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Dissymmetrization of crystals: Theory and experiment

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Abstract

The distribution of Cu^{2+} impurities in $\text{ZnSeO}_4 \cdot 6\text{H}_2\text{O}$ and $\text{Na}_2\text{Cd}(\text{SO}_4)_2 \cdot 2\text{H}_2\text{O}$ crystals was investigated by electron paramagnetic resonance. The tangential selectivity by sectors in pyramid growth was revealed. Dissymmetrization, i.e., decrease of point group symmetry, is explained by tangential selectivity occupying impurities and formation defects. An analysis by group theory is presented to explain dissymmetrization of crystals. The connection between the distribution of point defects in a crystal and the growth process is discussed. © 1980 Springer-Verlag.

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