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Mn-O (Manganese-Oxygen)

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[Massalski2] showed the Mn-O phase diagram at 0.21 bar O_2 pressure.

Figure 1 shows the Mn-O phase diagram with the suppressed gas phase calculated by [2003Gru]. Figure 2 shows the detail on the Mn-rich end.

Table 1 shows Mn-O crystal structure data. Mn_2O_3 and MnO_2 do not appear in the [Massalski2] phase diagram.

Reference

2003Gru: A.N. Grundy, B. Hallstedt, and L.J. Gauckler, Assessment of the Mn-O System, *J. Phase Equilibria*, 2003, **24**(1), p 21-39

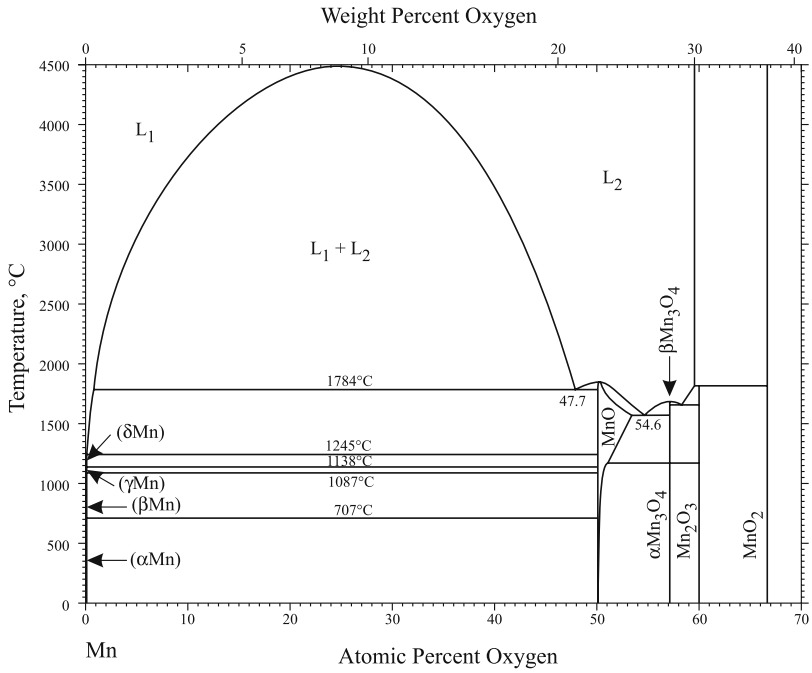

Fig. 1 Mn-O phase diagram [2003Gru]

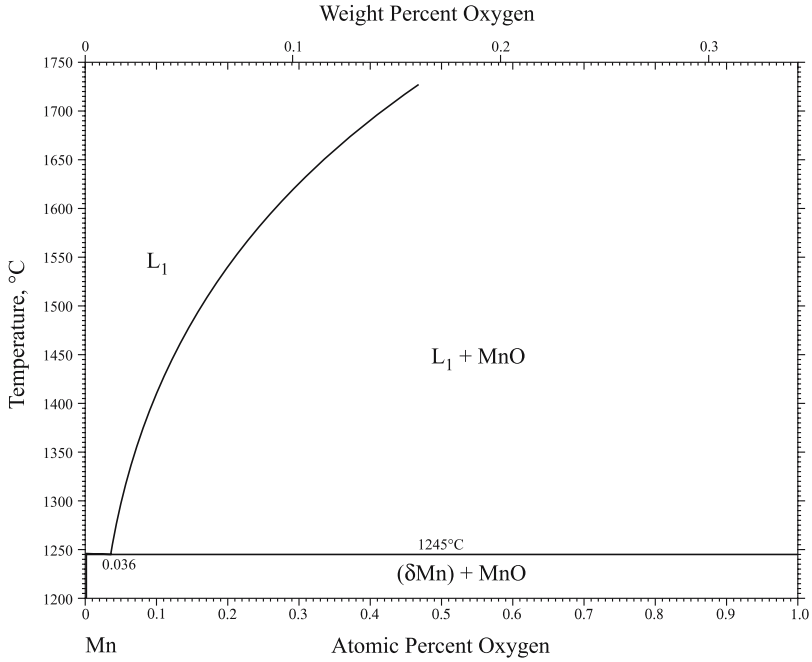

Fig. 2 Enlargement of the Mn-rich end of Fig. 1

Table 1 Mn-O crystal structure data

Phase	Composition, at.% O	Pearson symbol	Space group	Struktur-bericht designation	Prototype
(δMn)	0	*cI*2	$Im\bar{3}m$	*A*2	W
(γ Mn)	0	*cF*4	$Fm\bar{3}m$	*A*1	Cu
(β Mn)	0	*cP*20	$P4_132$	*A*13	βMn
(αMn)	0	*cI*58	$I\bar{4}3m$	*A*12	α Mn
MnO	50-53.3	*cF*8	$Fm\bar{3}m$	*B*1	NaCl
βMn_3O_4	57.1	...	$Fd\bar{3}m$	...	...
αMn_3O_4	57.1	*tI*28	$I4_1/amd$	...	...
Mn_2O_3	60	*cI*80	$Ia\bar{3}$	...	Mn_2O_3
MnO_2	66.7	*tP*6	$P4_2/mnm$	...	TiO_2