

### Design of new Mn Precursors for Single-molecule Magnet

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In the field of molecular magnetism, specific attention is devoted to polynuclear complexes with large-spin ground states and high anisotropy that exhibit original magnetic properties such as single-molecule magnet behaviour. The important feature of the rationale synthetic approach is the possibility that the chemist has to predict the nature of the ground state, the size of the molecule, its shape and the order of magnitude of the magnetic anisotropy that plays an crucial role in determining the blocking temperature of the magnetic moment. The synthesis of high-spin molecules has been considered as one possible route to the preparation of molecular-based ferromagnets.

Three new inorganic-organic compounds of formulae  $[\text{Mn}(\text{AcAc})_2(\text{py})_2]_2(\text{ClO}_4)_2$ ,  $[\text{Mn}(\text{AcAc})_3]$  and  $[\text{Mn}(\text{acacen})_2](\text{ClO}_4)$ , were AcAc = acetylacetonato, acacenH<sub>2</sub> = N,N'-ethylenebis (acetylacetone) imine and py = pyridine. They might be veiwed as new precursors for the design of single molecule or single chain magnets.

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**Keywords:** molecular magnetism, crystal engineering, coordination complexes