Cobalt
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Synthesis and Structural Characterization of a Tetra-Cobalt(II)-Substituted Sandwich-Type Tungstophosphate, $(1,3\text{-}H_2dap)_2H_4[Co_4(1,3\text{-}Hdap)_2(\alpha\text{-}B\text{-}PW_9O_{34})_2]\cdot 3H_2O$. — The title compound (1,3-dap: 1,3-diaminopropane) is hydrothermally synthesized from a mixture of Na_2WO_4, NaH_2PO_4, $CoCl_2$, $Co(OAc)_2$, 1,3-dap, and H_2O (autoclave, 160 °C, 4 d, 16% yield). It crystallizes in the monoclinic space group $P2_1/n$ with Z = 2 (single crystal XRD). The $[Co_4(1,3\text{-}Hdap)_2(PW_9O_{34})_2]^{8-}$ anion contains two lacunary α-B-$[PW_9O_{34}]^{9-}$ Keggin units linked by a rhomb-like $Co_4O_{14}(1,3\text{-}dap)_2$ cluster. A three-dimensional framework is formed by interaction of protonated 1,3-dap units with the $[PW_9O_{34}]^{9-}$ polyanions via hydrogen bonds. — (WANG*, Z.-L.; XI, H.-P.; Z. Naturforsch., B: Chem. Sci. 67 (2012) 5, 495-498, http://dx.doi.org/10.5560/znb.2012-0077 ; Coll. Chem. Chem. Eng., Henan Univ., Kaifeng 475001, Peop. Rep. China; Eng.) — W. Pewestorf