

Au – Zn (Gold – Zinc)

Phase diagram

Ipsen et al. [88 Ips] using DTA have investigated very thoroughly the melting equilibria of β' . The results obtained are plotted in Fig. 1.

Thermodynamics

Using the EMF method with solid electrolyte Prasad et al. [93 Pra] have determined thermodynamic properties of alloys with Zn-concentrations < 20 at%. Fig. 2 shows the integral molar free energy of the formation of solid (900 K) and liquid (1300 K) Au-Zn alloys. In Fig. 3 the integral molar enthalpy of the formation of solid and liquid Au-Zn alloys are plotted.

Figures

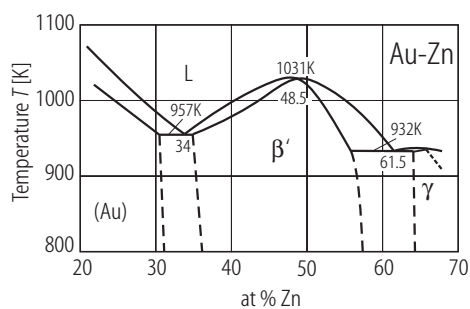


Fig. 1. Au–Zn. Melting equilibria involving β' [88 Ips].

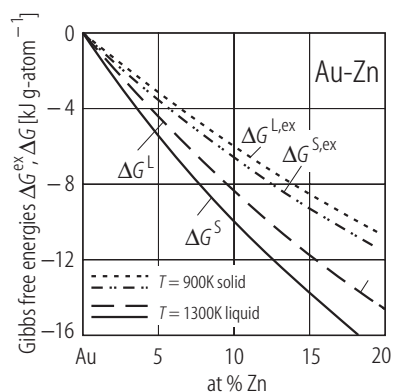


Fig. 2. Au–Zn. Integral molar Gibbs free enthalpy of the formation of solid (900 K) and Gibbs free enthalpy of liquid (1300 K) alloys [93 Pra].

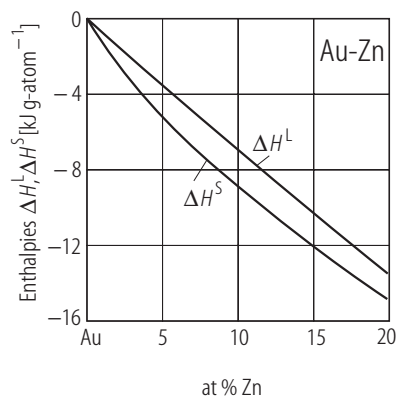


Fig. 3. Au–Zn. Integral molar enthalpy of the formation of solid and liquid Au-Zn alloys [93 Pra].

References

- [88 Ips] Ipser, H., Krachler, R.: Scripta Metallurg. **22** (1988) 1651
[93 Pra] Prasad, R., Bienzle, M., Sommer, F.: J. Alloys and Comp. **200** (1993) 69