

Au – Ce (Gold – Cerium)

Thermodynamics

Standard enthalpies of formation of three intermediate phases have been determined calorimetrically by Kleppa et al. [85 Kle] and Fitzner et al. [93 Fit]. The results are given in Table 1.

Table 1. Au–Ce. Standard enthalpies of formation of intermediate phases [85 Kle], [93 Fit] in $[\text{kJ g-atom}^{-1}]$.

Phase	ΔH_{298}°
$\text{Au}_{51}\text{Ce}_{14}$	-49.5 ± 2.2
Au_2Ce	-57.5 ± 4.7
AuCe	-62.8 ± 4.2

By high-temperature calorimetry Fitzner et al. [93 Fit] have determined enthalpies of mixing at 1473 K. The results obtained are given in Fig. 1.

Figure

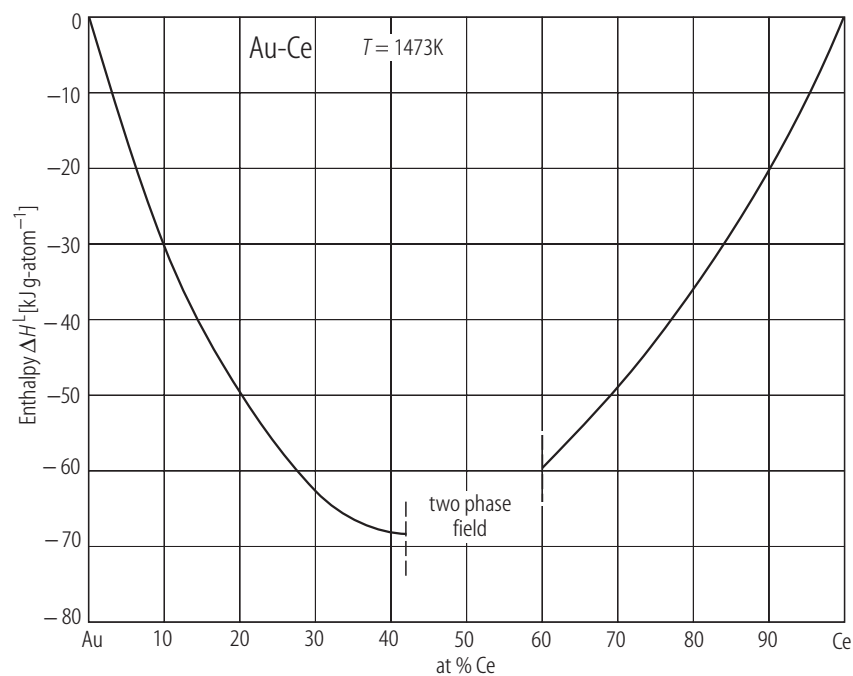


Fig. 1. Au–Ce. Enthalpies of mixing determined by [93 Fit].

References

- [85 Kle] Kleppa, O.J., Topor, L.: Metall. Trans. A **16A** (1985) 93
[93 Fit] Fitzner, K., Kleppa, O.J.: Metall. Trans. A **24A** (1993) 1827