

Ga-Pt (Gallium-Platinum)

H. Okamoto

The Ga-Pt phase diagram in [Massalski2] (solid lines in Fig. 1) was thermodynamically assessed by [2006Li]. The result is shown with dashed lines in Fig. 1. The phase boundary data adopted by [2006Li] in their assessment were essentially the same as those adopted by [Massalski2] from [1976Gue]. Noticeable differences between [Massalski2] and [2006Li] are as follows:

GaPt liquidus: The [Massalski2] diagram is too asymmetric. [2006Li] is more likely although [Massalski2] agrees better with available experimental data.

Ga₃Pt₅: [2006Li] assumes a line compound whereas [Massalski2] shows ~5 at.% solubility range. This disagreement must be settled experimentally.

γGaPt₃: The difference in the width must be examined experimentally.

βGaPt₃ and αGaPt₃: These phases were not taken into account by [2006Li].

(Pt): Experimental data are not available to support either [Massalski2] or [2006Li].

References

- 1976Gue:** P. Guex and P. Feschotte, Binary Systems Platinum-Aluminum, Platinum-Gallium, and Platinum-Indium, *J. Less-Common Met.*, 1976, **46**(1), p 101-116, in French
- 2006Li:** M. Li, F. Wang, and W. Zhang, Thermodynamic Assessment of the Ga-Pt System, *Intermetallics*, 2006, **14**(7), p 826-831

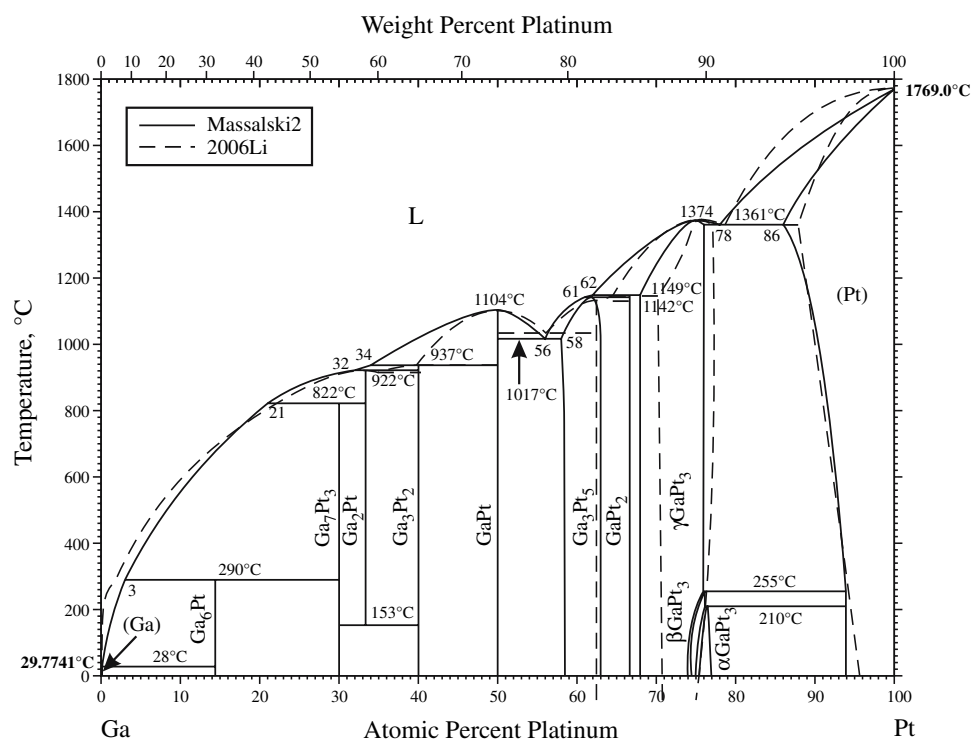


Fig. 1 Ga-Pt phase diagram