

# **Ag<sub>2</sub>Cs[B<sub>15</sub>O<sub>24</sub>]: Ein wasserfreies quaternäres Silber(I)-Borat mit einem neuartigen Boratanion mit helixartigem Aufbau**

Ag<sub>2</sub>Cs[B<sub>15</sub>O<sub>24</sub>]: An Anhydrous Quaternary Silver(I)-Borate with a New Helical Borate Anion

A. Wiesch, K. Bluhm\*

Institut für Anorganische Chemie der Christian-Albrechts-Universität zu Kiel,  
Otto-Hahn-Platz 6-7, D-24098 Kiel

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Single crystals of Ag<sub>2</sub>Cs[B<sub>15</sub>O<sub>24</sub>] were prepared by using a B<sub>2</sub>O<sub>3</sub> flux technique with Ag<sub>2</sub>CO<sub>3</sub> and Cs<sub>2</sub>CO<sub>3</sub> in a closed silver tube at 650 °C. X-Ray investigations led to a new crystal structure in the space group P 2<sub>1</sub>2<sub>1</sub>2 (Nr. 18) with lattice parameters  $a = 1778.7$  (4);  $b = 2219.2$  (4);  $c = 512.2$  (1) pm,  $Z = 4$ . The silver atoms are part of distorted AgO<sub>4</sub> tetrahedra and planar AgO<sub>3</sub> units while the caesium atoms are eightfold coordinated by oxygen. The compound contains an as yet unknown borate anion [B<sub>15</sub>O<sub>24</sub>] with twelve BO<sub>3</sub>- and three BO<sub>4</sub> units per formula. The BO<sub>3</sub> units are connected to eight cords twisted to helices which are combined via BO<sub>4</sub> tetrahedra to a three dimensional framework with large tunnels occupied by the cations.

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