

Ga-O (Gallium-Oxygen)

H. Okamoto

The Ga-O phase diagram was unknown in [Massalski2]. Figure 1 shows the Ga-O phase diagram calculated by [2004Zin] based on available thermodynamic and phase diagram data. Figure 2 shows the phase relationship near the melting point of Ga₂O₃.

Ga-O structure data are given in Table 1. Several polymorphic forms of Ga₂O₃ have been observed

but other than that given in Table 1 are metastable [2004Zin].

References

2004Zin: M. Zinkevich and F. Aldinger, Thermodynamic Assessment of the Gallium-Oxygen System, *J. Am. Ceram. Soc.*, 2004, **87**(4), p 683-691

Table 1 Ga-O crystal structure data

Phase	Composition, at.% O	Pearson symbol	Space group	Strukturbericht designation	Prototype
(Ga)	0	<i>oC8</i>	<i>Cmca</i>	A11	Ga
Ga ₂ O ₃	60	<i>mC20</i>	<i>C2/m</i>	...	Dy ₃ Ni ₂

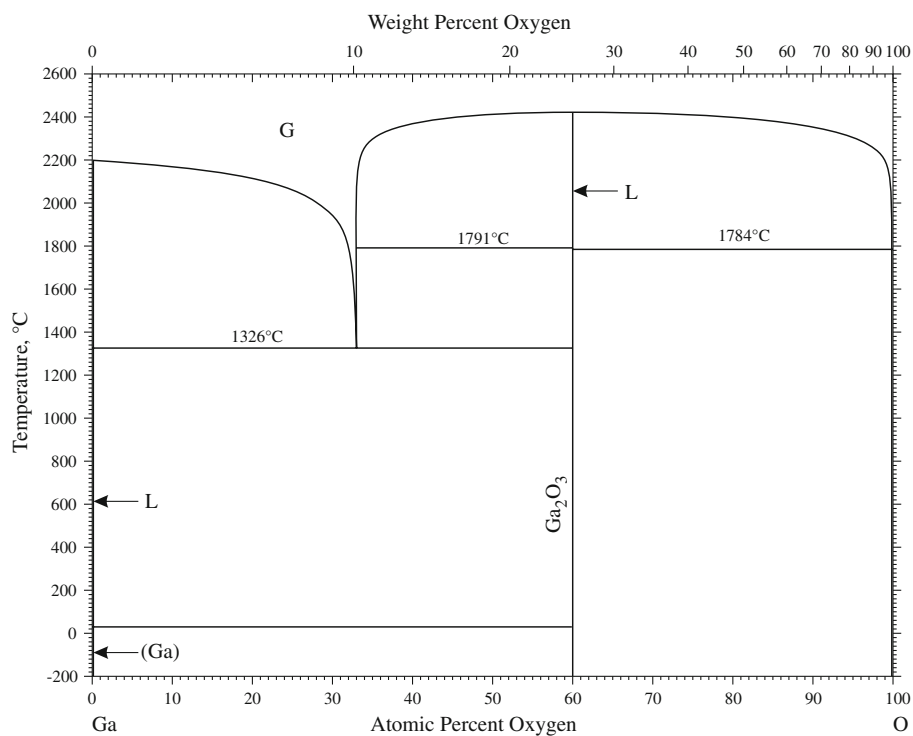


Fig. 1 Ga-O phase diagram

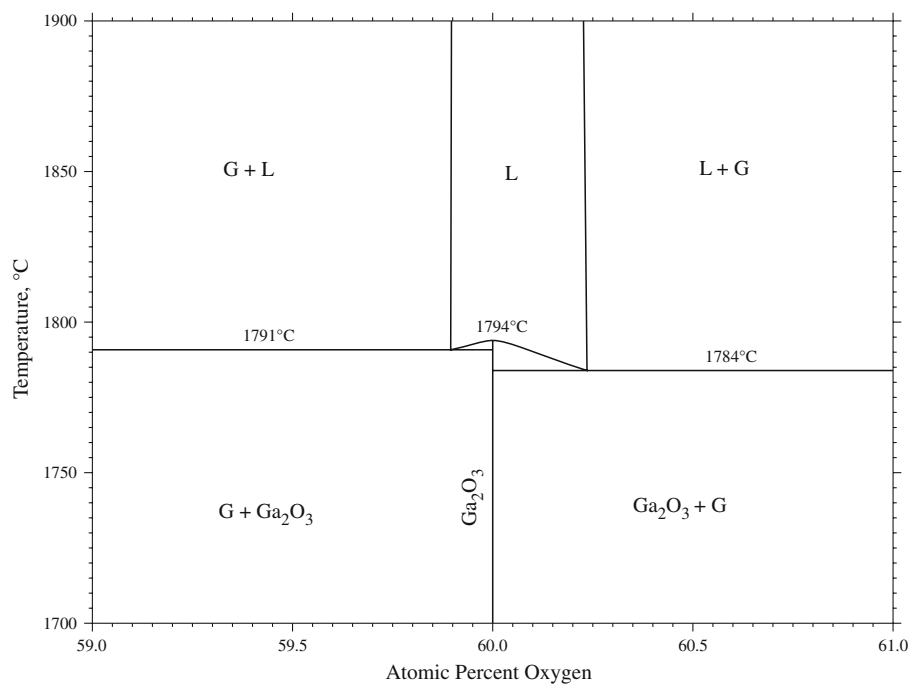


Fig. 2 Phase relationship near the melting point of Ga_2O_3