

Erratum: Phase transitions and equation of state of zirconium under high pressure [Phys. Rev. B **102**, 184105 (2020)]

Simone Anzellini , François Bottin, Johann Bouchet, and Agnès Dewaele 



(Received 10 February 2026; published 8 May 2026)

DOI: [10.1103/gwcx-xwhs](https://doi.org/10.1103/gwcx-xwhs)

We have identified a mistake in the data points plotted in Fig. 5 of the original article and in the fitting parameters provided in Table I. The fourth run data points were not correctly represented, and the fit was performed using only three of the four experimental runs. The refitted parameters for β -Zr (this study), third line of Table I, are $K_0 = 84.1(7)$ GPa and $K'_0 = 3.81(4)$, instead of $K_0 = 93(1)$ GPa and $K'_0 = 3.20(9)$ in the original article.

To ensure technical accuracy, we provide herein the revised Table I and Fig. 5. Please note that in both the revised Figure and Table, the original reference numbering of the paper has been strictly maintained for consistency. We also provide, in Supplemental Material [1], the raw lattice parameter data to avoid any confusion.

These corrections provide an accurate report of the experimental measurements and do not alter the discussion or the physical conclusions of the study.

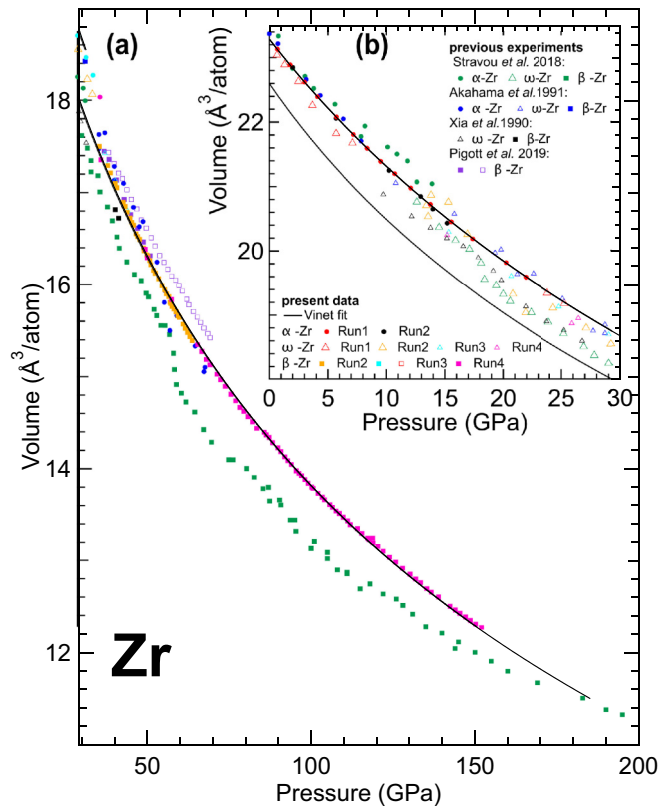


FIG. 5. P - V data points for the three phases of Zr collected at 300 K in this study and Refs. [7,12,13,15]. (a) P - V points collected for β -Zr and (b) P - V points collected for α -Zr and ω -Zr. Black solid lines correspond to fits of α and β -Zr P - V points obtained in the present study.

TABLE I. Rydberg-Vinet equation of state parameters obtained in this study and in the literature [3,13] using the same technique. The bold numbers have been fixed during the fit. The error bars on the last digit(s) correspond to the 95% confidence interval. The parameters listed for the β -Ti are an output from a fit of the high-temperature P - V data, and have higher error bars than the others.

Zirconium				Titanium			
Phase	V_0 ($\text{\AA}^3/\text{at}$)	K_0 (GPa)	K'_0	Phase	V_0 ($\text{\AA}^3/\text{at}$)	K_0 (GPa)	K'_0
α -Zr (this study)	23.29(1)	99.3(1.2)	2.92(13)	α -Ti [3]	17.65(2)	110.4(2.7)	4
ω -Zr (this study)	23.27(11)	78(7)	4.45(62)	ω -Ti [3]	17.46(10)	106.9(6)	3.68(20)
β -Zr (this study)	22.6	84.1(7)	3.81(4)	β -Ti [3]	17.8	96	3.1
ω -Zr [13]	23.6	78(6)	2.95(70)				
β -Zr [13]	22.6	80(5)	3.35(40)				
β' -Zr [13]	22.5(6)	43(5)	6				

The authors thank J. D. McHardy from the University of Edinburgh for pointing out this error.

[1] See Supplemental Material at <http://link.aps.org/supplemental/10.1103/gwcx-xwbs> for raw lattice parameter data.