

# A large family of niobium phosphate bronzes and bronzoids with $\text{KNb}_3\text{P}_3\text{O}_{15}$ structure

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Description

Nine new phosphate bronzoides- $\text{ANb}_2\text{TiP}_3\text{O}_{15}$ ,  $\text{ATa}_2\text{TiP}_3\text{O}_{15}$  and  $\text{ANbSbTiP}_3\text{O}_{15}$  (A= K, Rb, Tl)-and one new phosphate bronze  $\text{RbNb}_3\text{P}_3\text{O}_{15}$  have been synthesized. The cell parameters of these phases have been determined and the crystal structure of  $\text{RbNb}_3\text{P}_3\text{O}_{15}$  has been established from a single crystal X ray diffraction study. They are all isotypic with the niobium phosphate bronze  $\text{KNb}_3\text{P}_3\text{O}_{15}$  whose structure is closely related to that of the tetragonal tungsten bronze (TTB). The structural evolution in the series is discussed.