

As – Np (Arsenic – Neptunium)

Crystal structure

Lander et al. [74 Lan] have found the intermediate phase AsNp to exist in several modifications, the crystallographic data of which are given in Table 1 as far as they are available.

Table 1. As–Np. Structure and lattice parameters of AsNp in different modifications [Pearson].

Phase	Structure	Prototype	Lattice parameters [nm]		Range of stability	Reference
			<i>a</i>	<i>c</i>		
AsNp	cub	NaCl				[74 Lan]
β-AsNp	tet		0.58317	0.58274	140 K ... 170 K	[74 Lan]
γ-AsNp	cub	NaCl	0.5838		> 170 K	[74 Lan]
						[86 Dab]
AsNp _H	cub	CsCl	0.324		> 36 GPa	
AsNp _L	cub	NaCl	0.58366		< 26 GPa	

References

- [74 Lan] Lander, G.H., Mueller, M.H.: Phys. Rev. B **10** (1974)
- [86 Dab] Dabos, S., Dufour, C., Benedict, U., Spirlet, J.C., Pages, M.: Physica B und C, Amsterdam **144B** (1986) 79
- [Pearson] Pearson, W.B.: “Handbook of Lattice Spacings and Structure of Metals and Alloys”, Pergamon Press, New York, (1958), Vol. 1, (1967) Vol. 2