Supplementary information to:

Synthesis, characterisation and magnetic study of a cyano-substituted dysprosium double decker single-molecule magnet

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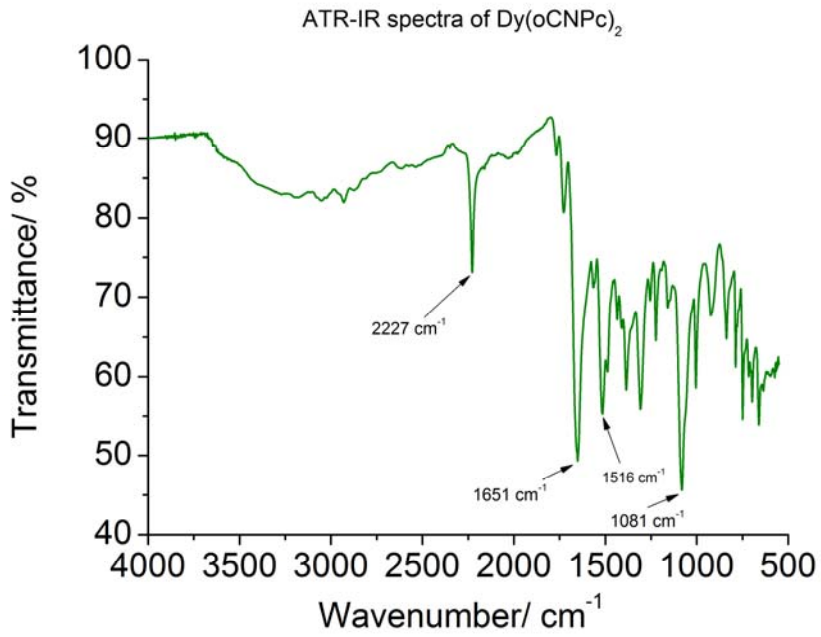

Fig. 1 ATR IR Spectrum of **1**.

Table S1. IR data for [Dy(oCNPc)2] (1), $[Dy(Pc)2]^{-}$, and $[Dy(Pc)2]^{0}$

$[Dy(oCNPc)_2]$ (**1**)	$[Dy(Pc)_2]^{-}$ [1]	$[Dy(Pc)_2]^{0}$ [2]
2227m	1605	1636m
1767w	1584	1608w
1727w	1474	1559w
1651s	1450	1541w
1565w	1398	1522w
1515s	1377	1504w
1488w	1329s	1486w
1435w	1310	1448w
1410w	1283	1401w
1385w	1161	1369w
1308w	1113	1320s
1255w	1078	1283w
1224w	1057	1203w
1159w	1003	1160w
1082s	949	1137w
1005m	878	1115s
921m	806	1062w
837w	772	1004w
787w	739	943w
749w	727s	884w
715w	627	810w
697w	559	779w
660w	492	758w
	434	739w
		726s
		678w
		626w
		562w
		500w
		426w

1. M. S. Haghighi and H. Homborg, *Zeitschrift Fur Anorganische Und Allgemeine Chemie*, 1994, 620, 1278-1284.
2. J. Jiang, M. Bao, L. Rintoul and D. Arnold, *Coord. Chem. Rev.*, 2006, 250, 424-448.

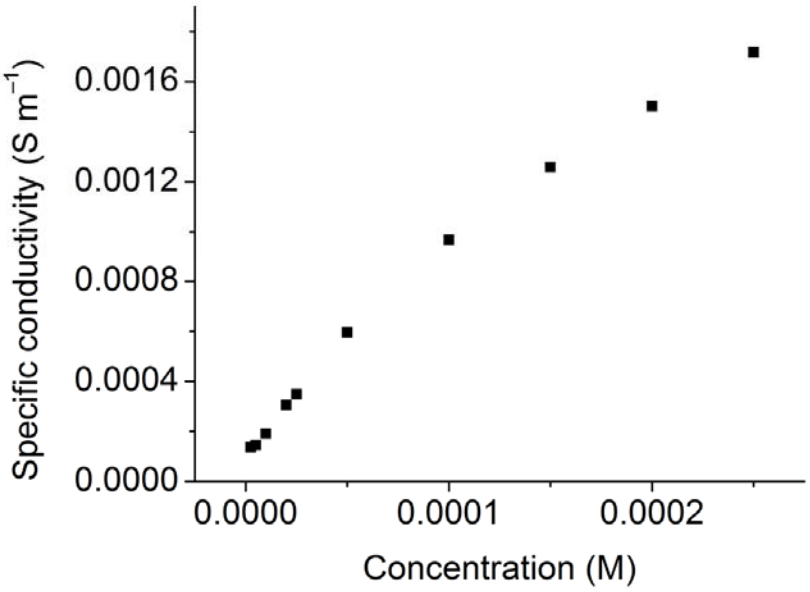

Fig. 2 Specific onductivity κ as a function of concentration of **1** in dmf at 24 °C. $\kappa = Gl/A$, where G is the measured conductivity, A is the electrode surface are and l is the distance between the electrodes.

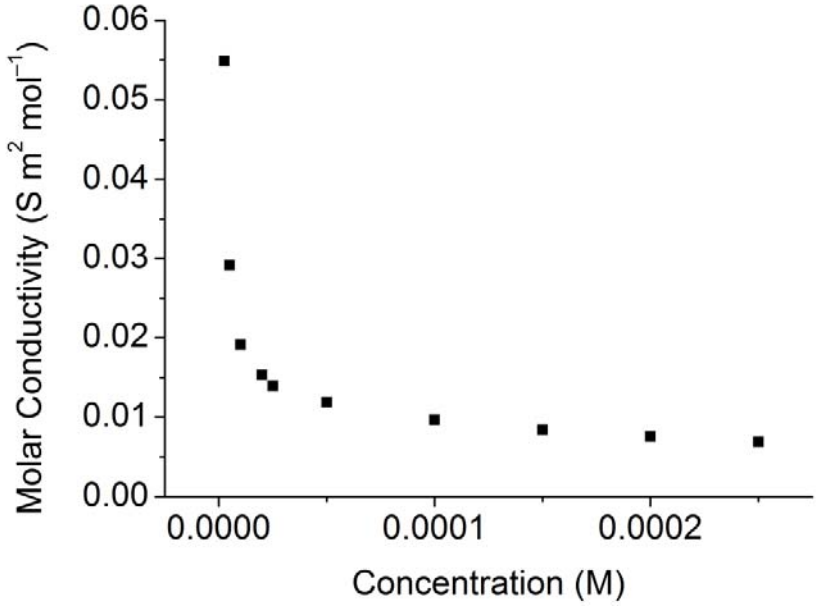

Fig. 3 Molar conductivity Λ_m as a function of concentration of 1 in dmf at 24 °C. $\Lambda_m = \kappa/c$, where c is the concentration. The limiting value of ca. 10 mS m^2 mol^{-1} is typical for strong (i.e. fully dissociated) electrolytes

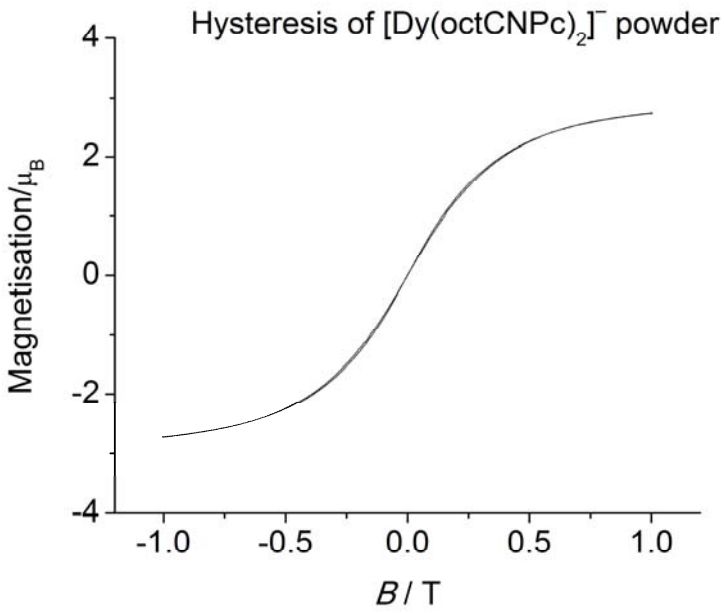

Fig. 4 Hysteresis of a powder pellet of pure 1 at T = 1.8K.

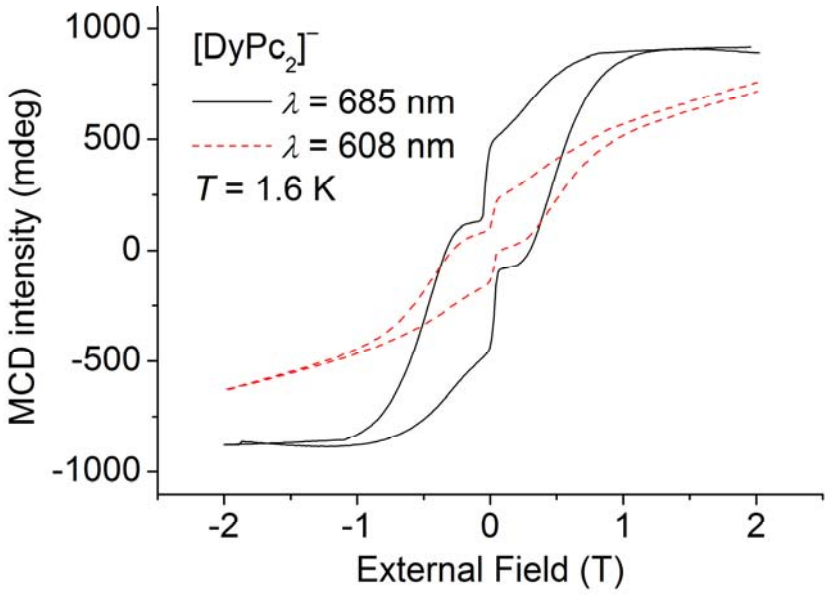

Fig. 5 MCD spectra on a frozen solution of $[DyPc_2]^-$ in dimethylformamide:dichloromethane (1:1 v/v) at 1.6 K, and two different wavelengths as indicated. Sweep rate 0.963 T/min

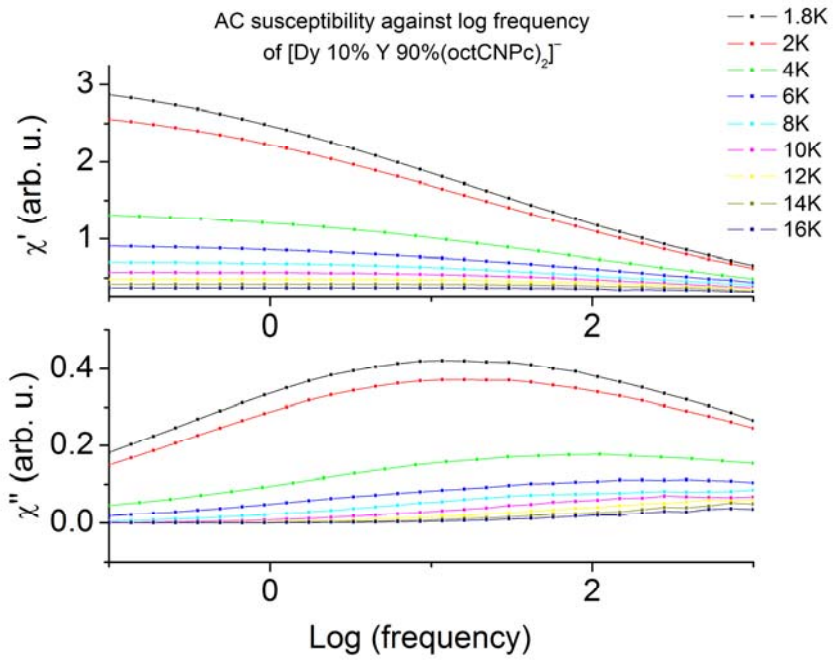

Fig. 6 χ' and χ" against log (frequency) for a powder sample of 10:90 $[(Dy:Y)(oCNPc)_2]^-$ without external magnetic field.