

Isolierte trigonale SrO_6 -Prismen verknüpfen Kagomé-Netze im Strontium-Manganat(IV)-Tellurat(VI): SrMnTeO_6

Kagomé Layers Connected by Isolated Trigonal SrO_6 Prisms in the Strontium Manganate(IV) Tellurate(VI): SrMnTeO_6

L. Wulff, Hk. Müller-Buschbaum*

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

Z. Naturforsch. **53 b**, 283–286 (1998); eingegangen am 7. November 1997

Strontium, Manganese, Tellurate, Crystal Structure

Single crystals of the hitherto unknown compound SrMnTeO_6 have been prepared from $\text{Sr}(\text{OH})_2 \cdot 8\text{H}_2\text{O}$, $\text{MnCO}_3(\text{aq})$ and TeO_2 in air by crystallization below the melt range. X-ray investigations showed hexagonal symmetry, space group $D_{3h}^3\text{-P}\bar{6}2m$, lattice constants $a = 5.143(1)$, $c = 5.384(2)$ Å, $Z = 1$. SrMnTeO_6 is characterized by staggered $[(\text{Mn}/\text{Te})_6\text{O}_{18}]$ Kagomé layers along $[001]$. These layers are connected by Sr^{2+} ions, resulting in SrO_6 prisms isolated from each other. The structure is discussed with respect to the connection of Kagomé nets in the quaternary oxides of the $\text{Ba}_3\text{Ln}_4\text{O}_9$ type.

* Sonderdruckerfordernungen an Prof. Dr. Müller-Buschbaum.