Investigation of the EPR Parameters of an Orthorhombic Cu^{2+} Center in Cs_2ZnCl_4 Crystal

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The electron paramagnetic resonance (EPR) anisotropic g-factors g_x, g_y and g_z and hyperfine structure constants A_x, A_y and A_z of Cu^{2+} in Cs_2ZnCl_4 crystal are theoretically investigated by the method of diagonalizing the full Hamiltonian matrix. The crystal-field parameters are obtained from the crystal structure by the superposition model. The results, agreeing reasonably with the observed values, are discussed.

Key words: Crystal-field Theory; Electron Paramagnetic Resonance; Cu^{2+}; Cs_2ZnCl_4.