

*Title:* **A new Mn<sup>III</sup> single molecule magnet derived from salicyloximate ligand.**

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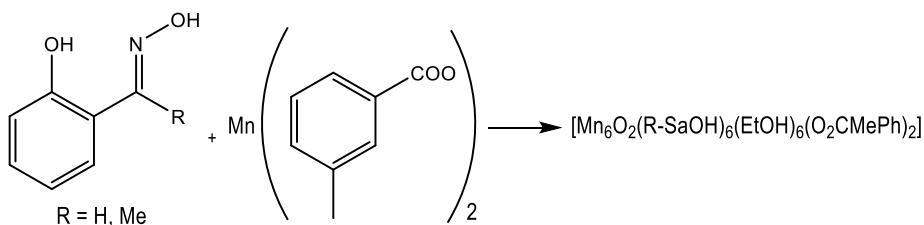
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[Mn<sub>6</sub>] Systems have been closely studied because they provide interesting magnetic properties, in particular they behave like molecular magnets at low temperatures. This behavior is interesting because it presents possible applications in the field of information storage.

In this research work two systems [Mn<sub>6</sub>] have been synthesized using different ligands oxime. Good quality crystals were obtained to carry out structural characterization by X-ray diffraction. This characterization was only made of a one compound due to lack of time. The two systems were also characterized through infrared spectroscopy (IR). Finally, a magnetic study was carried out using different measures. On the one hand, measurements of DC and AC magnetic susceptibility were made, and the other hand magnetization measures were made.



Scheme 1. Reactions to synthesize compounds **1** and **2**.

The compound in which the magnetic study was performed exhibits SMM behavior, the values of the theoretical and experimental potential barrier were calculated, and they have very different values between them.

**Keywords:** SMM, oxime, systems [Mn<sub>6</sub>], magnetic susceptibility, magnetization.