EPR Study of Cu$^{2+}$ and VO$^{2+}$ Ions in [NH$_4$H$_3$(C$_2$O$_4$)$_2$] ·2H$_2$O Single Crystals

R. Bıyık, R. Tapramaz, and B. Karabulut

Ondokuz Mayıs University, Faculty of Art and Sciences, Department of Physics, 55139 Samsun, Turkey

Reprint requests to Dr. B. K.; e-mail: bbulut@omu.edu.tr

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The EPR spectra of Cu$^{2+}$ and VO$^{2+}$ ions in [NH$_4$H$_3$(C$_2$O$_4$)$_2$] ·2H$_2$O single crystals were recorded at room temperature in three orthogonal planes. The spectra indicate that the Cu$^{2+}$ and VO$^{2+}$ ions substitute NH$_4^+$ ions. The principal values of the $g$ and $A$ tensors were determined. The ground state wave function of the Cu$^{2+}$ ion in the lattice has been calculated and the covalancy and Fermi contact terms of the VO$^{2+}$ ions were evaluated.

Key words: EPR; Ammonium Tetraoxalate; Vanadyl Ion; Copper Ion.