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Determination of the parameters characterizing the superexchange interaction in complex ferrite-spinels

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Abstract

A calculation procedure is proposed here for determining the values of exchange parameters, applicable to spinels which contain three kinds of ions in tetrahedral positions and which have an arbitrary distribution of cations. The values of exchange integrals obtained here for ferrites of the manganese-zinc system provide a useful basis for a quantitative interpretation of the spread of Curie-temperature readings in experiments which involve ferrites with the same composition. © 1976 Plenum Publishing Corporation.

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