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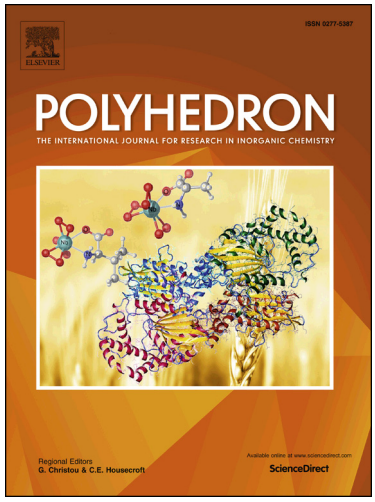

Single-molecule magnetism within a family of [$Ln^{III}_{2}Mn^{III}_{10}$] complexes from 2-hydroxymethylpyridine

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Single-molecule magnetism within a family of $[Ln^{III}_2Mn^{III}_{10}]$ complexes from 2-hydroxymethylpyridine

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ABSTRACT

A family of heterometallic Ln/Mn (Ln = lanthanide) clusters with a $[Ln^{III}_2Mn^{III}_{10}]$ core has been synthesized. The complexes $[Ln_2Mn_{10}O_8(O_2CPh)_{10}(hmp)_6(NO_3)_4]$ (Ln = Pr (**1**), Nd (**2**), Sm (**3**), Gd (**4**), Tb (**5**), Dy (**6**), Ho (**7**) and Er (**8**)) were prepared from the reaction of $(NBu_4)[Mn_4O_2(O_2CPh)_9(H_2O)]$, 2-hydroxymethylpyridine (hmpH) and $Ln(NO_3)_3$. The analog with diamagnetic Y^{III}, $[Y_2Mn_{10}O_8(O_2CPh)_{10}(hmp)_6(NO_3)_4]$ (**9**), was also synthesized to assist the

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