Structure and phase transitions in the $[C(NH_2)_3]SbCl_6$ crystals.

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Streszczenie

The crystal structure of $[C(NH_2)_3]SbCl_6$ at 298 K (monoclinic, $C2/m$) and 240 K (monoclinic, $P2_1/a$) has been determined. The structure consists of isolated $SbCl_6^-$ anions and guanidinium cations. Differential scanning calorimetry, dilatometric and dielectric studies revealed two structural phase transitions; a first-order one at 351 K and a second-order one at 265 K. One of the two crystallographically non-equivalent anions, $SbCl_6^-(1)$, disordered in the room temperature phase is postulated to contribute to the phase transition mechanism at 265 K. A ferroelastic domain structure is found below 351 K.

Słowa kluczowe

A. halogenoantimonates(V), D. phase transition, D. dielectric, C. differential scanning calorimetry (DSC), C. dilatometric

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