

Ag⁺ als Substituent eines Alkalimetalls in Ag₂SrMnV₂O₈

Ag⁺ as Substituent of an Alkaline Metal in Ag₂SrMnV₂O₈

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Z. Naturforsch. **53 b**, 279–282 (1998); eingegangen am 17. November 1997

Silver, Strontium, Manganese, Vanadium Oxide

Single crystals of Ag₂ SrMnV₂O₈ have been prepared by reactions of metallic silver and a mixture of SrCO₃, MnCO₃·H₂O and V₂O₅. X-Ray investigations showed monoclinic symmetry, space group C_{2h}⁶-C2/c, $a = 9.7022(9)$, $b = 5.5882(5)$, $c = 13.894(1)$, $\beta = 90.41(1)^\circ$, $Z = 4$. The crystal structure is isotypic to Na₂BaCuV₂O₈ and includes VO₄ tetrahedra, MnO₆ octahedra as well as irregular AgO₈ and SrO₁₀ polyhedra. Ag₂SrMnV₂O₈ is characterized by a [MnV₂O₈] network incorporating Ag⁺ and Sr²⁺ or a [Ag₂V₂O₈] frame incorporating Mn²⁺ and Sr²⁺ ions. Ag⁺ is able to replace an alkali ion in the cationic part of the crystal structure.

* Sonderdruckanforderungen an Prof. Dr. Müller-Buschbaum.