

Analysis of the absorption spectrum of U^{3+} doped YCl_3 single crystals.

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Streszczenie

Low temperature emission and polarized absorption spectra of U^{3+} ions diluted in YCl_3 host single crystals have been recorded in the 4000-500000 cm^{-1} spectral range. The point symmetry of the doped U^{3+} ions has been assumed to be octahedral. 29 experimental crystal-field levels were fitted to seven parameters of a semi-empirical Hamiltonian representing the combined atomic, and one-electron crystal field operators, with a rms deviation of 49 cm^{-1} .