

Erratum: Interplay of superexchange and vibronic effects in the hidden order of Ba₂MgReO₆ from first principles [Phys. Rev. B 110, L201101 (2024)]

Dario Fiore Mosca , Cesare Franchini, and Leonid V. Pourovskii 

(Received 21 April 2026; published 9 June 2026)

DOI: [10.1103/5jv9-gg5n](https://doi.org/10.1103/5jv9-gg5n)

We report a correction to the equation-of-state (EOS) parameters of Ba₂MgReO₆ (BMRO) tabulated in the Supplemental Material (SM) of the above article. An error in the Birch-Murnaghan EOS fitting script led to incorrect values of the bulk modulus B_0 and its pressure derivative B'_0 being reported. The correct Table IV in the SM is as follows:

Supplementary TABLE IV. Calculated bulk modulus (B_0 in GPa) and derivative of bulk modulus (B'_0).

	DFT (this work)	DFT [1]
B_0 (GPa)	144.91	158.27
B'_0	4.92	4.80

We note that the EOS curve shown in SM Fig. 6 of the original article, while generated with the incorrect fit parameters, is quite close with the corrected fit due to a partial error compensation. Accordingly, the BMRO volumes employed in our phase-diagram calculations are close to those obtained from the corrected EOS. The phase diagram of Fig. 2 in the main text and the conclusions of the paper are therefore unaffected by this correction.

The corrected EOS is shown in Fig. 1, together with the volume data points used in the phase-diagram calculations. The corresponding (new) lattice parameters at selected pressures are compared in Table I to the (old) data of Table VI of the SM.

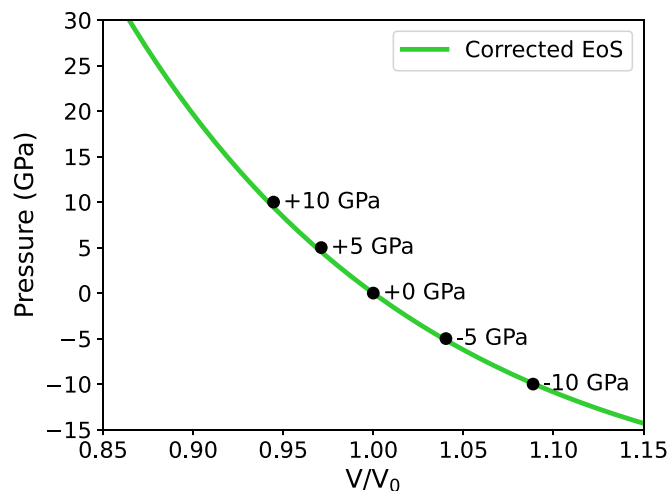


FIG. 1. Corrected Birch-Murnaghan EOS for BMRO. Black symbols indicate the volume points used in the phase-diagram calculations.

TABLE I. Lattice constants from the old and new EOS at given pressures.

Pressure (GPa)	a_{old} (Å)	a_{new} (Å)
−10	8.22258	8.22429
−5	8.09898	8.09512
0	7.99292	7.99292
5	7.91524	7.90787
10	7.84270	7.83479

We thank I. Zivkovic for bringing this discrepancy to our attention.

-
- [1] S. A. Dar, V. Srivastava, U. K. Sakalle, and G. Pagare, Insight into electronic structure, magnetic, mechanical and thermodynamic properties of double perovskite $\text{Ba}_2\text{MgReO}_6$: A first-principles investigation, [Comput. Condens. Matter](#) **14**, 137 (2018).