Correlation between crystal structures and polar (ferroelectric) properties of hybrids of haloantimonates(III) and halobismuthates(III).

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Streszczenie

Halogenoantimonates(III) and halogenobismuthates(III) are a highly versatile class of organic–inorganic hybrid materials, applicable in optoelectronics and switchable dielectric devices. In this review, we discuss the rich chemistry of molecular–ionic halide complexes of Bi(III) and Sb(III) focusing on the correlations between their crystal structures and ferroelectric properties as well as on an explanation of the molecular mechanism of the paraelectric–ferroelectric phase transition. This review summarizes the current state of the art in the field of ferroelectricity among organic–inorganic hybrids based on Bi(III) and Sb(III) halides, which has become one of the key exploration areas of modern materials chemistry.

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