substance: RhP_2
property: physical properties

Energy level scheme is similar to that given for $CoAs_2$ (Fig. 1).

energy gap

E_g	≈ 1 eV	RT	from diffuse reflectance of powder samples	63H

magnetic susceptibility
(in 10^{-6} cm^3 mol^{-1}, χ in CGS units)

χ_m	– 37	T = 295 K	(temperature dependence probably	63H
	– 14	T = 77 K	due to paramagnetic impurities)	
	– 77.5	T = 80...1000 K	($\chi_g = 0.47 \cdot 10^{-6}$ cm^3 g^{-1})	71K

far infrared absorption: for spectrum in the range 50...400 cm^{-1}, see [83L].

Comparative tables on structural data of transition metal dipnictides:

structure, chemical bond: see document ,

crystallographical data of compounds with octahedrally coordinated cations, see document ,

interatomic distances in arsenopyrite-type phases, see document .

References:

63H Hulliger, F.: Phys. Lett. 4 (1963) 282.
71K Kjekshus, A.: Acta Chem. Scand. 25 (1971) 411.
72G Goodenough, J. B.: J. Solid State Chem. 5 (1972) 144.
83L Lutz, H. D., Schneider, O., Kliche, G.: Phys. Chem. Minerals 9 (1983) 109.

Fig. 1.

$CoAs_2$. Energy-level scheme for the valence electrons in the arsenopyrite-type phase with formal d^5 configuration [72G].