Energy Levels and $g$ Factors of Cu$^{2+}$-Doped Bis(L-asparaginato)zinc(II)

Ling Zhang, Maolu Du, and Ke Zhan

Department of Physics, Southwest University for Nationalities, Chengdu 610041, P.R. China

Reprint requests to M. D.; E-mail: Duml@mail.sc.cninfo.net

Z. Naturforsch. 63a, 616–618 (2008); received March 17, 2008

The formulas for the energy levels and $g$ factors for 3$d^9$ ions in an orthorhombic field with $D_{2h}$ symmetry are obtained. They are used to investigate the energy levels and the $g$-anisotropy of Cu$^{2+}$ ions in a bis(L-asparaginato)zinc(II) single crystal. The theoretically calculated values of the energy levels have agree well with the observed optical spectrum of the Cu$^{2+}$ ions in the compound considered here, and also the calculated values of the $g$-anisotropy conform with the experimental values.

**Key words:** Bis(L-asparaginato)zinc(II) Crystal; Energy Levels; $g$-Anisotropy; $D_{2h}$ Distortion.

**PACS numbers:** 71.70CH; 76.30F; 78.50; 78.40