

Electronic Supplementary Information (ESI)

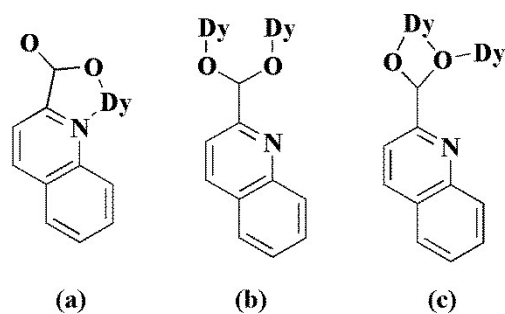
Evolution from linear tetranuclear cluster into one-dimensional chain of Dy(III) single-molecule magnets with enhanced energy barrier

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Scheme S1. Coordination modes of the QLC⁻ ligand in **1** and **2**.

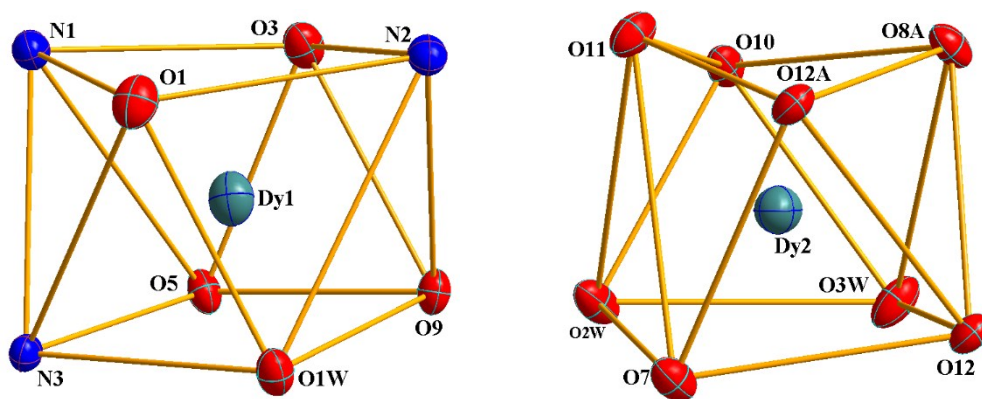


Fig. S1 The coordination polyhedrons of the Dy(III) centers in **1**.

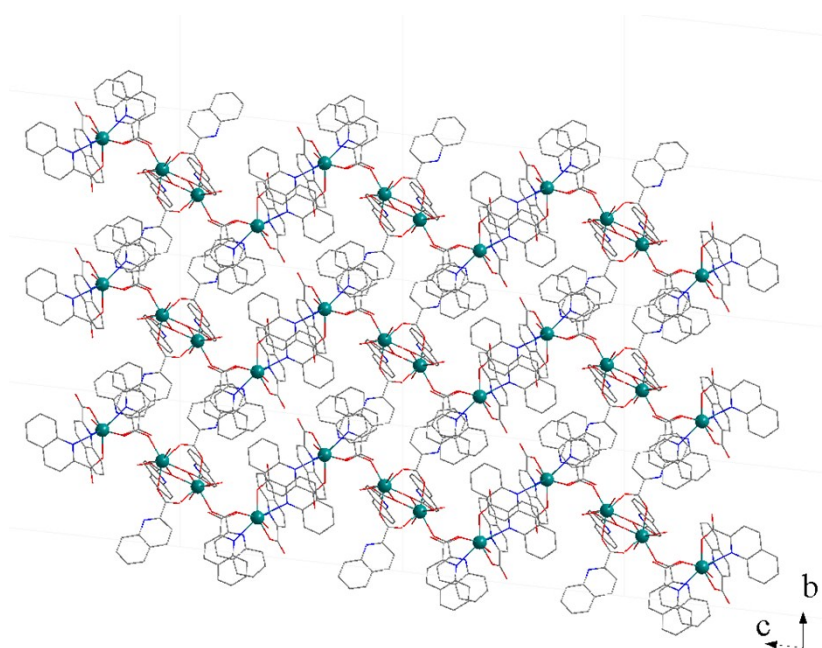


Fig. S2 View of the 3D packing of **1** along the *a* axis.

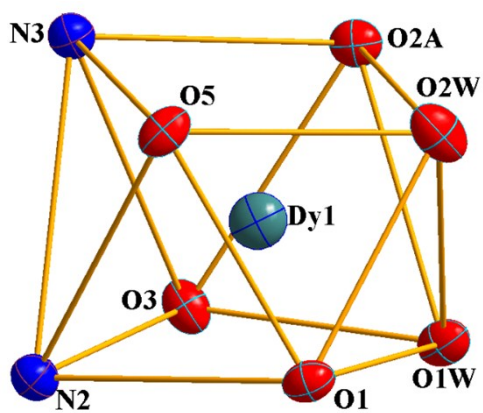


Fig. S3 The coordination polyhedron of the Dy(III) center in **2**.

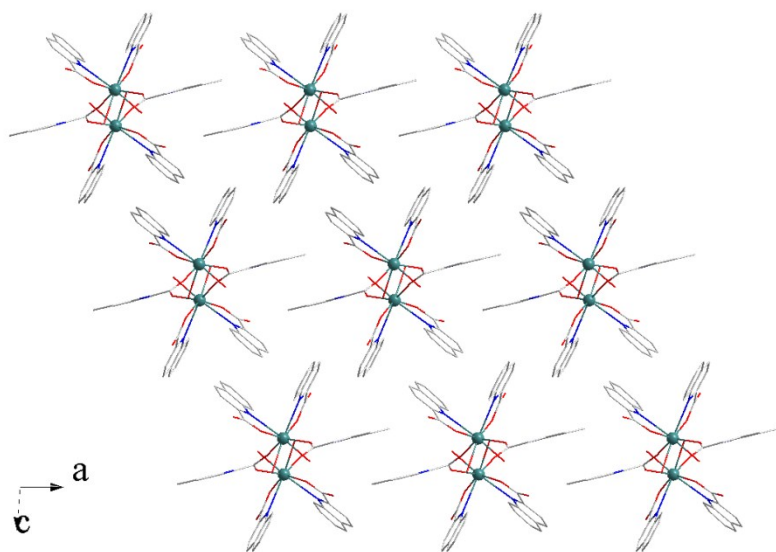


Fig. S4 View of the 3D packing of **2** along the *b* axis.

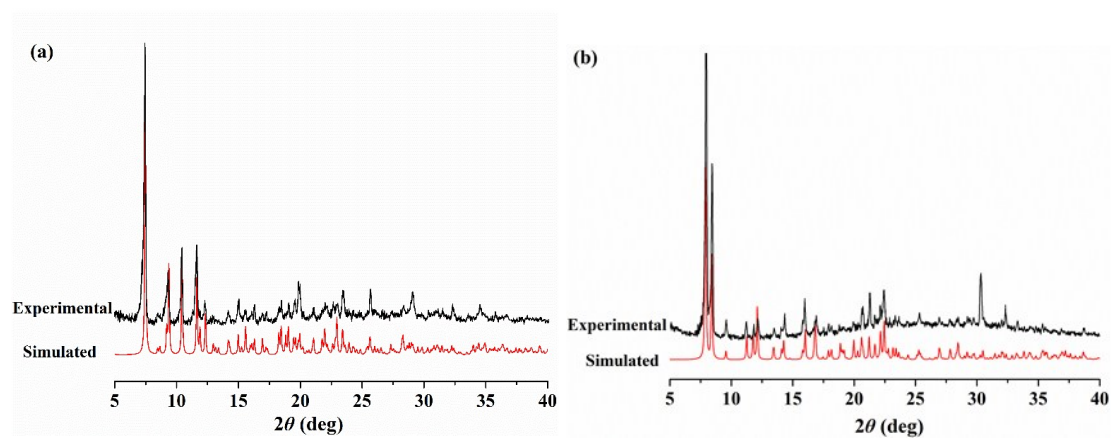


Fig. S5 PXRD patterns of **1** (a) and **2** (b).

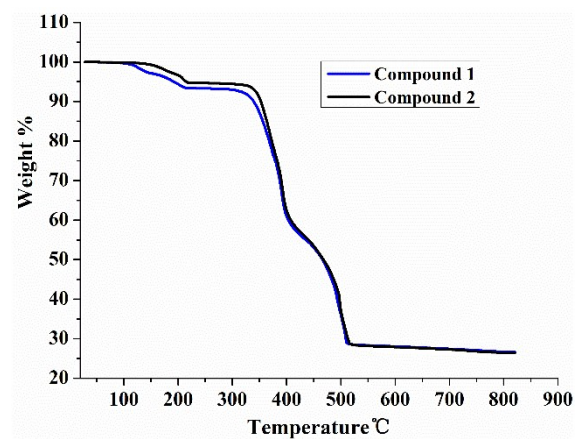


Fig. S6 TGA curves of **1** and **2**.

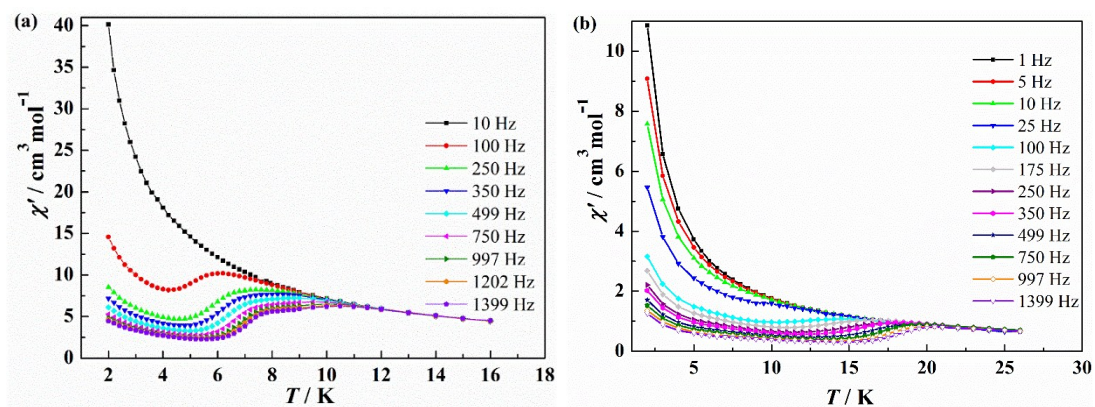


Fig. S7 Temperature dependence of in-phase ac susceptibility signals under zero dc field for **1** (a) and **2** (b).

Table S1. Linear Combination of Two Modified Debye Model Fitting Parameters for **1**.

$T(K)$	$\chi_2(\text{cm}^3.\text{mol}^{-1})$	$\chi_1(\text{cm}^3.\text{mol}^{-1})$	$\chi_0(\text{cm}^3.\text{mol}^{-1})$	$\tau_1(\text{s})$	α_1	$\tau_2(\text{s})$	α_2
4.5	15.10115	2.08511	7.0444×10^{-6}	0.01126	0.09603	0.00223	0.15512
5.0	13.67278	1.94546	0.00007	0.00645	0.10734	0.00163	0.12251
5.5	12.4507	1.81276	4.7092×10^{-13}	0.00319	0.15753	0.00111	0.10144
6.0	11.45966	1.62197	0.99478	0.00453	0.17637	0.00069	0.10577
6.5	10.64275	1.24808	0.44135	0.00437	0.18584	0.00045	0.17344
7.0	9.99517	0.95639	0.00008	0.00471	0.1439	0.00028	0.26777

Table S2. Debye model fitting parameters **2**.

$T(K)$	$\chi_T(\text{cm}^3.\text{mol}^{-1})$	$\chi_S(\text{cm}^3.\text{mol}^{-1})$	α
14	1.21947	0.29303	0.00322
15	1.14072	0.29851	0.03413
16	1.07555	0.26402	0.03687
17	1.01897	0.29697	0.05513