

# In-O (Indium-Oxygen)

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The In-O phase diagram was unknown in [Massalski2].

Figure 1 shows the In-O phase diagram calculated by [2006Iso]. Phase boundary data used in their thermodynamic model were the solubility of O in liquid In reported by [1988Cha] and the melting point of  $\text{In}_2\text{O}_3$  reported by [1991Kna]. Figure 2 shows that the calculated phase boundary agrees well with the data of [1988Cha].

Table 1 shows In-O crystal structure data as reported by [Massalski2].

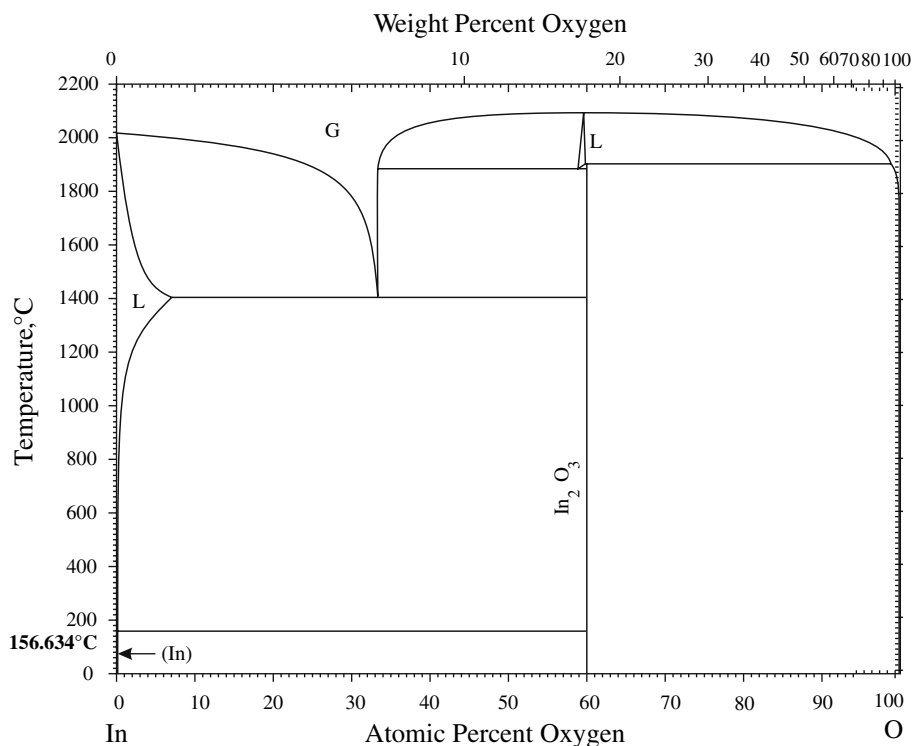
## References

- 1988Cha:** Y.A. Chang, K. Fitzner, and M.X. Zhang, The Solubility of Gases in Liquid Metals and Alloys, *Prog. Mater. Sci.*, 1988, **32**(2-3), p 97-259
- 1991Kna:** O. Knacke, O. Kubaschewski, and K. Hesselmann, *Thermodynamic Properties of Inorganic Substances I*. 2nd edn, Springer, Berlin, 1991
- 2006Iso:** I. Isomäki, M. Hämmäläinen, W. Gierlotka, B. Onderka, and K. Fitzner, Thermodynamic Evaluation of the In-Sn-O System, *J. Alloys Compds.*, 2006, **422**, p 173-177

**Table 1 In-O crystal structure data**

Phase	Composition, at.% O	Pearson symbol	Space group	Struktur-bericht designation	Prototype
(In)	0	<i>tI2</i>	<i>I4/mmm</i>	<i>A6</i>	In
$\text{In}_2\text{O}^*$	33.3	...	...	...	...
$\text{InO}^*$	50	...	...	...	...
$\text{In}_2\text{O}_3$	60	<i>cI80</i> <i>hR^*</i>	<i>Ia\bar{3}</i> <i>R\bar{3}c</i>	<i>D5_3</i> ...	$\text{Mn}_2\text{O}_3$ ...

\*Not shown in Fig. 1.



**Fig. 1** In-O phase diagram

Section III: Supplemental Literature Review

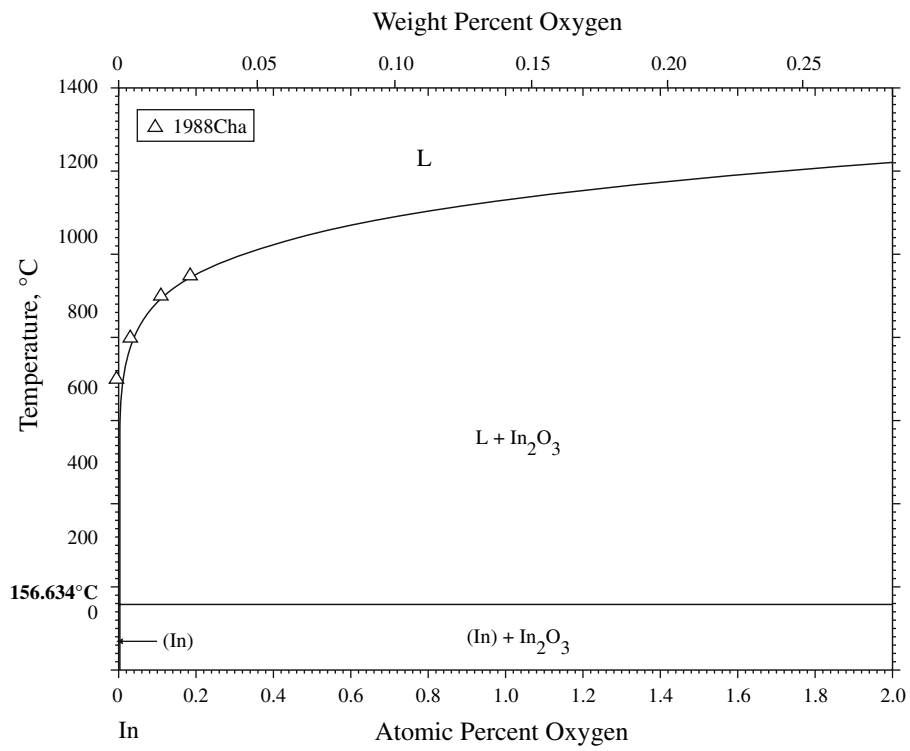


Fig. 2 In-rich corner of the In-O phase diagram