Darstellung, Schwingungsspektren und Normalkoordinatenanalysen der Dioxoosmate(VI) *trans*-$[OsO_2(CN)_2(ox)]^{2-}$, *trans*-$[OsO_2(CN)_2(mal)]^{2-}$ und *trans*-$[OsO_2(CN)_2(N_2H_2C_2O_2)]^{2-}$

Synthesis, Vibrational Spectra and Normal Coordinate Analysis of the Dioxoosmates(VI) *trans*-$[OsO_2(CN)_2(ox)]^{2-}$, *trans*-$[OsO_2(CN)_2(mal)]^{2-}$ and *trans*-$[OsO_2(CN)_2(N_2H_2C_2O_2)]^{2-}$

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trans-Dioxodicyanooxalatoosmate(VI), *trans*-Dioxodicyanomalonatoosmate(VI), *trans*-Dioxodicyanooxamidoosmate(VI), Synthesis, Vibrational Spectra

By careful acidification of the aqueous solution of *trans*-$K_2[OsO_2(OH)_4]$ in the presence of the required amount of cyanide ions with oxalic acid, malonic acid or oxamide the osmyl complexes *trans*-$[OsO_2(CN)_2(ox)]^{2-}$ (**1**), *trans*-$[OsO_2(CN)_2(mal)]^{2-}$ (**2**) und *trans*-$[OsO_2(CN)_2(N_2H_2C_2O_2)]^{2-}$ (**3**) are formed. The IR and Raman spectra of the (*n*-Bu_4N) and (Et_4N) salts of **1**, **2** und **3** were measured at room temperature. Based on the molecular parameters of the X-ray determination of related complexes normal coordinate analyses have been performed and the vibrations were assigned. The valence force constants are f_d(C≡N) = 16.95, f_d(Os=O) = 6.68 - 6.70, f_d(Os-O) = 2.55 - 2.60, f_d(Os-C) = 2.55 and f_d(Os-N) = 2.30 mdyn/Å. For the chelate ligands, f_d(C=O) ranges from 11.03 - 11.15, f_d(C-O/N) from 4.86 - 5.05 and f_d(C-C) from 4.07 - 4.70 mdyn/Å.