Electronic Supplementary Material (ESI) for Journal of Materials Chemistry

Micro- and nanocrystals of the iron(III) spin-transition material $[Fe^{III}(3\text{-}CH_3O\text{-}SalEen)_2]PF_6$.

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Figures

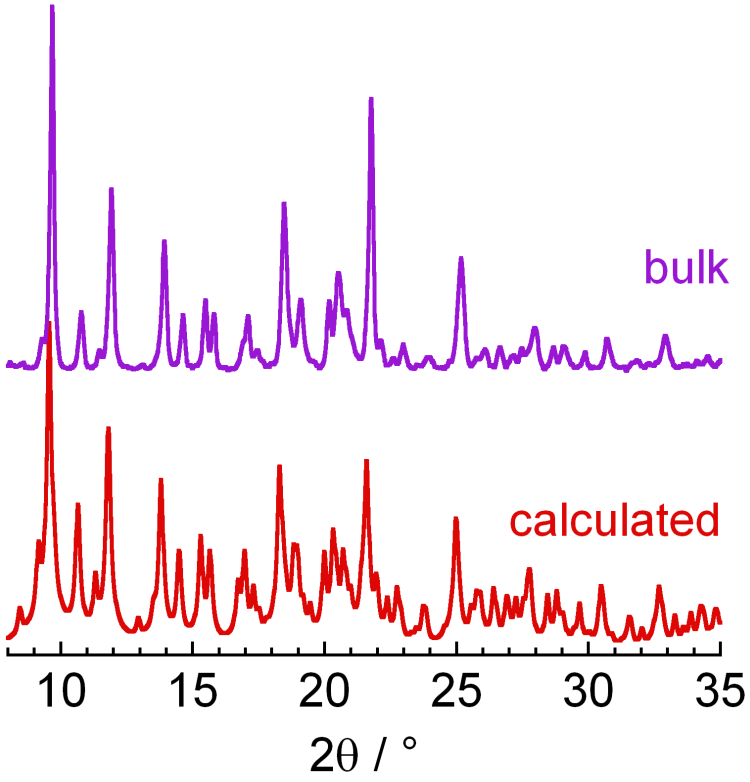

Figure S1: Room temperature powder X-ray diffractogram of $[Fe^{III}(3\text{-MeO-SalEen})_2]PF_6$ in the 8-35° range (bulk) and diffractogram calculated from the structure at 293 K determined by single crystal X-Ray diffraction (in reference 20).

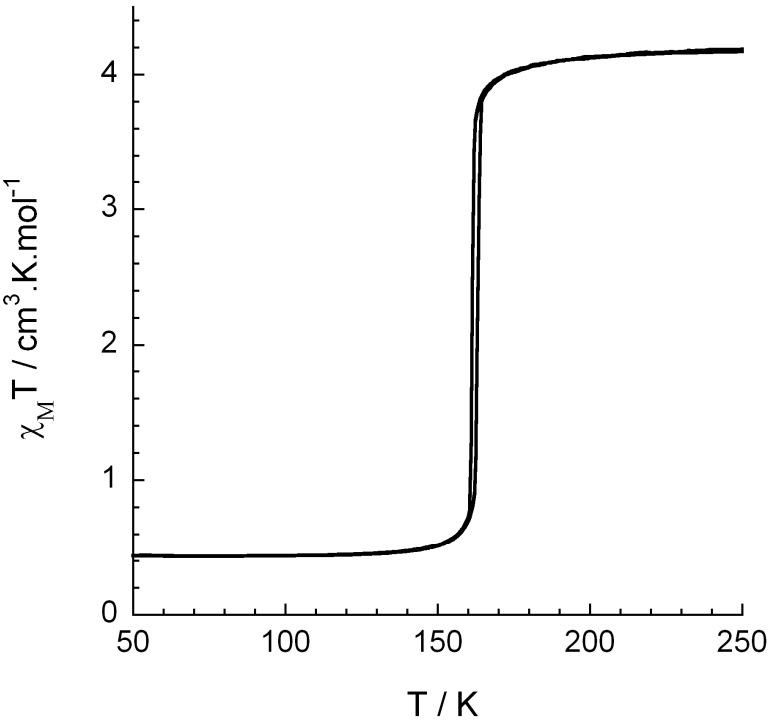

Figure S2: Temperature dependence of the $\chi_M T$ product (χ_M = molar magnetic susceptibility, T = temperature) for the powdered sample of $[Fe^{III}(3\text{-MeO-SalEen})_2]PF_6$. (From reference 20)

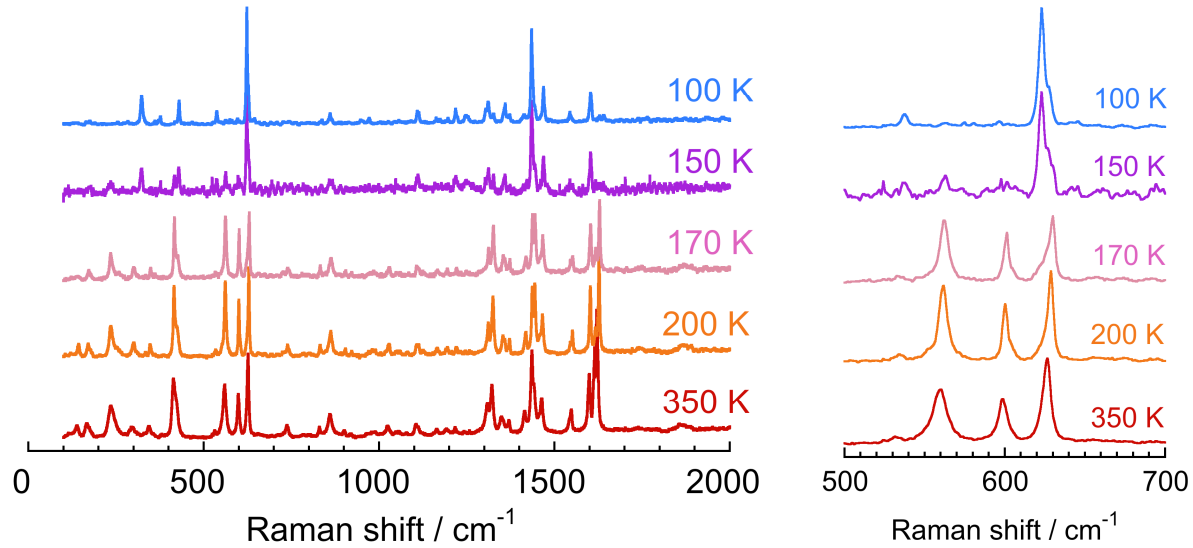

Figure S3: Variable temperature Raman spectra of $[Fe^{III}(3\text{-MeO-SalEen})_2]PF_6$ in the form of a microcrystalline powder (bulk). Expansion of the Raman spectra in the 500-700 cm^{-1} range

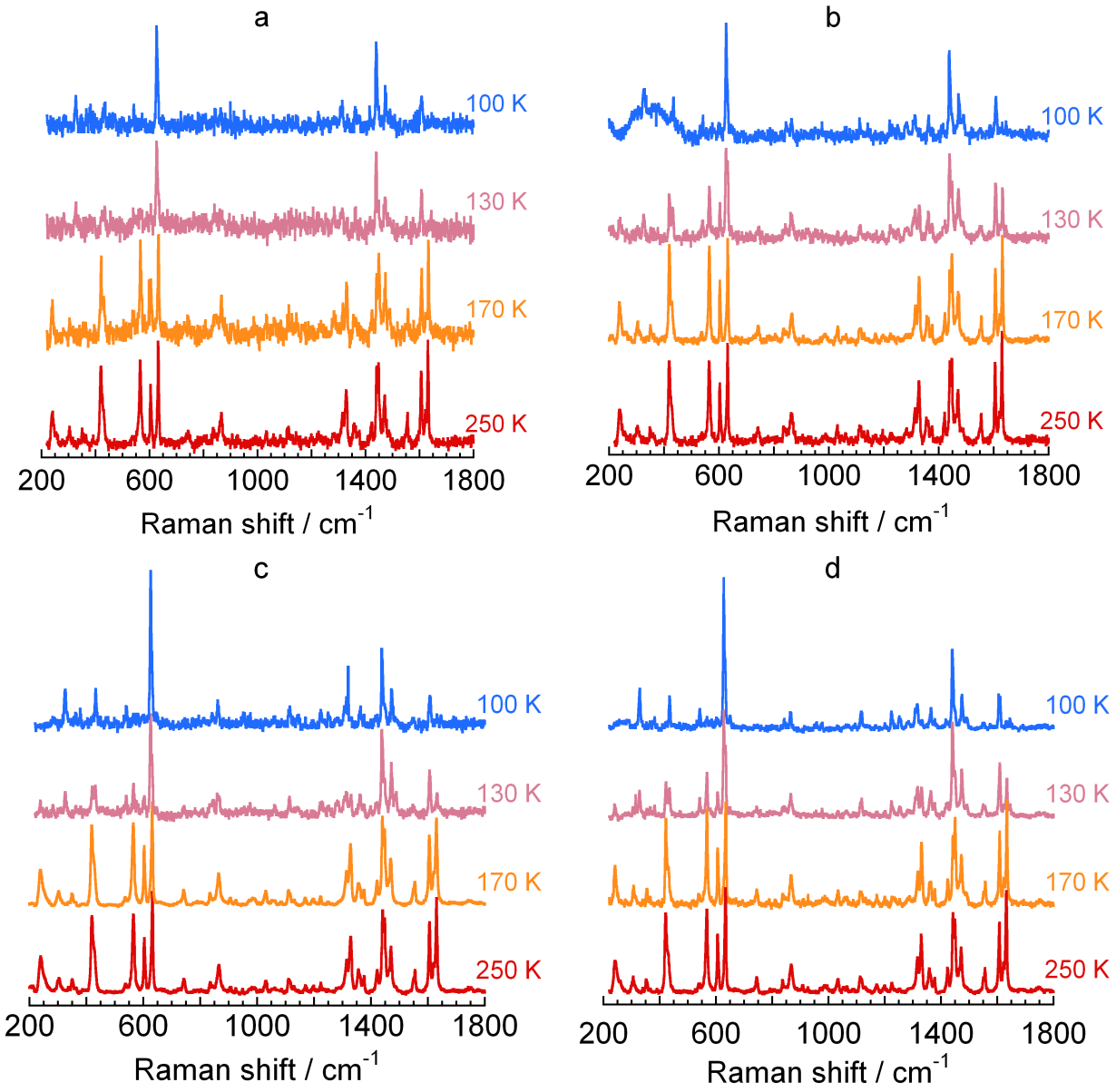

Figure S4: Variable temperature Raman spectra of the composites containing 7.5 μm (**a**), 3 μm (**b**), 1 μm (**c**) and 18 nm (**d**) long particles of $[Fe^{III}(3\text{-MeO-SalEen})_2]PF_6$.

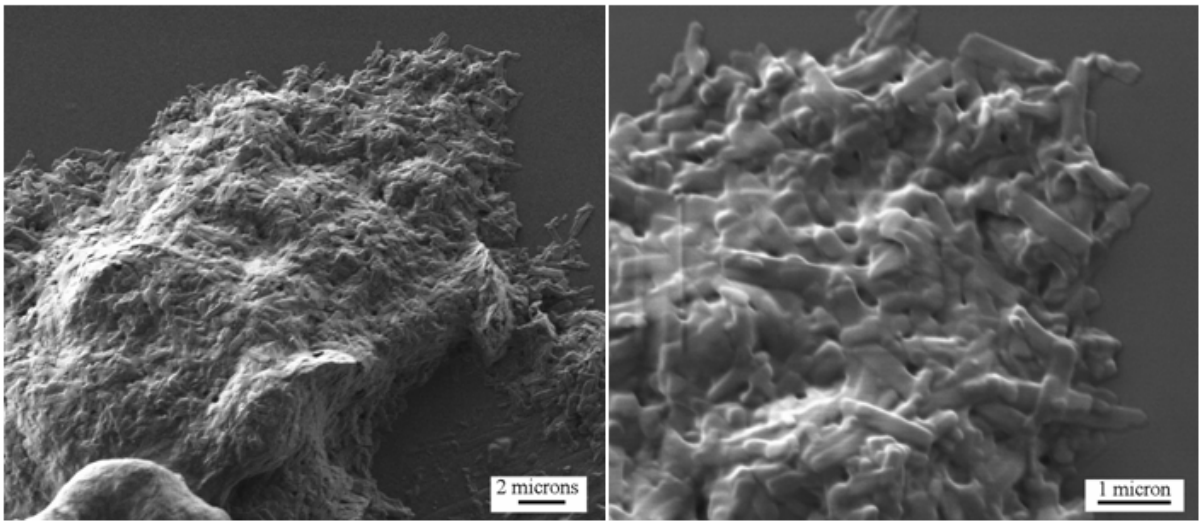

Figure S5: SEM images of the 1 μm long microparticles (sample **b**) embedded in the PEG polymer.

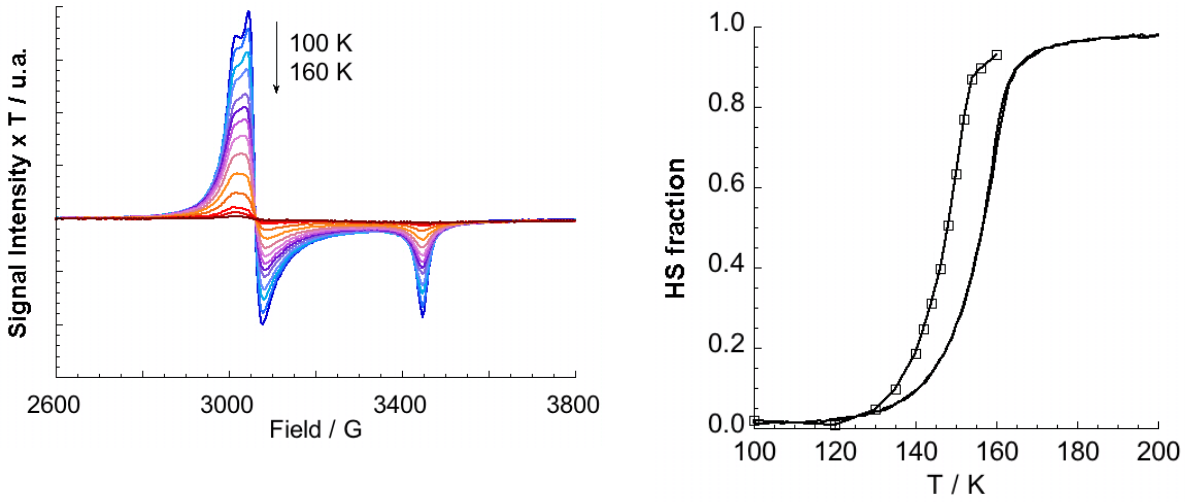

Figure S6: (left) The X-band EPR signal registered as a function of temperature for the 7.5 μm microcomposites (sample **a**, T= 100, 120, 130, 135, 140 K and then every 2 K up to 160 K). (right) The HS fraction vs. temperature plot corresponding to spin-transition species analyzed from the LS EPR signal (□) and magnetic data (—).