



General structural relationships between rutile-type  $\text{VO}_2$  and the  
Magnéli-phases  $\text{V}_n\text{O}_{2n-1}$

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Abstract:

The structures of the Magnéli-phases  $\text{V}_n\text{O}_{2n-1}$  ( $3 \leq n \leq 7$ ) are reviewed with respect to their structural relationships to rutile-type  $\text{VO}_2$ . The general expressions for the transformation matrices  $P$  and  $Q = P^{-1}$  are derived allowing the prediction of lattice parameters and atomic coordinates for hypothetical structures of  $\text{V}_n\text{O}_{2n-1}$  with  $n \geq 8$ .