The D_{2h} Distortion around the Cu^{2+} Center in $Cu_{0.5}Zr_2(PO_4)_3$ Single Crystals

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A formula for the calculation of the three g factors of $3d^9$ ions in an orthorhombic field D_{2h} has been derived. Using it to investigate the EPR g factors of the Cu^{2+} ions in single crystals of $Cu_{0.5}Zr_2(PO_4)_3$, the variation of the g factors on changing the angle α between the x- and y-axis has been explained. According to that, it can be confirmed that the angle α of the D_{2h} distortion is about $62.6°$. PACS: 71.70C; 76.30F

Key words: $Cu_{0.5}Zr_2(PO_4)_3$ Crystal; Gyromagnetic Factor; D_{2h} Distortion.