



Neutron quasielastic scattering by $(\text{CH}_3\text{NH}_3)_5\text{Bi}_2\text{Cl}_{11}$.

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$(\text{CH}_3\text{NH}_3)^+$ -cation rotation in crystalline $(\text{CH}_3\text{NH}_3)_5\text{Bi}_2\text{Cl}_{11}$ was studied by the QNS. The following (no doubt simplified) models were considered: 1. All cations are equivalent and rotate as a whole around C-N axes 2. Majority of cations behave as in point (1) and the remaining ones do not move (for the neutron observation window). 3. All CH_3 groups rotate, whereas all NH_3 groups do not move. The QNS measurements exclude the possibilities (1) and (3). A transition at ca. 160–170 K was confirmed in the measurements, as connected with an increase of the quasielastic component intensity observed via a dip of the EISF.

Słowa kluczowe

Neutron scattering, Molecular reorientation, Phase transitions

Adres publiczny

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