

# Isolierte $\overset{1}{\infty}$ [TeO<sub>5</sub>]-Oktaederketten im Bleitellurat Pb<sub>2</sub>TeO<sub>5</sub>

Isolated  $\overset{1}{\infty}$  [TeO<sub>5</sub>] Chains of Octahedra in the Lead Tellurate Pb<sub>2</sub>TeO<sub>5</sub>

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

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

Z. Naturforsch. **53 b**, 287–290 (1998); eingegangen am 17. November 1997

Lead, Tellurate, Crystal Structure

Single crystals of Pb<sub>2</sub>TeO<sub>5</sub> have been prepared by flux techniques. X-ray investigations showed a new crystal structure with monoclinic symmetry, space group C<sub>s</sub><sup>4</sup>-Cc,  $a = 13.099(3)$ ,  $b = 5.714(1)$ ,  $c = 7.520(2)$  Å,  $\beta = 123,80(3)^\circ$ ,  $Z = 4$ . Pb<sub>2</sub>TeO<sub>5</sub> is characterized by  $\overset{1}{\infty}$  [TeO<sub>5</sub>] chains of octahedra isolated from each other and incorporated into an edge, corner and face connected frame of PbO<sub>7</sub> polyhedra. Possible positions of the lone pair of electrons of Pb<sup>2+</sup> are estimated by calculations of Coulomb terms of lattice energy.

\* Sonderdruckanforderungen an Prof. Dr. Müller-Buschbaum.