Darstellung, Kristallstruktur, Schwingungsspektren und Normalkoordinatenanalyse von *trans*-$[OsO_2(N_2H_2C_2O_2)_2]^{2-}$

Synthesis, Crystal Structure, Vibrational Spectra, and Normal Coordinate Analysis of *trans*-$[OsO_2(N_2H_2C_2O_2)_2]^{2-}$

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trans-Dioxo-bis(oxamido)osmate(VI), Synthesis, Crystal Structure, Vibrational Spectra, Normal Coordinate Analysis

The treatment of $K_2[OsO_2(OH)_4]$ with oxamide in aqueous solution yields $[OsO_2(N_2H_2C_2O_2)_2]^{2-}$. The crystal structure of *trans*-$(Ph_4P)_2[OsO_2(N_2H_2C_2O_2)_2]\cdot CH_2Cl_2$ (triclinic, space group P1, a = 10.447(1), b = 14.102(4), c = 16.962(2) Å, α = 90.037(1), β = 90.633(7), γ = 98.812(2)°, Z = 2) has been determined by single crystal X-ray diffraction analysis. The IR and Raman spectra were measured at room temperature. Based on the molecular parameters of the X-ray determination a normal coordinate analysis has been performed and the vibrations are assigned. The valence force constants are f_d(Os=O) = 6.7, f_d(Os-N) = 2.4, f_d(C-N) = 4.9, f_d(C=O) = 11.15 and f_d(C-C) = 4.7 mdyn/Å.

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