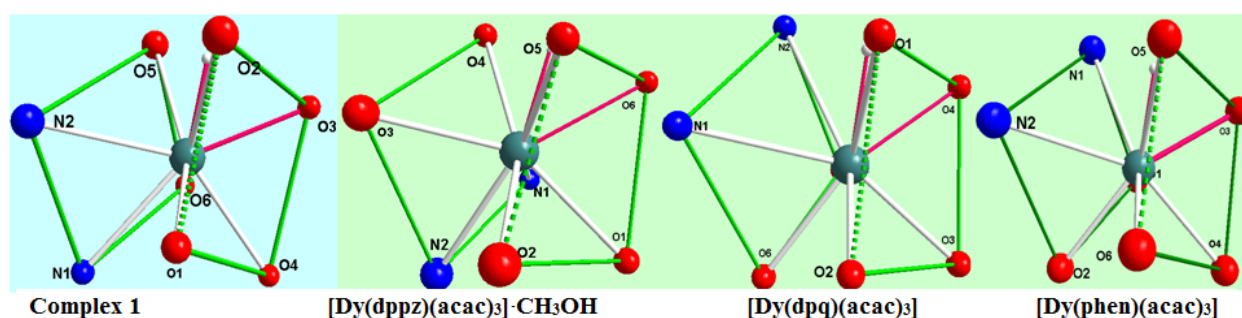


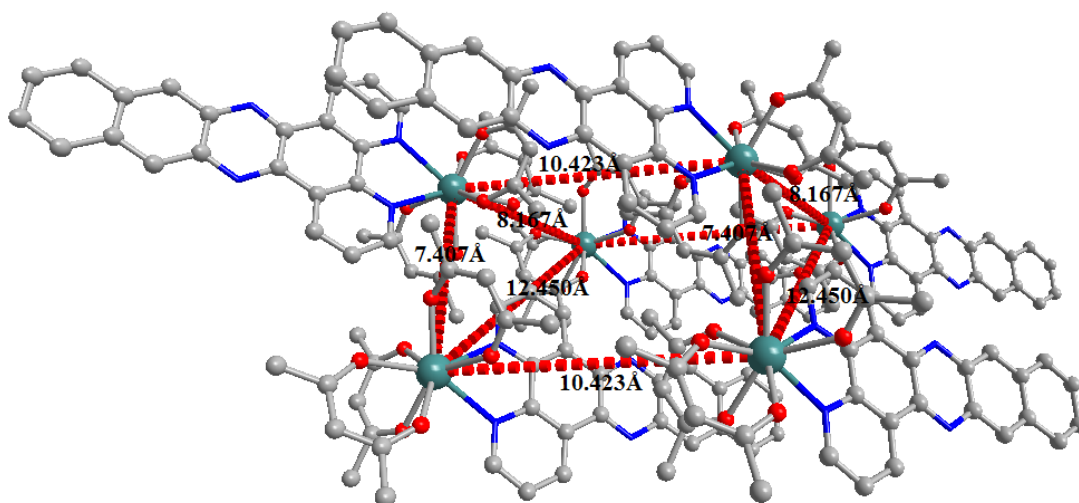
## Supporting Information

### [Dy(acac)<sub>3</sub>(dppn)]·C<sub>2</sub>H<sub>5</sub>OH: construction of single-ion magnet based on the square-antiprism dysprosium(III) ion

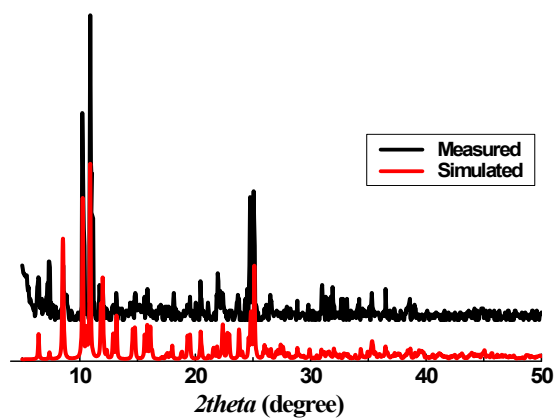
Gong-Jun Chen, Yang Zhou, Guo-Xia Jin, Yu-Bin Dong\*



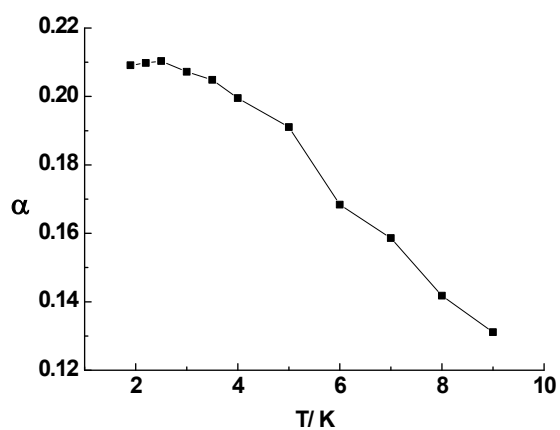
**Fig. S1** Another angle views of the structures of **1**, [Dy(dppz)(acac)<sub>3</sub>]·CH<sub>3</sub>OH, [Dy(dpq)(acac)<sub>3</sub>] and [Dy(phen)(acac)<sub>3</sub>].



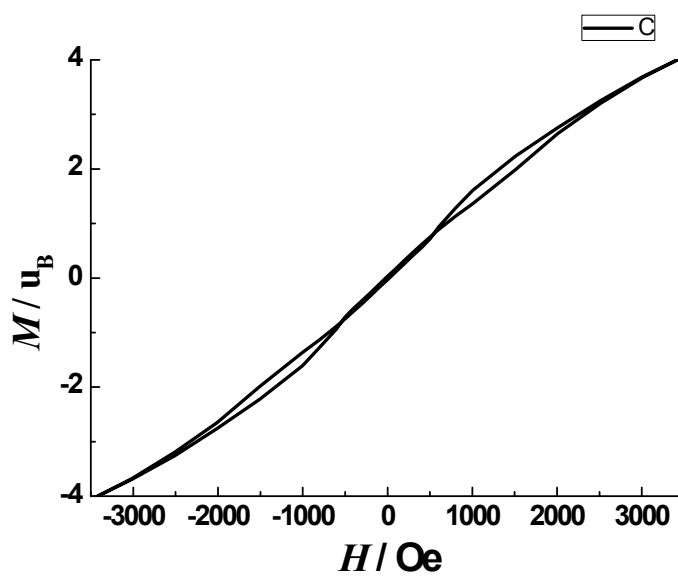
**Fig. S2** The Dy...Dy distances found in **1**.



**Fig. S3** The powder X-ray diffraction (PXRD) patterns of **1**.



**Fig. S4** Fitted broadness parameters  $\alpha$  as a function of temperature for **1**.



**Fig. S5** The magnetic hysteresis loop of **1** at 2 K.

