

substance: YH_x

property: crystal structure, physical properties

YH_{2+x} [95V]

semiconductor: $x = 0.065$

ρ 84 $\mu\Omega\text{cm}$ $T = 283\text{ K}$

semiconductor: $x = 0.070$

ρ 170 $\mu\Omega\text{cm}$ $T = 235\text{ K}$
185 $\mu\Omega\text{cm}$ $T = 256\text{ K}$

SC-M transition: $T = 37\text{ K}$ 91V,
M-SC transition: not observed (cooling) 92D
M-SC transition: $T = 283(1)\text{ K}$ (heating)

SC-M transition: $T = 79\text{ K}$ 91V,
M-SC transition: $T = 235(1)\text{ K}$ (cooling) 92D
M-SC transition: $T = 256(1)\text{ K}$ (heating)

XPS-spectrum: Fig. 1

References:

- 85O Osterwalder, J: Z. Phys. B 61 (1985) 113.
- 91V Vajda, P., Daou, J.N.: Phys. Rev. Lett. 66 (1991) 3176.
- 92D Daou, J.N., Vajda, P.: Phys. Rev. B 45 (1992) 10907.
- 95V Vajda, P.: "Hydrogen in rare-earth metals, including RH_{2+x} Phases" in: Handbook on the Physics and Chemistry of Rare Earth, Vol. 20, Gschneidner, K.A., Jr., Eyring, L. (eds.), Elsevier Science, 1995, p. 207.

Fig. 1.

RH_x . Valence band spectra for La, Y, Ce, and Pr and for their phase boundary and trihydride compositions from XPS. Data for the metals are shown by dotted lines [85O].

