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Investigation of copper minerals by NQR: Crystallochemistry, electronic structure, lattice dynamics

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Abstract

A series of copper minerals has been investigated by NQR (Nuclear Quadrupole Resonance), the most typical cases of Cu(I) environment in oxides, sulphides and sulphosalts being taken into account. The linear complexes Cu X2 have the greatest quadrupole splitting. Minimal quadrupole splitting is observed in tetrahedral complexes. Spin-lattice relaxation measurements indicate that the quadrupole relaxation mechanism due to the Raman process predominates. © 1987 Springer-Verlag.

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Keywords

copper complexes, Nuclear quadrupole resonance