

Au – Rb (Gold – Rubidium)

Crystal structure

By reaction of RbN_3 with powder of gold at 723 K Zachwieja [94 Zac] succeeded to prepare single crystals of Au_3Rb_2 .

If RbN_3 reacts with powder of gold at 773 K the intermediate phase Au_2Rb_3 is forming [93 Zac]. By X-ray diffractography the crystal structure has been investigated. The results are presented in Table 1.

Table 1. Au–Rb. Crystallographic data for intermediate phases.

Phase	Structure	Type	Lattice parameters [nm]			Reference
			<i>a</i>	<i>b</i>	<i>c</i>	
AuRb	cub	CsCl	0.4107			[78 Tin]
Au_3Rb_2	ort	Au_3K_2	0.4942	0.5442	1.0601	[94 Zac]
Au_2Rb						[61 Kie]
Au_5Rb	hex	CaCu_5	0.5760		0.4443	[64 Rau]
Au_7Rb_3	ort		0.5585	1.3252	0.7258	[93 Zac]

References

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