substance: LaS_2
property: crystal structure, physical properties

crystal structure	tetragonal (pseudocubic, D_{4h}^7 – P4/nmm)		
lattice parameters			
a	4.09 Å	color: light brown [75B]	79F
c	8.19 Å		

IR and Raman spectra: Figs. 1, 2

crystal structure	orthorhombic (D_{2h}^{16} – Pnma)		
lattice parameters			
a	8.131(5) Å		78D
b	16.34(1) Å		
c	4.142 Å		

References:

75B Bucher, E., Andres, K., di Salvo, F. J., Maita, J. P., Gossard, A. C., Cooper, A. S., Hull jr., G. W.: Phys. Rev. B 11 (1975) 500.

75G Golovin, Yu. M., Petrov, K. I., Loginova, E. M., Grizik, A. A., Ponomarev, N. M.: Zh. Neorg. Khim. 20 (1975) 283.

78D Dugue, J., Carré, D., Guittard, M.: Acta Cryst. B 34 (1978) 403.

79F Flahaut, J.: In Handbook on the Physics and Chemistry of Rare Earths; Gschneidner, K. A., and Eyring, L. R. (eds.), Amsterdam: North Holland 1979.

Fig. 1.

LaS_2, CeS_2. Absorbance vs. wavenumber for a polycrystalline sample [75G].

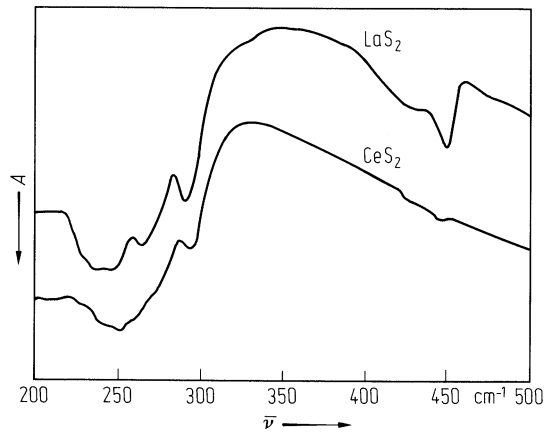

Fig. 2.

LaS_2. Raman intensity vs. Raman shift (in wavenumbers) [75G].