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CORRECTION

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Correction: Magnetic properties of the seven-coordinated nanoporous framework material $Co(bpy)_{1.5}(NO_3)_2$ (bpy = 4,4′-bipyridine)

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Correction for 'Magnetic properties of the seven-coordinated nanoporous framework material $Co(bpy)_{1.5}(NO_3)_2$ (bpy = 4,4′-bipyridine)' by Elena Bartolomé *et al.*, *Dalton Trans.*, 2012, **41**, 10382–10389.

In our follow-up work on the anisotropy evaluation of Co complexes, we have become aware of an error in a theoretical development included in the ESI, section B, of the aforementioned paper. Namely in the Section titled "Magnetization *versus* magnetic field and magnetic heat capacity in a random oriented powdered sample of an orthorhombic S = 1/2 system."

The error stems from the underlined statement in the following text in the ESI section B, which is wrong. Therefore, to correct the text in the ESI, please delete the following lines:

On the other hand, as a consequence of the *g*-tensor anisotropy, the magnetization is not parallel to the magnetic field *but it is directed along the* $\underline{\hat{u}'}$ *direction*; the components of $\hat{u}'$ in the (X, Y, Z) frame are.

$$\hat{u}' = g^{-1}(\hat{u})(g_X u_X, g_Y u_Y, g_Z u_Z) \tag{B.3}$$

and, if T is the temperature, the magnetization of such a single crystal is given by

$$\vec{M}(\hat{u}) = Ng(\hat{u})\mu_B \,\mathrm{th}\left(\frac{g(\hat{u})\mu_B H}{2k_B T}\right)\hat{u}' \tag{B.4}$$

In this expression N is the number of paramagnetic entities (N_A for the molar magnetization).

In particular, the component parallel to the applied field, $M_0(\hat{u})$, results to be:

$$\begin{aligned} M_0(\hat{u}) &= \vec{M}(\hat{u}) \cdot \hat{u} \\ &= N\mu_B(g_X {u_X}^2 + g_Y {u_Y}^2 + g_Z {u_Z}^2)\mathrm{th}\left(\frac{g(\hat{u})\mu_B H}{2k_B T}\right) \end{aligned} \tag{B.5}$$

The correct text that should substitute this paragraph is:

On the other hand, as a consequence of the *g*-tensor anisotropy, the magnetization is not parallel to the magnetic field. Its components in the (X, Y, Z) frame are:

$$\begin{aligned} &M_\alpha(\hat{u}) \\ &= N\mu_B g^{-1}(\hat{u}) {g_\alpha}^2 u_\alpha \frac{1}{2}\mathrm{th}\left(\frac{g(\hat{u})\mu_B H}{2k_B T}\right) \quad (\alpha = X, Y, Z) \end{aligned} \tag{B.3}$$

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Then the magnetization along a direction fixed by and unitary vector $\hat{w}$ is:

$$M_{\hat{w}}(\hat{u}) = \vec{M}(\hat{u}) \cdot \hat{w} = N\mu_B g^{-1}(\hat{u}) \\ (g_X{}^2 u_X w_X + g_Y{}^2 u_Y w_Y + g_Z{}^2 u_Z w_Z) \frac{1}{2} \mathrm{th}\left(\frac{g(\hat{u})\mu_B H}{2k_B T}\right) \quad \text{(B.4)}$$

where (w_X, w_Y, w_Z) are the components of $\hat{w}$ in the (X, Y, Z) frame.

In particular, the component parallel to the applied field, $M_0(\hat{u})$, results to be:

$$M_0(\hat{u}) = \vec{M}(\hat{u}) \cdot \hat{u} = N\mu_B g(\hat{u}) \frac{1}{2} \mathrm{th}\left(\frac{g(\hat{u})\mu_B H}{2k_B T}\right) \quad \text{(B.5)}$$

Thus, old eqn (B.5) is substituted by the new eqn (B.5). Moreover, since old eqn (B.8) was a transcription of the wrong old eqn (B.5), after substituting (B.7), the new eqn (B.8) should read as follows:

$$M_0(u, \varphi) = N\mu_B g(u, \varphi) \frac{1}{2} \mathrm{th}\left(\frac{g(u, \varphi)\mu_B H}{2k_B T}\right) \quad \text{(B.8)}$$

This error has no bearing on the calculated magnetization curve in the main text, Fig. 4 fitted curve for the $M(H)$ measurements, since the latter fit was done using a numerical approach, and did not use the wrong analytical expression we are correcting now.

The ESI text is now correct and can be used with confidence in the evaluation of magnetization curves for powdered sample of orthorhombic $S = 1/2$ system.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

