

NONSTOICHIOMETRY AND CONDUCTIVITY  
ANISOTROPY OF LEAD GERMANATE  
SINGLE CRYSTALS

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S u m m a r y

The conductivity of lead germanate single crystals with the stoichiometric composition, PbO deficiency, and PbO excess has been measured. A reduction of the PbO fraction in the initial blend leads to a considerable increase of the conductivity, because the fraction of lead ions which change their valency from  $\text{Pb}^{2+}$  to  $\text{Pb}^{3+}$  grows. The relative arrangement of lead ions, which are able to change their valency and trap holes, can be responsible for a significant anisotropy of conductivity.