

Synthesis and Structure of NbPdSi

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The new silicide NbPdSi was prepared by melting the elements in an arc-furnace. Well-shaped single crystals were obtained by annealing the sample in an induction furnace. The structure of NbPdSi has been studied by X-ray powder and single crystal diffractometer data: TiNiSi type, *Pnma*, $Z = 4$, $a = 643.0(1)$, $b = 376.7(1)$, $c = 744.4(2)$ pm, $wR2 = 0.0330$, 346 F^2 values, and 20 variables. The palladium and silicon atoms build up a three-dimensional [PdSi] network where each palladium atom has a strongly distorted tetrahedral silicon coordination at Pd–Si ranging from 242 to 250 pm. The niobium atoms fill channels left in the [PdSi] network.

Key words: Silicide, Intermetallics, Crystal Chemistry