

Peer Review

Review of: "Anomalous Scaling and Magnetization Temperature Dependence in Cubic Ferromagnetic Crystals"

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The author studies the study of “

Anomalous Scaling and Magnetization Temperature Dependence in Cubic Ferromagnetic Crystals».

1. The author should give more of the motivation for why they chose spin dynamics of cubic ferromagnetic crystals EuO and EuS in the introduction.

2. The authors should cite these references in the new version:

DOI 10.1140/epjb/s10051-023-00567-2; Journal of Superconductivity and Novel Magnetism Volume 35, Issue 12, Pages 3613 – 3622 December 2022; Applied Physics A: Materials Science and Processing Volume 128, Issue 11 November 2022 Article number 1023; Solid State Communications, 2022, 355, 114932; Journal of Materials Science: Materials in Electronics, 2022, 33(30), pp. 23524–23541; Optical and Quantum Electronics, 2022, 54(10), 667; Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2022, 284, 115906.

3. The authors should explain more about $T=0K$.

The author should give more explanation for the dependence of some magnetic phase on the effect of magnetic parameters such as J_1 , J_2 , J , T_C ,....

4. I propose to the author to use $J_1 = \alpha J_2$ with $\alpha = +1$ or -1 .

5. The authors should explain the absence of a compensation temperature in this system.

6. The authors should explain in the figure whether it is given in ferro or in antiferromagnetic.

7. The authors should give the units of each parameter.

8. The authors should explain more how the critical temperature T_C and J_1 , J_2 were calculated.

In general, the manuscript has a correct methodological structure. But in my opinion, the authors

should make a major revision of this manuscript. I hope that the authors reconsider all these points and clarify some issues.

Attachments: available at <https://doi.org/10.32388/MXPP8M>

Declarations

Potential competing interests: No potential competing interests to declare.