

**Supporting Information**

**Imparting Hysteretic Behavior to Spin Transition in Neutral Mononuclear Complexes**

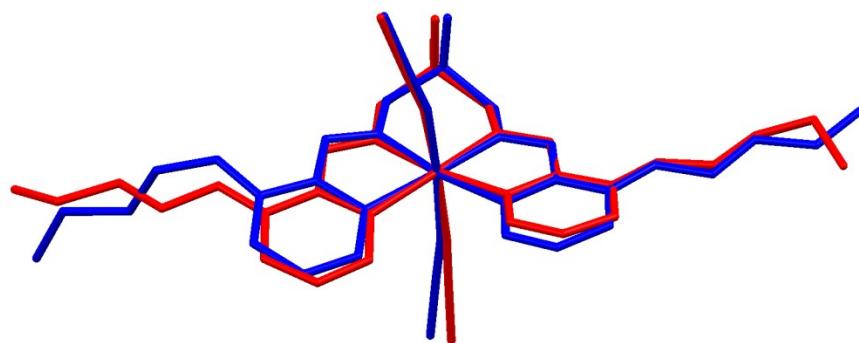
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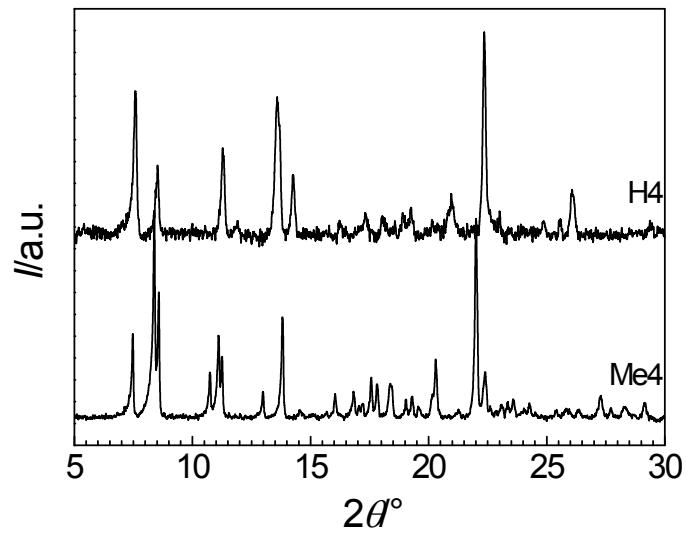
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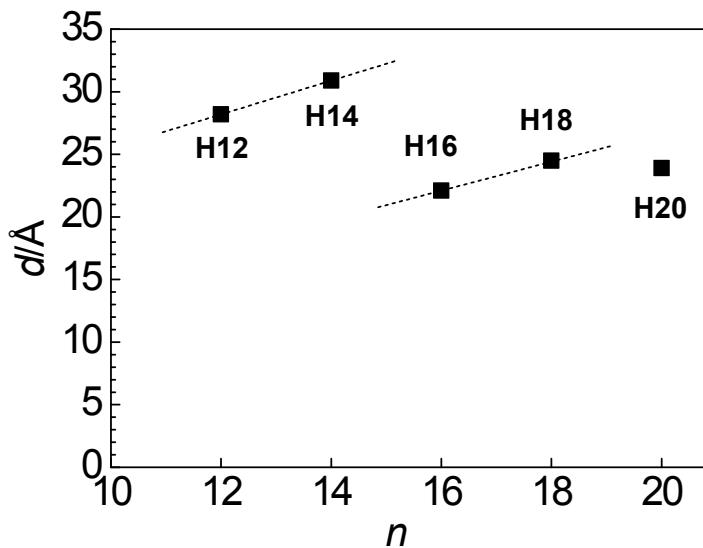
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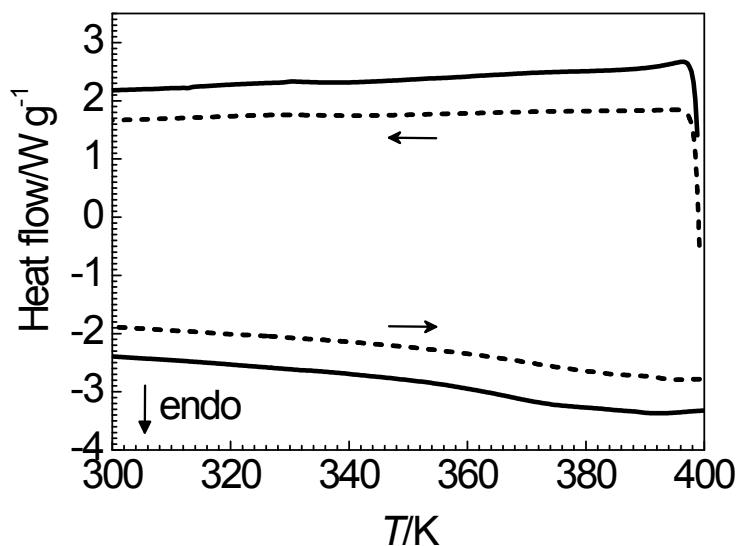
**Figure S1.** Minimized overlay of two independent complex molecules of **Me4** at 120 K. The main difference is due to different conformation of the butyl substituents.



**Figure S2.** Comparison of diffractograms of **Me4** and **H4** collected at 300 K.



**Figure S3.** Number of carbon atoms in aliphatic substituents  $n$  vs interlayer distance  $d$ .



**Figure S4.** DSC profiles of **H12** (---) and **H14** (—).