Raman studies of ferroelectric phase transition in $[NH_2(CH_3)]_3Sb_2Cl_9$(DMACA).

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The ferroelectric phase transition at 242 K in single crystals of $[(CH_3)_2NH_2]_3Sb_2Cl_9$ (DMACA) has been investigated by the Raman spectroscopy over the range 3500–400 cm^{-1}. The temperature dependencies of the wave numbers, damping coefficients and intensities of the bands corresponding to the symmetric, ν_s, and asymmetric, ν_{as}, NC_2 stretching vibrations were analysed in detail. The Raman studies confirm that the mechanism of the ferroelectric phase transition of the order–disorder type is governed by changes in dynamical state of the dimethylammonium cations.

Słowa kluczowe

Raman spectroscopy, Phase transition, Halogenoantimonates(III)

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