Electronic Supplementary Information for Dalton Transactions

Supplementary information

for

Synthesis, characterisation and magnetic properties of octahedral chromium(III) compounds with six *C*-donor ligands

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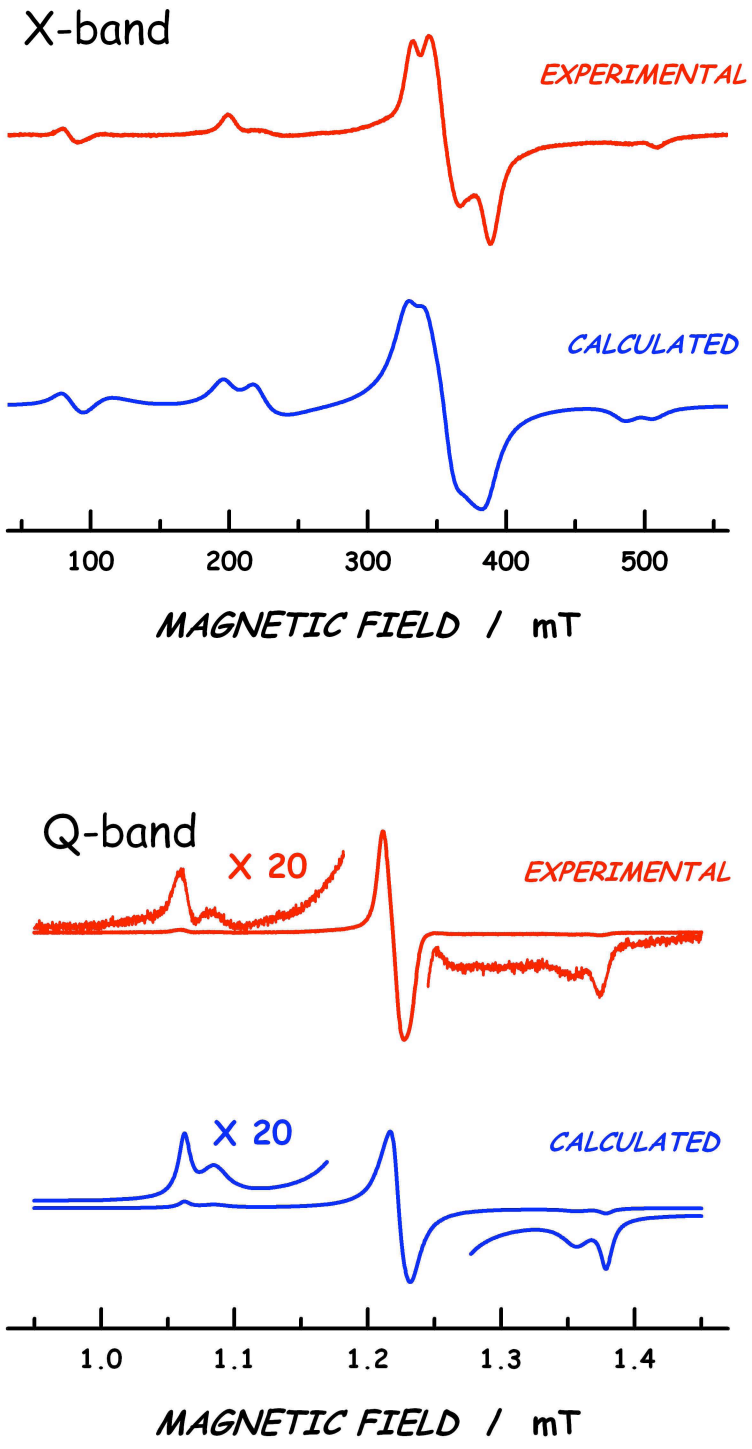

Figure S1. Comparison between experimental (red lines) and simulated (blue lines) EPR spectra of a polycrystalline sample of **2** measured at X-band (upper part) and at Q-band (lower part). Experimental spectra correspond to those given in Figures 5c (X-band) and 6c (Q-band). Simulated spectra correspond to type C contribution (Table 3).

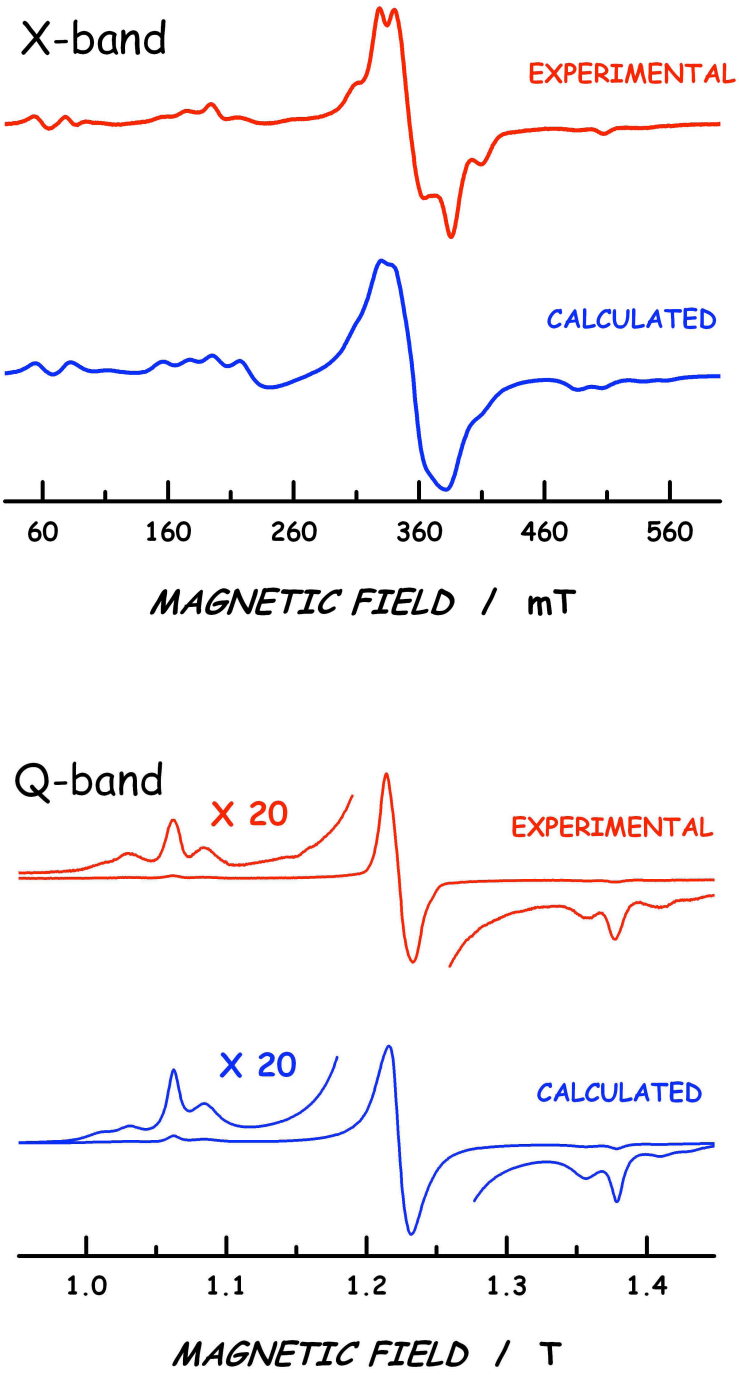

Figure S2. Comparison between experimental (red lines) and simulated (blue lines) EPR spectra of a polycrystalline sample of **2** measured at X-band (upper part) and at Q-band (lower part). Experimental spectra correspond to those given in Figures 5d (X-band) and 6d (Q-band). Simulated spectra have been calculated considering coexistence of type C (80%) and type D (20%) contributions (Table 3).

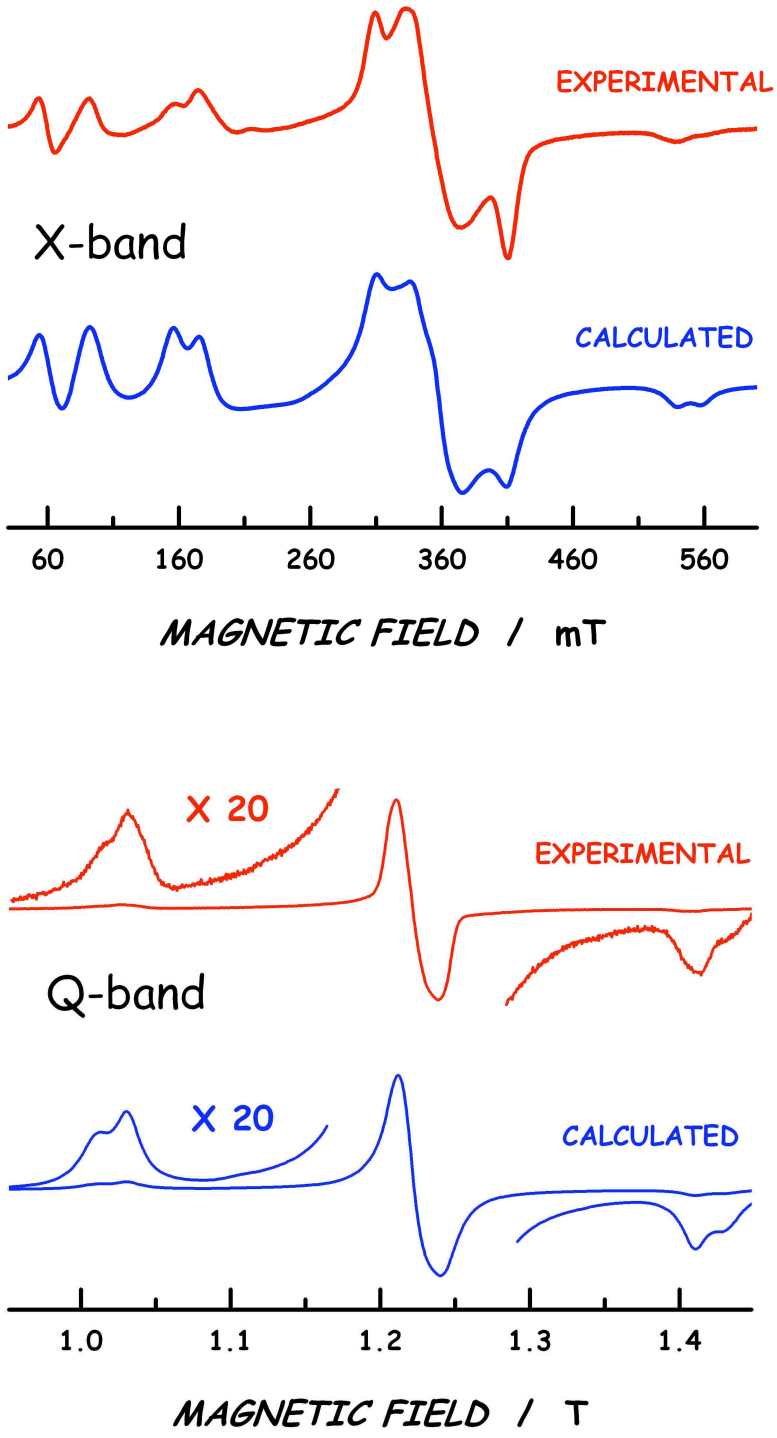

Figure S3. Comparison between experimental (red lines) and simulated (blue lines) EPR spectra of a polycrystalline sample of **2** measured at X-band (upper part) and at Q-band (lower part). Experimental spectra correspond to those given in Figures 5e (X-band) and 6e (Q-band). Simulated spectra correspond to type D contribution (Table 3).

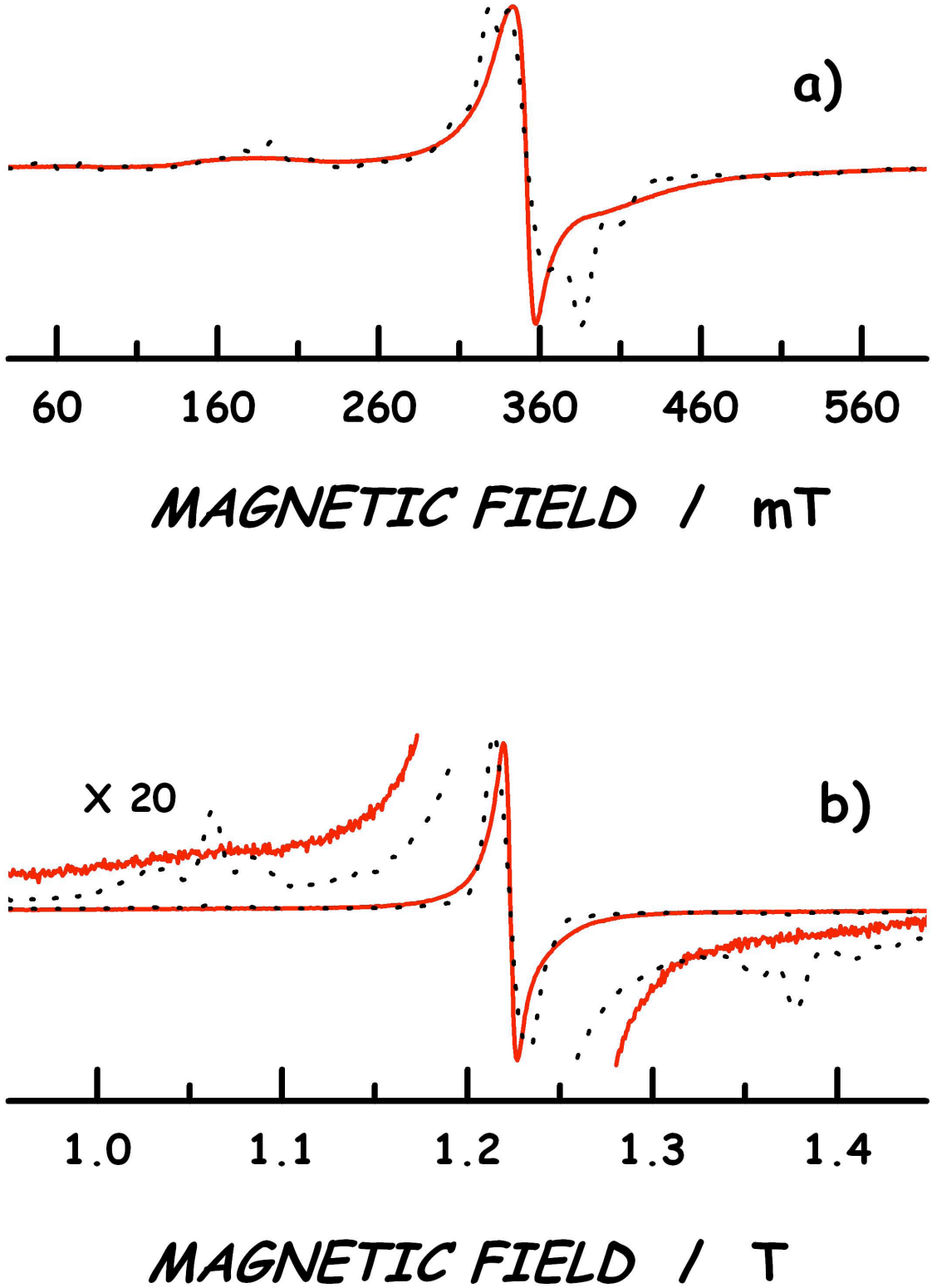

Figure S4. EPR spectra of **3** (red solid line) compared with typical spectra of **2** (black broken line): a) X-band; b) Q-band..

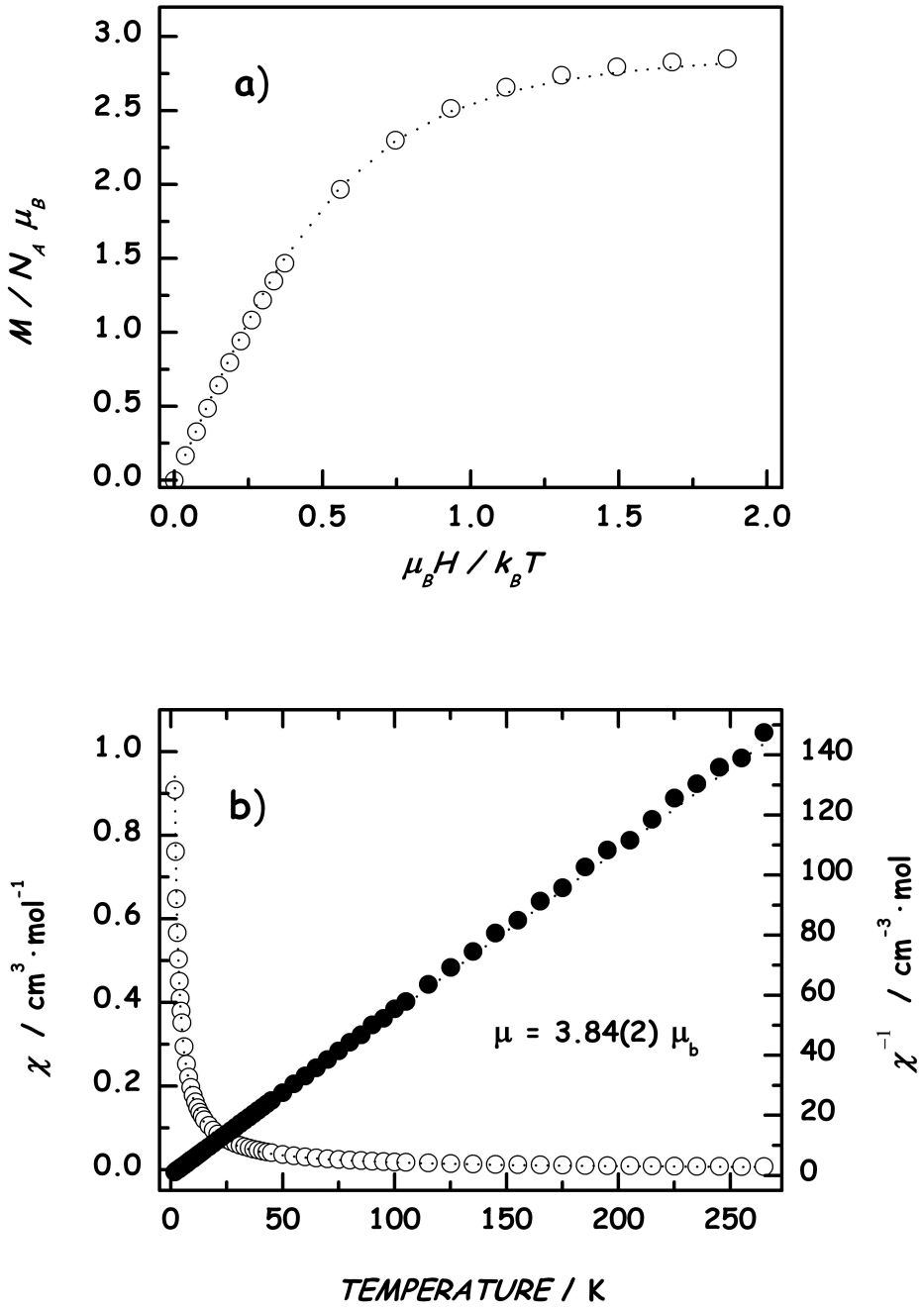

Figure S5. a) Magnetization *vs*. the reduced applied magnetic field, $M(\mu_0 H/k_B T)$, of a powder sample of **3** at 1.8 K (dotted line corresponds to the evolution calculated with a Brillouin function with $S = 3/2$ and $g = 1.92$); b) Thermal dependence of the magnetic susceptibility, χ (empty circles, ordinate scale on the left) and its inverse, χ^{-1} (full circles, ordinate scale on the right) of the same sample (dotted lines correspond to the predicted evolution following the Curie law).