

Ag – Ga (Silver – Gallium)

Phase diagram

Feschotte et al. [91 Fes] found the intermediate phase AgGa.

Okamoto [01 Oka] has published an Ag-Ga phase diagram (Fig. 1) on the basis of assessments performed by [92 Oka] and experimentally determined phase equilibria by [00 Gun].

The existence of the intermediate phase AgGa needs confirmation. The dependence of lattice constants of Ag-solid solution on concentrations as given by [00 Gun] (including data also from literature) is shown in Fig. 2.

Crystal structure

Using X-ray diffractography [91 Fes] found that AgGa is of cubic body centered structure with the lattice constant.

$$a = 0.3171 \text{ nm.}$$

Recently, Yuantao et al. [92 Yua] have determined the lattice constant of (Ag) samples obtained by splat cooling. The results are plotted in Fig. 3.

Figures

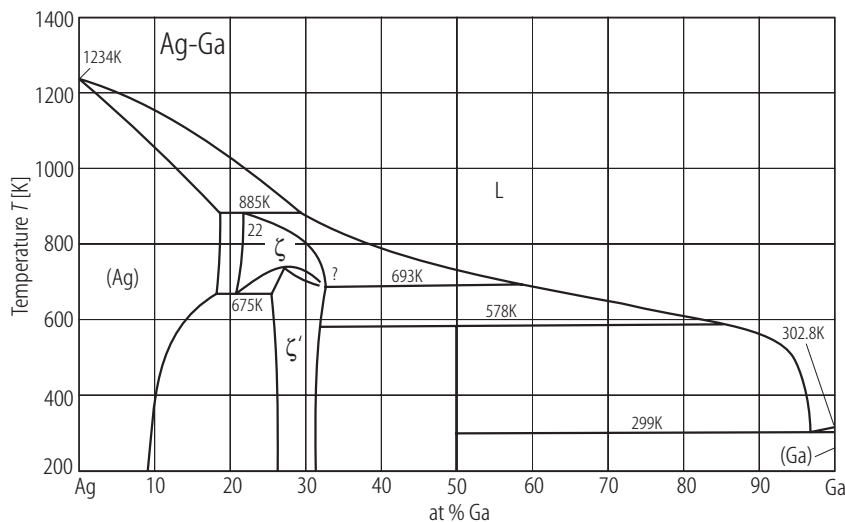


Fig. 1. Ag-Ga. Phase diagram proposed by [01 Oka].

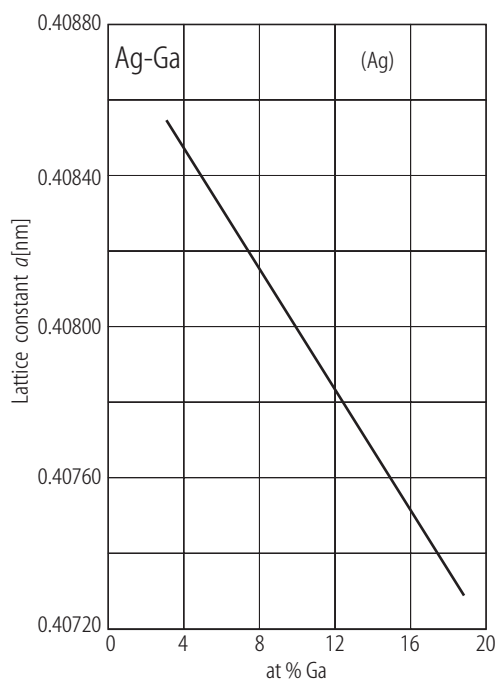


Fig. 2. Ag-Ga. Lattice constant a as a function of concentration [00 Gun].

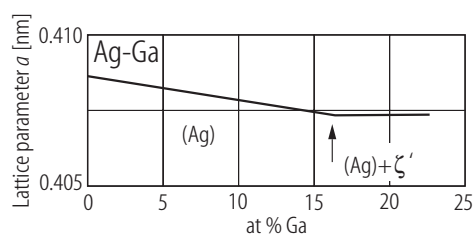


Fig. 3. Ag-Ga. Lattice constants of stable and metastable (Ag) solid solutions [92 Yua].

References

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