

substance: V_nO_{2n+1} : $n \geq 3$
property: crystal structure of V_4O_9

Different formulations

lattice parameters

a	17.926(4) Å	RT	orthorhombic, space group	70W
b	3.631(1) Å		$D_{2h}^7 - Pmna$, $Z = 4$	
c	9.396(2) Å			
a	8.235 Å	RT	orthorhombic, $Z = 8$	77G
b	10.32 Å			
c	16.47 Å			
$a = b$	8.215 Å	RT	$Z = 4$	69T
c	10.32 Å			

An analysis suggests that the compound may best be formulated $V_4O_8 \cdot OH$ [72C, 76W], though the compound formed by ultra-high vacuum reduction of V_2O_5 at low temperatures ($> 100^\circ C$) is indexed as a defect form of V_2O_5 in which the structural elements of V_2O_5 are retained but an ordered superlattice of O vacancies is found [77G].

References:

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- 72C Casalot, A.: Mater. Res. Bull. 7 (1972) 903.
- 76W Waltersson, K.: Chem. Commun. Univ. Stockholm 1976, No. 7.
- 77G Grymonprez, C., Fiermans, L., Vennik, J.: Acta Crystallogr. A33 (1977) 834.