Synthese und Kristallstruktur des Lanthan-Titanat-Tellurats $LaTi(Ti_{0,25}Te_{0,75})O_6$ und seine Verwandtschaft mit $PbSb_2O_6$ und $Sr(MnTe)O_6$

Synthesis and Crystal Structure of the Lanthanum Titanate Tellurate $LaTi(Ti_{0.25}Te_{0.75})O_6$ and its Relationship to $PbSb_2O_6$ and $Sr(MnTe)O_6$

L. Wulff, Hk. Müller-Buschbaum*

Institut für Anorganische Chemie der Christian-Albrechts-Universität, Olshausenstr. 40, D-24098 Kiel

Z. Naturforsch. **53 b,** 149–152 (1998); eingegangen am 25. November 1997

Lanthanum, Titanate, Tellurate, Crystal Structure

Single crystals of $LaTi(Ti_{0.25}Te_{0.75})O_6$ have been prepared by solid state reactions. X-ray investigations led to trigonal symmetry, space group C_3^1-P3, a = 5.141(10), c = 5.218(10) Å, Z = 1. The compound is characterized by a predominantly ordered distribution of Ti^{4+} and Te^{6+}. Typical features of the crystal structure are staggered layers containing edge connected TiO_6 and $(Ti,Te)O_6$ octahedra. The layers are connected by La^{3+} ions receiving an octahedral coordination by the surrounding oxygen ions. The relationships to the $PbSb_2O_6$ type and the recently described compound $Sr(MnTe)O_6$ are discussed.

* Sonderdruckanforderungen an Prof. Dr. Müller-Buschbaum.