Structure
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**Synthesis, Structure, Magnetic, Optical and Moessbauer Properties of $Na_2FeSn(PO_4)_3$.** — The title compound is prepared by solid state reaction of a stoichiometric mixture of $Na_2CO_3$, $(NH_4)_2HPO_4$, $Fe_2O_3$, and $SnO_2$ (200, 600, and 950 °C, 48 h) and characterized by powder XRD, UV/VIS diffuse reflectance spectroscopy, magnetic measurements, and Moessbauer spectroscopy. It belongs to the Nasicon family and crystallizes isotypically with $Na_2CrTi(PO_4)_3$ in the hexagonal space group $R\bar{3}c$ with $Z = 6$. The structure consists of a three-dimensional framework of corner-sharing $[PO_4]$ tetrahedra and $[(Sn/Fe)O_6]$ octahedra. $Fe^{3+}$ and $Sn^{4+}$ cations are statistically distributed over the octahedral sites of the framework. Na occupies totally the $M_1$ sites and partially the $M_2$ sites. — (EL BOUARI*, A.; EL JAZOULI, A.; BENMOKHTAR, S.; GRAVEREAU, P.; WATTIAUX, A.; J. Alloys Compd. 503 (2010) 2, 480-484, DOI:10.1016/j.jallcom.2010.05.037 ; Lab. Chim. Mater. Solides, Fac. Sci. Ben M'Sik, Casablanca, Morocco; Eng.) — W. Pewestorf