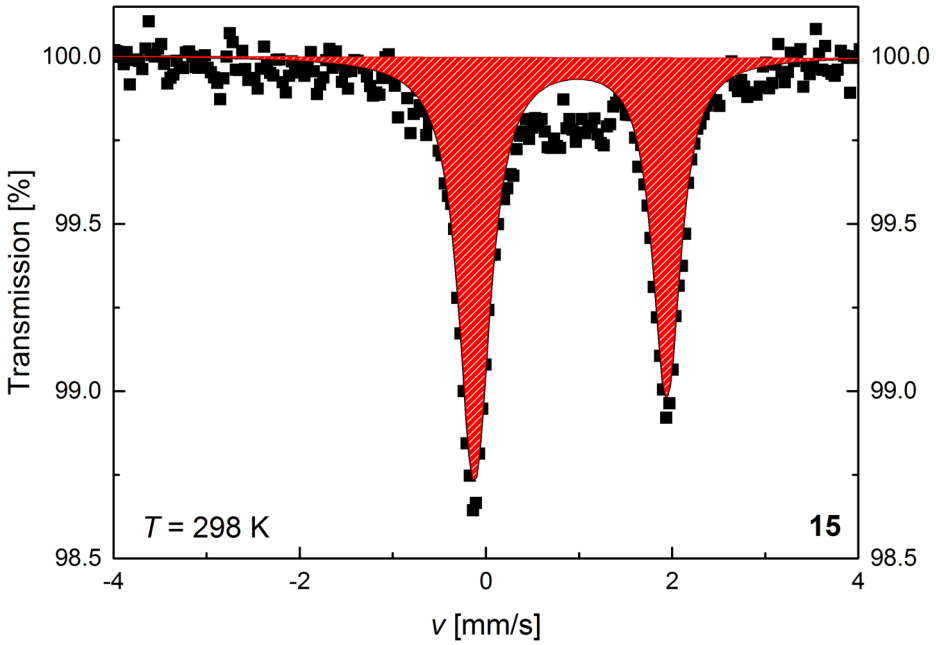


Figure S8: Mössbauer spectrum of **15**, hyperfine parameters: δ = 0.908(6), ΔE_Q = 2.066(12) and $\Gamma/2$ = 0.174(13).

Mössbauer spectrometry: ^{57}Fe Mössbauer spectra were recorded in transmission geometry on a constant-acceleration using a conventional Mössbauer spectrometer with a 50 mCi ^{57}Co(Rh) source. The samples were sealed in the sample holder under an argon atmosphere. The spectra were fitted using Recoil 1.05 Mössbauer Analysis Software. The isomer shift values are given with respect to a α-Fe reference at room temperature.

Recoil Software: K. Lagarec and D. G. Rancourt, *Recoil, mössbauer spectral analysis software for windows 1.0*, Department of Physics, University of Ottawa, Canada, 1998.