Al-Pd (Aluminum-Palladium)

H. Okamoto

The Al-Pd phase diagram in Fig. 1 is based on [1986Mca], which was adopted in [Massalski2], with modification in the range 0-40 at.% Pd according to [2001Yur]. [1986Mca] showed the γ phase peritectically melting at 790 °C. [2001Yur] discovered two high-temperatures phases Al_3Pd and ε (named ε_6 and ε_{28}, respectively) around γ. Al-Pd crystal structure data in [Massalski2] are modified in Table 1 based on [2001Yur].

References

1986Mca: A.J. McAlister: *Bull. Alloy Phase Diagrams*, 1986, *7*(4), pp. 368-74.

2001Yur: M. Yurechko, A. Fattah, T. Velikanova, and B. Grushko: *J. Alloys Compds.*, 2001, *329*, pp. 173-81.

Table 1 Al-Pd Crystal Structure Data

Phase	Composition at.% Pd	Pearson Symbol	Space Group	Strukturbericht Designation	Prototype
(Al)	0-0.2	*cF*4	$Fm\bar{3}m$	*A*1	Cu
λ(Al_4Pd)	20	*hP**	$P6_322$	…	…
Al_3Pd	25.5-26.9	*o***	…	…	
γ($Al_{21}Pd_8$)	27.6	*tI*116	$I4_1/a$	…	$Al_{21}Pt_8$
ε	~28	*o***	…	…	…
δ(Al_3Pd_2)	39-42	*hP*5	$P\bar{3}m1$	$D5_{13}$	Al_3Ni_2
β	44-57	*cP*2	$Pm\bar{3}m$	*B*2	CsCl
β′	48.5-52.8	*hR*78	$R\bar{3}$	…	…
μ	48-49	*cF*8	$P2_13$	*B*20	FeSi
ν(Al_2Pd_5)	62.5	*oP*16	*Pbam*	…	Ge_3Rh_5
ρ	65-74.5	*oP*12	*Pnma*	*C*23	Co_2Si
τ	70.7-71.7	*oP*28	*Pbmn*	…	Ga_2Pd_5
(Pd)	79.7-100	*cF*4	$Fm\bar{3}m$	*A*1	Cu

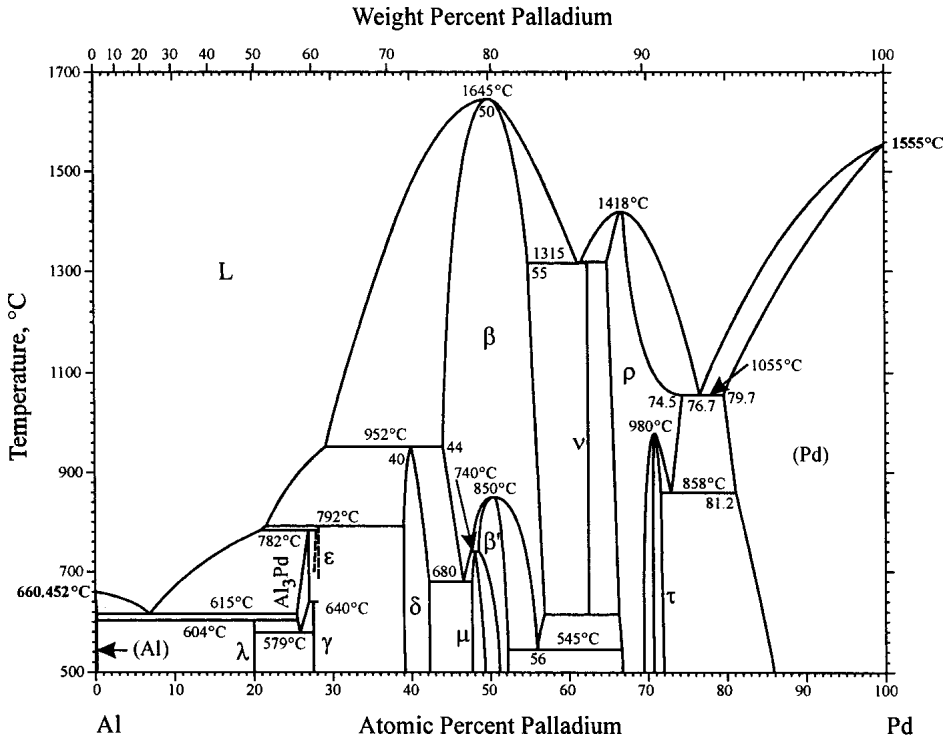

Fig. 1 Ag-Ce phase diagram