

Vibrational study of the structural phase transitions in 4-aminopyridinium tetrachloroantimonate(III) (4-APCA) ferroelectric crystal by infrared spectroscopy.

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Streszczenie

Infrared spectra of powdered 4-aminopyridinium tetrachloroantimonate(III) [4-NH₂C₅H₄NH][SbCl₄] (abbreviation: 4-APCA) in the region of the internal vibrations of the 4-aminopyridinium cation (3600 and 400 cm⁻¹) and in the temperature interval 10–300 K covering three structural phase transitions are presented and discussed. The results confirm the order–disorder mechanism of the phase transition at 245 K. The paraelectric–ferroelectric phase transition at 271 K is hardly visible in the infrared spectra, which is in agreement with its “displacive” nature of the transition suggested by the single crystal X-ray and ac calorimetric studies.

Słowa kluczowe

Halogenoantimonates(III), Vibrational spectra, Phase transition, Ferroelectric

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