

Au – O (Gold – Oxygen)

Phase diagram

Schwarzman et al. [70 Sch] found under high pressure the compound Au_2O_3 . In air this compound is metastable. It decomposes to solid Au [92 Hsi].

Crystal structure

Au_2O_3 is of orthorhombic structure (Au_2O_3 -type) with lattice constants:

$$a = 1.2827 \text{ nm}$$

$$b = 1.0520 \text{ nm}$$

$$c = 0.3838 \text{ nm}$$

[79 Jon].

References

- [70 Sch] Schwarzman, E., Gromann, G.: Z. Naturf. B **25** (1970) 1308
[79 Jon] Jones, P.G., Rumpel, H., Schwarzman, E., Sheldrick, G.M., Paulus, H.: Acta Cryst. B **35B** (1979) 1435
[92 Hsi] Hsieh, K.C., Neumann, J.P., Chang, Y.A., in: [Massalski]
[Massalski] Massalski, T.B., (ed.): "Binary Alloy Phase Diagrams" Second Edition, The Materials Information Society, ASM International, Materials Park, Ohio (1992)