

In-Ir (Indium-Iridium)

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The In-Ir phase diagram was unknown in [Massalski2]. A partial phase diagram up to 50 at.% Ir was reported by [2000Anr] (see [2001Oka]). Two compounds, In_3Ir and In_2Ir , were shown, but the liquidus boundaries were unknown except that for In_3Ir .

The work of [2000Anr] was updated by [2002Fla] based on x-ray diffraction, electron probe microanalysis, and thermal analysis. The result is shown in Fig. 1. In_3Ir was found to be dimorphic. The In-Ir crystal structure table in [2001Oka] is updated in Table 1 based on the information given in [2002Fla].

References

- 2000Anr:** P. Anres, P. Fossati, K. Richter, M. Gambino, M. Gaune-Escard, and J.P. Bros: "Thermodynamics of the [In-Ir] System," *J. Alloys Compds.*, 2000, 296, pp. 119-27.
- 2001Oka:** H. Okamoto: "In-Ir (Indium-Iridium)," *J. Phase Equilibria*, 2000, 21(4), p. 412.
- 2002Fla:** H. Flandorfer, K.W. Richter, E. Hayer, H. Ipser, G. Borzone, and J.P. Bros: "The Binary System In-Ir: A New Investigation of Phase Relationships, Crystal Structures, and Enthalpies of Mixing," *J. Alloys Compd.*, 2002, 345, pp. 130-39.

Table 1 In-Ir

Phase	Composition, at.% Ir	Pearson Symbol	Space Group	Strukturbericht Designation	Prototype
(In)	0	<i>tI2</i>	<i>I4/mmm</i>	A6	In
$\beta\text{In}_3\text{Ir}$	24-25	<i>tP16</i>	$P\bar{4}n2$...	CoGa_3
$\alpha\text{In}_3\text{Ir}$	24-25	<i>oP16</i>	<i>Pnma</i>	DO_{11}	Fe_3C
In_2Ir	32-34	<i>oF48</i>	<i>Fddd</i>	C_b	CuMg_2
(Ir)	98.5-100	<i>cF4</i>	<i>Fm\bar{3}m</i>	A1	Cu

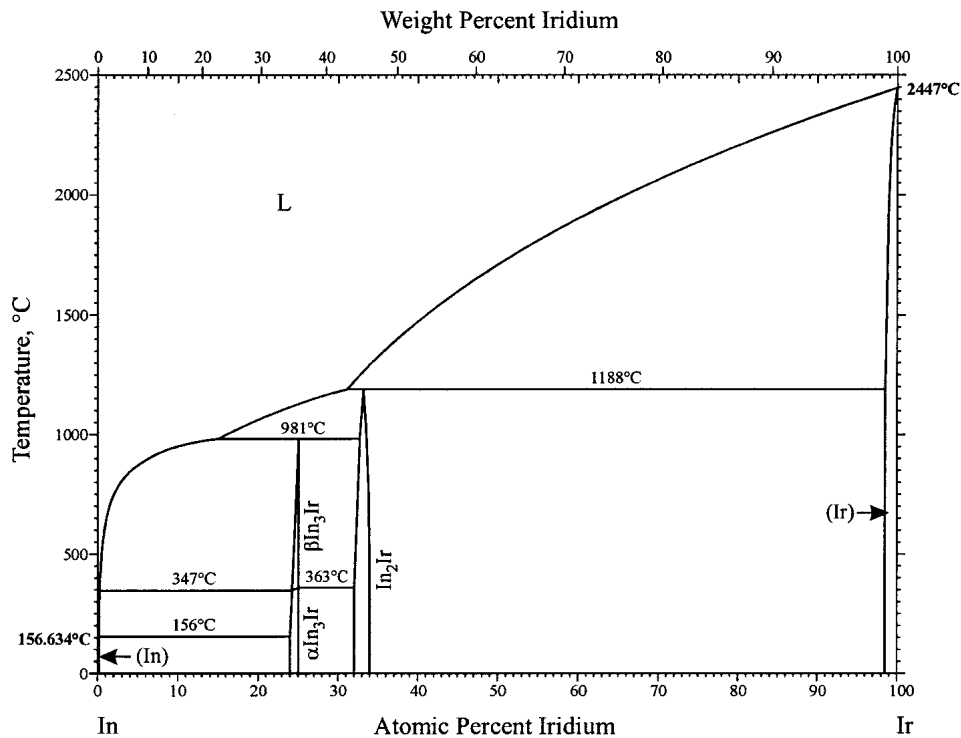


Fig. 1 In-Ir phase diagram from [2002Fla]