

Generalized theoretical approach to quasi-one-dimensional molecular magnets

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Two quasi-one-dimensional compounds $[Ln^{III}(terpy)(DMF)_4][W^V(CN)_8] \cdot 6H_2O$, where Ln stands for Gd or Sm , were synthesized and the measurements of their magnetic features were carried out. Magnetization was measured at 2 K in the field range 0–5 T. To extract physical information from the experimental data a generalization of the theoretical approach given by Verdaguer *et al.* [Phys. Rev. B 29, 5144 (1984)] is put forward. That theoretical model is found to fit the data well. It allows for the determination not only of the coupling constant but also of the zero-field splitting parameter.

← 13.4 cm →

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9.7 cm