

substance: boron compounds with lanthanides
property: properties of lanthanide hexaborides: TbB₆, DyB₆

TbB₆

Structure, chemical bond

lattice parameters

a	4.0998(3) Å	$T = 300$ K	X-ray diffraction	96G
	4.1052 Å			91S

Lattice properties

Force constants [90Y]

For vibrational frequencies [88T, 90Y, 93Y]

Optical properties

IR diffuse reflection and Raman spectra (La, Nd, Gd, Tb, Yb)B₆ in Fig. 1 [88T, 93Y].

DyB₆

Structure, chemical bond

Formation mechanism of DyB₆ investigated by DTA [79D].

Lattice properties

Force constants [90Y]

For vibrational frequencies [88T, 90Y, 93Y]

Optical properties

IR diffuse reflection and Raman spectra (La, Nd, Gd, Tb, Dy, Yb)B₆ in Fig. 1 [88T, 93Y].

References:

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- 88T Turrell, S., Yahia, Z., Huvenne, J.P., Lacroix, B., Turrell, G.: J. Mol. Struct. 174 (1988) 455.
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- 91S Serebryakova, T.I., Neronov, V.A., Peshev, P.D.: in: High-Temperature Borides, Moscow, 1991.
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Fig. 1.

Metal hexaborides. IR diffuse reflectance spectra of representative MB_6 compounds with two-valent Ca, Sr and Yb, and three-valent Nd, Gd, La, Tb and Dy metal atoms [88T, 93Y].

