

Fourier transform infrared and Fourier transform Raman investigation of alkylammonium hexachloroantimonates.

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Streszczenie

The FT-IR spectra ($7000\text{--}50\text{ cm}^{-1}$) and the Raman spectra ($3500\text{--}70\text{ cm}^{-1}$) of $(\text{CH}_3)_4\text{NSbCl}_6$ (TMASbCl₆), $(\text{C}_2\text{H}_5)_4\text{NSbCl}_6$ (TEASbCl₆) and $(\text{CH}_3)_2\text{NH}_2\text{SbCl}_6$ (DMASbCl₆) are investigated at 295 K. The vibrational data suggest that the distortion of the octahedral symmetry of SbCl_6^- increases in the order $\text{TMASbCl}_6 < \text{TEASbCl}_6 < \text{DMASbCl}_6$. The splittings of the rocking modes of the NH_2^+ and CH_3 groups and of the deformation mode of the NH_2^+ group in DMASbCl₆ suggest that even at 295 K the rotational motions are frozen and these spectroscopic data are consistent with the absence of low temperature phase transition.

Słowa kluczowe

Fourier transform, Raman spectrometry, Alkylammonium hexachloroantimonates

Adres publiczny

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