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$_6$

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Single crystals of the hitherto unknown compound SrMnTeO$_6$ have been prepared from Sr(OH)$_2$·8H$_2$O, MnCO$_3$(aq) and TeO$_2$ in air by crystallization below the melt range. X-ray investigations showed hexagonal symmetry, space group D$_3$h-P6$_2$m, lattice constants $a = 5.143(1)$, $c = 5.384(2)$ Å, $Z = 1$. SrMnTeO$_6$ is characterized by staggered [(Mn/Te)$_6$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 Ba$_3$Ln$_4$O$_9$ type.

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