Electronic Supplementary Information

Spin-Crossover Metal-Organic Frameworks: Promising Materials for Designing Gas Sensors

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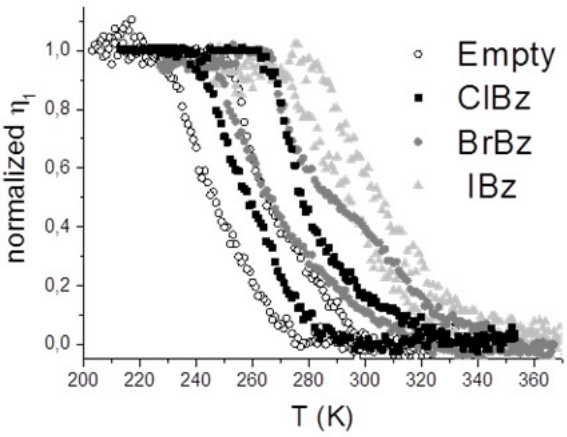

Figure ESI1. Normalized temperature dependence of the first-order diffraction efficiency (η_1) for gratings of **1** before (Empty) and after the absorption of vapors of chlorobenzene (ClBz), bromobenzene (BrBz) and iodobenzene (IBz) recorded both on heating and cooling.

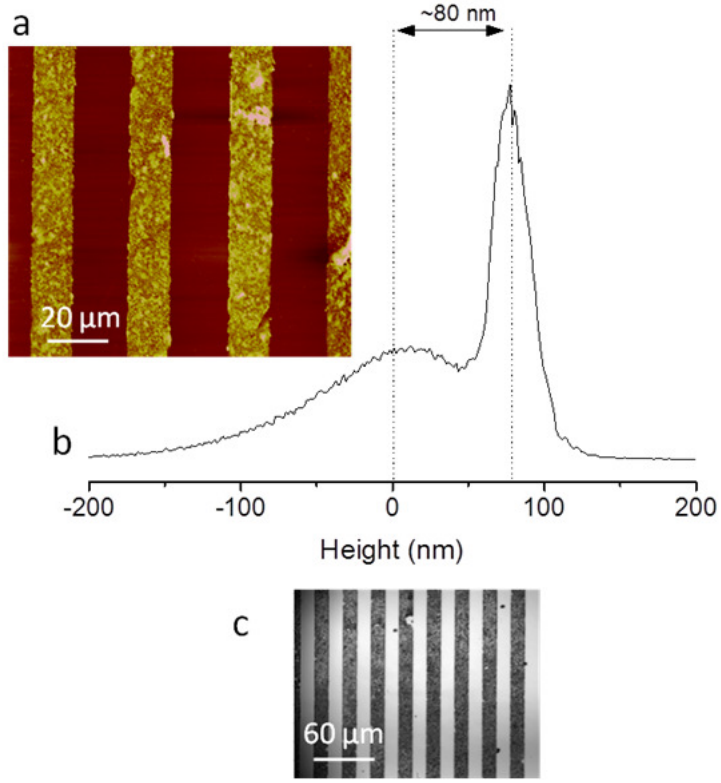

Figure ESI2. a) AFM image, b) height distribution histogram and c) bright field optical microscopy image of a surface-relief grating of **1** obtained after 50 deposition cycles (grating period: 30 µm, line width: 15 µm, line thickness: 80 nm).

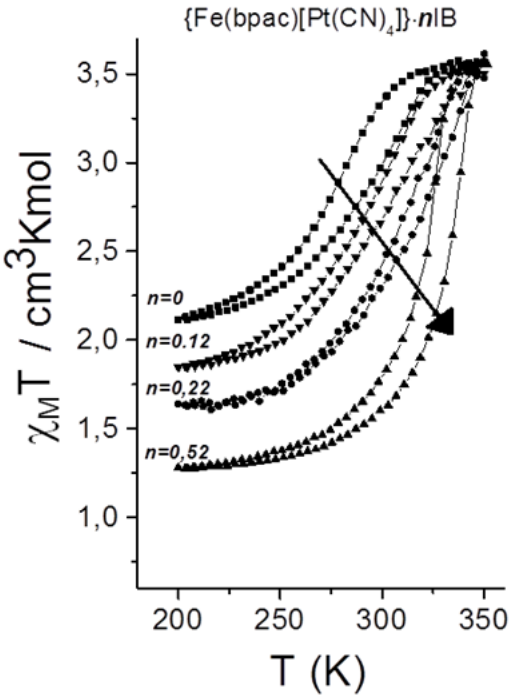

Figure ESI3. Magnetic behavior of a polycrystalline sample of {Fe(bpac)Pt(CN)$_4$}·*n*IBz with n=0, 0.12, 0,22 and 0,52 recorded in the heating and cooling modes (the black arrow indicates de increasing IBz absorbed fraction). (Note that the molar magnetic susceptibility χ_M is higher in the HS state while the refractive index and thus the diffraction efficiency η_1 are higher in the LS state (see fig. ESI1).)

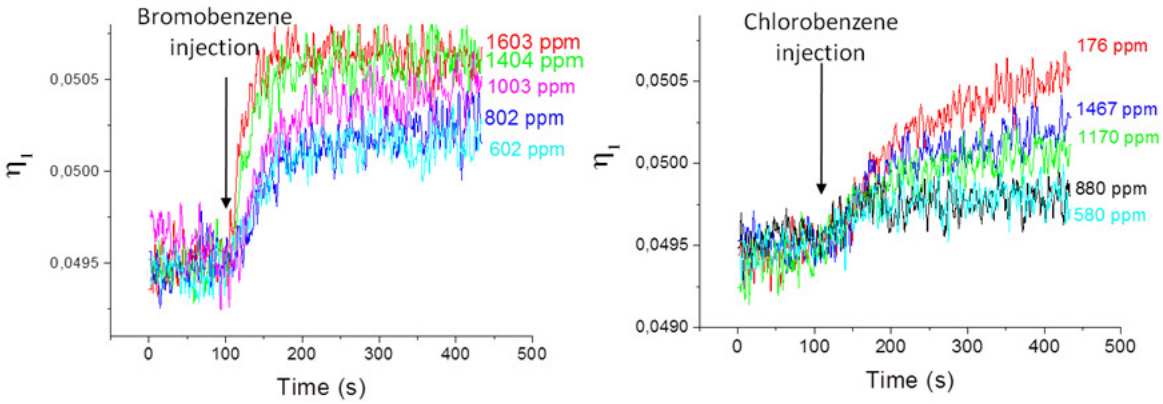

Figure ESI 4. Time dependence of η_1 under different concentrations of bromobenzene (left) and chlorobenzene (right) at 273 K. The black arrows indicate the moment of vapor injection.

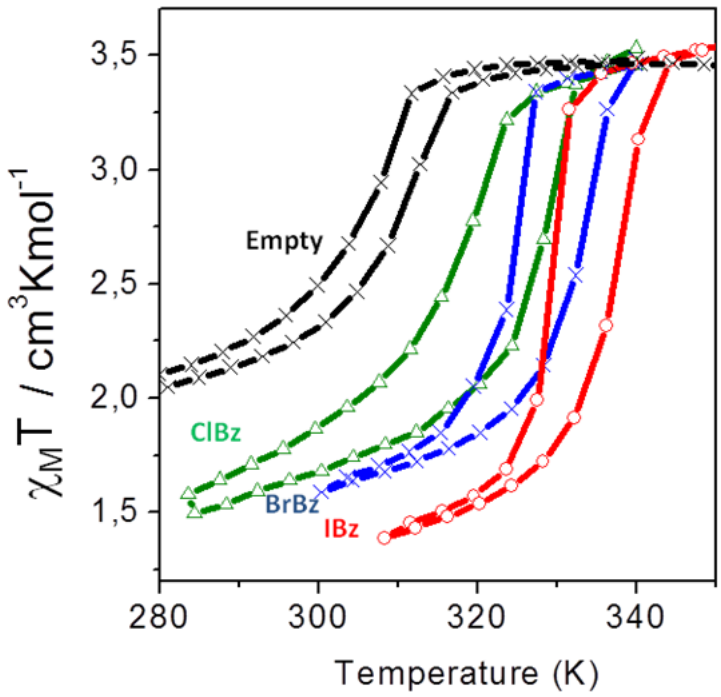

Figure ESI5. Thermal dependence of the $\chi_M T$ product for a polycrystalline sample of **1** in the heating and cooling modes before and after the absorption of vapors of chlorobenzene (ClBz), bromobenzene (BrBz) and iodobenzene (IBz). (Note that χ_M is higher in the HS state while η_1 is higher in the LS state (see fig. ESI1)).