

Synthesis and Crystal Structure of the Tetra-nickel Substituted $[\text{Ni}_4(\text{H}_2\text{O})_2(\text{AsW}_9\text{O}_{34})_2]^{10-}$ Polyoxoanion

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Dedicated to Professor Kurt O. Klepp on the occasion of his 60th birthday

The new polyoxotungstate $(\text{NH}_4)_6\text{Na}_4[\text{Ni}_4(\text{H}_2\text{O})_2(\text{AsW}_9\text{O}_{34})_2] \cdot 20 \text{ H}_2\text{O}$ (**1**) was synthesized in aqueous solution and characterized by IR and UV/Vis spectroscopy, energy dispersive X-ray fluorescence and single-crystal X-ray analysis. It contains the tetra-nickel substituted $[\text{Ni}_4(\text{H}_2\text{O})_2(\text{AsW}_9\text{O}_{34})_2]^{10-}$ polyoxoanion, in which the four Ni atoms are in a common plane and form a regular rhombus. **1** crystallizes in the monoclinic crystal system, space group $P2_1/n$ with $a = 11.849(2)$, $b = 16.718(3)$, $c = 21.243(4)$ Å, $\beta = 100.48(3)^\circ$, and $Z = 2$. The anions are linked *via* hydrogen bonds and sodium cations.

Key words: Polyoxometalates, Nickel, Tungsten, Crystal Structure