

# Mechanisms of substituting quadrivalent ions influence on the properties of La-Sr manganites

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Regularities of the influence of quadrivalent ions and oxygen concentrations on the phase composition, structural characteristics, saturation magnetization, Curie point, electrical conductance and magnetoresistance of ceramic manganites  $La_{1-c-x}Sr_{c+x}Mn_{1-x}Me_x^{4+}O_{3+\gamma}$  ( $Me=Ti, Ge$ ;  $0.15 \leq c \leq 0.35$ ;  $0.025 \leq x \leq 0.150$ ) were established experimentally taking into account the data of work [1]. The relation between experimental data on lattice parameters, electromagnetic properties and crystal chemistry characteristics (nonstoichiometry index, concentrations of ions residing at different charge and spin state), was determined using the modified model of effective cation-anion distances and the model of active exchange bonds in terms of double exchange.

## References:

[1] A.G.Badelin, Z.R.Datskaya, I.Yu.Epifanova, S.Kh. Estemirova, V.K.Karpasyuk, A.M.Smirnov, EPJ Web of Conf., V.40, 15004 (2013)

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