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EPR of Gd³⁺ in Na₂Cd(SO₄) 22H₂O, comparison with previous results obtained for Fe³⁺

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Abstract

An EPR experiment on Gd³⁺ in a single crystal of Na₂Cd(SO₄)₂₂H₂O (CdK) was carried out at Q band frequency and nitrogen temperature. Two spectra related by symmetry were observed. All spin Hamiltonian constants have been calculated. The pseudosymmetries of the fourth-order term of the spin Hamiltonian are compared to those of Fe³⁺. It is observed that the substitution of Gd³⁺ for Cd²⁺ induced a very important local distortion of the host lattice, which is discussed. © 1985 American Institute of Physics.
