

High-pressure Synthesis, Crystal Structure, and Properties of δ -Ce(BO₂)₃

Almut Haberer, Gunter Heymann, and Hubert Huppertz

Department Chemie und Biochemie, Ludwig-Maximilians-Universität München,
Butenandtstraße 5 – 13 (Haus D), 81377 München, Germany

Reprint requests to H. Huppertz. E-mail: huh@cup.uni-muenchen.de

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The cerium *meta*-oxoborate δ -Ce(BO₂)₃ was synthesized under high-pressure / high-temperature conditions of 3.5 GPa and 1050 °C in a Walker-type multianvil apparatus. The crystal structure was determined by single crystal X-ray diffraction data, collected at r. t. The compound crystallizes monoclinically in the space group $P2_1/c$ with the lattice parameters $a = 422.52(8)$, $b = 1169.7(2)$, $c = 725.2(2)$ pm, and $\beta = 91.33(3)^\circ$. The structure is isotypic to the recently published high-pressure phase δ -La(BO₂)₃, consisting exclusively of corner sharing [BO₄]⁵⁻ tetrahedra.

Key words: High-pressure Phase, Borate, Crystal Structure, Multianvil