

vanadium, V

I 5000

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Crystal Structure of a New Sodium Vanadyl(IV) Fluoride Phosphate $\text{Na}_3\{\text{V}_2\text{O}_2\text{F}[\text{PO}_4]_2\}$. — Single blue-green crystals of the title compound are prepared hydrothermally from a 2:1:1 mixture of VO_2 , Na_3PO_4 , and CuO in a 30% aqueous NaF solution (280 °C, 100 bar, 20 d). Single crystal XRD reveals that $\text{Na}_3\{\text{V}_2\text{O}_2\text{F}[\text{PO}_4]_2\}$ crystallizes in the space group $I4/mmm$ with $Z = 2$. Its crystal structure is formed by layers of alternating $[\text{VO}_5\text{F}]$ octahedra and $[\text{PO}_4]$ tetrahedra sharing common oxygen atoms. — (MASSA, WERNER; YAKUBOVICH, OLGA V.; DIMITROVA, OLGA V.; *Solid State Sci.* 4 (2002) 4, 495-501; Fachbereich Chem., Philipps-Univ., D-35043 Marburg, Germany; EN)