

substance: Y_2Cl_3

property: crystal structure, physical properties

Y_2Cl_3 [91S]

structure: monoclinic, $C2/m$

lattice parameters

a	15.144 Å
b	3.825 Å
c	10.077 Å
β	118.24°

80M

temperature dependence of C_p and C_m (C_p : specific heat, C_m : magn. part): Fig. 1, Fig. 2

References:

- 80M Mattausch, HJ., Simon, A., Eger, R.: Rev. Chim. Miner. 17 (1980) 516;
85K Kremer, R.K.: Thesis (Darmstadt, Germany) 1985.
91S Simon, A., Mattausch, HJ., Miller, G.J., Bauhofer W., Kremer, R.K.: "Metal-Rich Halides" in:
Handbook on the Physics and Chemistry of Rare Earths, Vol. 15, Gschneidner, K.A., Jr., Eyring, L.
(eds.), Elsevier Science, 1991.
Mattausch, HJ., Hendricks, J.B., Eger R., Corbett, J.D., Simon, A.: Inorg. Chem. 19 (1980) 2128;
Mattausch, HJ., Simon, A., Holzer, N., Eger, R.: Z. Anorg. Allg. Chem. 466 (1980) 7.

Fig. 1.

Gd_2Cl_3 , Y_2Cl_3 . **(a)** Specific heats vs. temperature. The arrow indicates the 3D ordering transition. **(b)** Magnetic part of the specific heat of Gd_2Cl_3 (per formula unit $\text{GdCl}_{1.5}$). The full line is the specific heat of an $S = 7/2$ Heisenberg chain with exchange constant $J/k = -2.6$ K [85K].

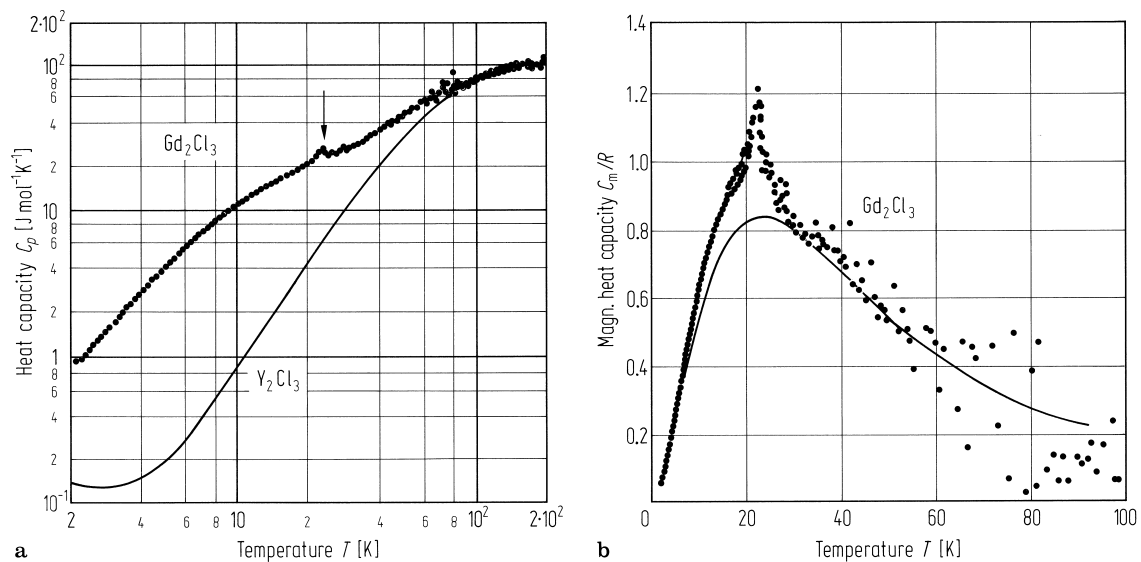


Fig. 2.

Tb_2Cl_3 , Y_2Cl_3 . Specific heat vs. temperature. The arrow indicates the 3D ordering transition [91S].

