JAHN-TELLER EFFECT IN EPR SPECTRUM OF METAL-ORGANIC COMPLEX $Cu(en)SO_4.2H_2O$

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9.7 cm

The temperature dependence of resonance spectrum of single crystal $Cu(en)SO_4.2H_2O$ have been investigated in temperature range 2,3 - 60 K at the frequency 73 GHz. At T>15 K the angular dependence of spectrum is described by spin-Hamiltonian of axial symmetry with g_z=2,291 and g_x=g_y=2,067. At T<15 K the following effects are observed: i) the splitting of resonance line in external field orientation along axis b; ii)the spectrum symmetry decreasing up to rhombic one; iii) the considerable broadening of resonance line with temperature decreasing. These effects are discussed in frame of model of two nonequivalent Jahn-Teller centers with mutually connected dynamical distorsion in cell. The behaviour of resonance line at low temperatures is determined by critical broadening in short-range magnetic order region.

13.4 cm

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