

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

Autorzy

J. Zaleski
Ryszard Jakubas
Zbigniew Galewski
Lucjan Sobczyk

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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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