

Spectroscopic studies of $\text{PrBr}_3 \cdot 7\text{H}_2\text{O}$ monocrystal.

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Streszczenie

Single crystals of praseodymium tribromide heptahydrate were grown from aqueous solution. The IR, Raman, and high resolution absorption spectra were measured at room and low temperatures. The assignments of IR and Raman frequencies are reported. The temperature dependence of intensities was found and vibronic coupling in f-f transitions was analysed. Anisotropy of the intensities of optical lines was detected and taken into account in the Judd-Ofelt analysis of the f-f transitions probabilities. The results are compared to the available IR and electron spectroscopic data for other single crystals of lanthanide bromides.

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<http://www.ifpan.edu.pl>