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Vibrational spectra and structure of antimony (III) trialkoxides

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Abstract

1. According to their vibrational spectra, antimony trialkoxides of formula $\text{Sb}(\text{OR})_3$ with $\text{R}=\text{CH}_3$, C_2H_5 , $n\text{-C}_3\text{H}_7$, and $i\text{-C}_4\text{H}_9$ are associated; no signs of association are observed for the compounds with $\text{R}=i\text{-C}_3\text{H}_7$ and $t\text{-C}_4\text{H}_9$. 2. The molecules of antimony tri-*t*-butoxide in the liquid state at 20°C exist in the form of rotational isomers having C_1 (C_s) and C_3 (C_{3v}) symmetry, with the C_1 (C_s) conformer predominating. Upon freezing, the C_3 (C_{3v}) conformer remains in the crystal. © 1981 Plenum Publishing Corporation.

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