

substance: hematite (α -Fe₂O₃)

property: band structure

No extended band structure calculation reported. X α -cluster calculation: Fig. 1 (see [74T, 73T, 76T]). From this, the topmost O 2p level is 1t_{1g}↓ and Fe d-t_{2g}↑ levels lie well below the O 2p edge. The highest occupied level is the Fe d-e_g↑.

References:

- 73T Tossell, J. A., Vaughan, D. J., Johnson, K. H.: Nature (London) 244 (1973) 42.
74T Tossell, J. A., Vaughan, D. J., Johnson, K. H.: Am. Mineral. 59 (1974) 319.
76T Tossell, J. A.: J. Electron Spectrosc. Relat. Phenom. 8 (1976)1.

Fig. 1.

Fe_2O_3 . X α -cluster calculation on FeO_6^{9-} . Energy for Fe, O and the spin up and down states of the cluster [74T].

