

Indium partiell in tetraedrischer Sauerstoffkoordination in $\text{BaIn}_2\text{Zn}_3\text{O}_7$.

Eine Betrachtung zum $\text{Ba}_2\text{Ln}_2\text{Zn}_8\text{O}_{13}/\text{BaLnAlZn}_3\text{O}_7$ -Typ

Partial Tetrahedral Oxygen Coordination of Indium in $\text{BaIn}_2\text{Zn}_3\text{O}_7$.

A Consideration of the $\text{Ba}_2\text{Ln}_2\text{Zn}_8\text{O}_{13}/\text{BaLnAlZn}_3\text{O}_7$ Type

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Barium, Indium, Zinc, Oxide, Crystal Structure

Single crystals of $\text{BaIn}_2\text{Zn}_3\text{O}_7$ have been prepared by solid state reaction and crystallization from flux. X-ray investigations led to hexagonal symmetry, space group C_{6v}^4 - $P6_3mc$, lattice constants $a = 6.342(1)$, $c = 10.282(1)$ Å, $Z = 2$. $\text{BaIn}_2\text{Zn}_3\text{O}_7$ shows tetrahedral positions statistically occupied by In^{3+} and Zn^{2+} . The crystal structure is isotypic to $\text{Ba}_2\text{Ln}_2\text{Zn}_8\text{O}_{13}$ and $\text{BaLnAlZn}_3\text{O}_7$. A discussion of the related compounds is given.

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