Structural phase transitions in $[(C_2H_5)_4N]_3Sb_2Br_9$ and $[(C_2H_5)_4N]_3Bi_2Br_9$.

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Streszczenie

Dielectric, DSC and preliminary X-ray diffraction studies on $[(C_2H_5)_4N]_3Sb_2Br_9$ (TEABA) and $[(C_2H_5)_4N]_3Bi_2Br_9$ (TEABB) are reported. The compounds are isomorphous, space group $P6_322$. The static electric permittivity measurements on single crystals in the temperature range 220 - 290 K revealed that both compounds show two distinct dielectric anomalies; TEABA at T_{c1} = 258 K and T_{c2} = 252 K, while TEABB at T_{c1}= 265 K and T_{c2} = 248 K. The DSC studies show only one anomaly of first order at T_{c1} =258 K for TEABA, and T_{c1} =266 K for TEABB. These transitions are presumably related to a freezing of the reorientational motion of the tetraethylammonium cations

Słowa kluczowe

Alkylammonium halogenoantimonates, Bismuthates, Phase transition, Dielectric, DSC, Single crystals

Adres publiczny

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