15

## **Supporting Information**

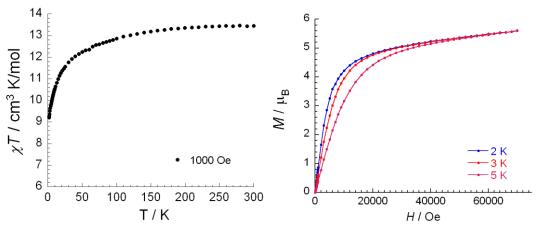
for

Slow Magnetic Relaxation in Tris(diphosphanylamido) and Tetra(phosphanoamido) Dysprosium Complexes

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 $Figure \ S1. \ (\text{Left}) \ \text{Temperature dependence of dc magnetic susceptibility of complex 1.} \ (\text{Right}) \ \text{Field dependence of magnetization of complex 1.}$ 

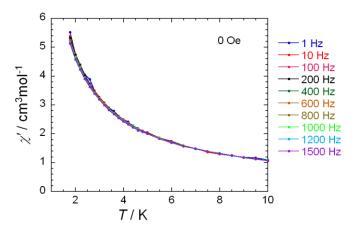
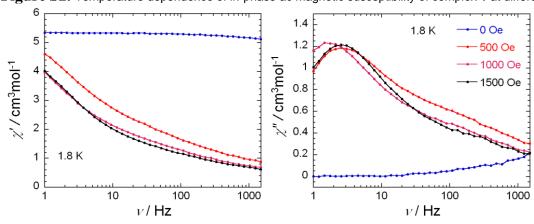
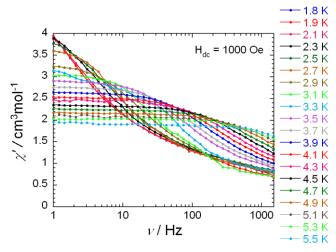


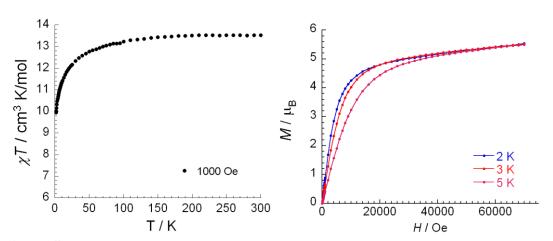
Figure S2. Temperature dependence of in-phase ac magnetic susceptibility of complex 1 at different frequencies.



<sup>10</sup> **Figure S3.** Frequency dependence of ac magnetic susceptibility of complex 1 under different external dc fields.



**Figure S4.** Frequency dependence of in-phase ac magnetic susceptibility of complex 1 at indicated temperatures under a dc field of 1000 Oe.



**Figure S5.** (Left) Temperature dependence of dc magnetic susceptibility of complex 1. (Right) Field dependence of magnetization of complex 2.

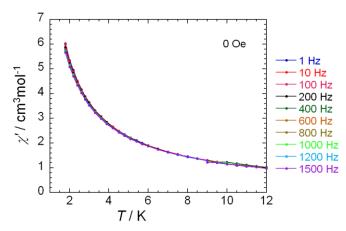


Figure S6. Temperature dependence of in-phase ac magnetic susceptibility of complex 2 at different frequencies.

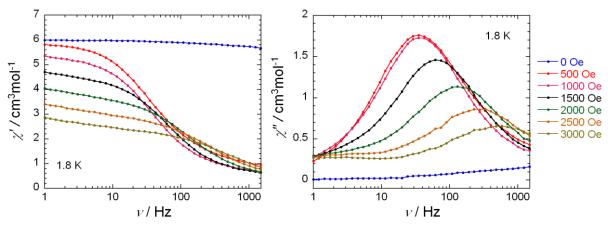
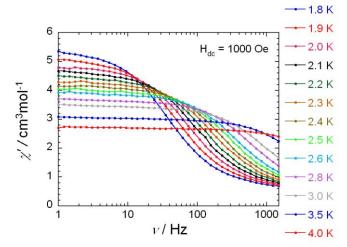


Figure S7. Frequency dependence of ac magnetic susceptibility of complex 2 under different external dc fields.



**Figure S8.** Frequency dependence of in-phase ac magnetic susceptibility of complex **2** at indicated temperatures under a <sup>5</sup> dc field of 1000 Oe.