

Zur Kristallchemie von Telluraten mit Mn^{2+} im kationischen und anionischen Teil der Kristallstruktur: $(\text{Mn}_{2,4}\text{Cu}_{0,6})\text{TeO}_6$, $\text{Ba}_2\text{MnTeO}_6$ und $\text{Pb}(\text{Mn}_{0,5}\text{Te}_{0,5})\text{O}_3$

On the Crystal Chemistry of Tellurates Containing Mn^{2+} in the Cationic and Anionic Part of the Crystal Structure: $(\text{Mn}_{2,4}\text{Cu}_{0,6})\text{TeO}_6$, $\text{Ba}_2\text{MnTeO}_6$ and $\text{Pb}(\text{Mn}_{0,5}\text{Te}_{0,5})\text{O}_3$

L. Wulff, B. Wedel, Hk. Müller-Buschbaum*

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

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Manganese, Copper, Lead, Barium, Tellurates

Single crystals of $(\text{Mn}_{2,4}\text{Cu}_{0,6})\text{TeO}_6$ (**I**), $\text{Ba}_2\text{MnTeO}_6$ (**II**) and $\text{Pb}(\text{Mn}_{0,5}\text{Te}_{0,5})\text{O}_3$ (**III**) have been prepared by crystallization from fluxes. X-ray investigations led to rhombohedral symmetry (**I**): $R\bar{3}$, (**II**): $R\bar{3}m$ with the trigonal lattice constants (**I**): $a = 8.826(1)$, $c = 10.687(2)$ Å, $Z = 2$. (**II**): $a = 5.817(8)$, $c = 14.244(3)$ Å, $Z = 3$. Compound (**III**) crystallizes with cubic symmetry $P4\bar{3}m$, $a = 4.045(3)$ Å, $Z = 1$. (**I**) is the first example of a manganese(II) tellurate and belongs to the structure type of $A_3\text{XO}_6$ compounds like $(\text{Mn}_2\text{In})\text{SbO}_6$, Mn_3WO_6 and Ca_3UO_6 . (**II**) exemplifies an ordered and (**III**) a disordered variation of the perovskites.

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