

Au – Pb (Gold – Lead)

Thermodynamics

Bouhajib et al. [99 Bou] have mentioned that enthalpies of formation, as have been published by Okamoto et al. [84 Oka], „surprisingly“ are positive. Therefore [99 Bou] have redetermined these values. There was used the experimental method of dissolution calorimetry at 650 K taking liquid lead as the solvent. The mentioned authors, indeed, now, as expected, obtained negative values of enthalpies of formation. There are for

$$\text{Au}_2\text{Pb} : \quad \Delta H^{\text{S}} = - 3.1 \text{ kJ mol}^{-1}$$

$$\text{AuPb}_2 : \quad \Delta H^{\text{S}} = - 3.2 \text{ kJ mol}^{-1}$$

$$\text{AuPb}_3 : \quad \Delta H^{\text{S}} = - 1.6 \text{ kJ mol}^{-1}$$

References

- [84 Oka] Okamoto, H., Massalski, T.B.: Bull. Alloy Phase Diagrams **5** (1984) 276
[99 Bou] Bouhajib, A., Nadiri, A., Yacoubi, A., Bros, H., Castanet, R.: J. Alloys and Comp. **282** (1999) 149