Bleispezies PbX und PbX_2 als Brückenliganden in übergangsmetallorganisch geschützten Koordinationsverbindungen

Leadspecies PbX and PbX_2 as Bridging Ligands in Organometallic Protected Coordination Compounds

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Lead, Alkoxo-Lead Compounds

The disodium salt $Na_2[\{(CO)_5Cr\}_2Pb(NO_3)_2]$, $Na_2\cdot$**1**, which contains a lead center in a (*4+2*) coordination mode, reacts with tetraphenylphosphonium halides $[Ph_4P]X$ to give the tetrahedral compounds $[Ph_4P]_2[\{(CO)_5Cr\}_2PbX_2]$ (X = Cl: **2a**; X = Br: **2b**; X = I: **2c**). Substitution of the nitrate groups of $Na_2\cdot$**1** by alcoxides leads to binuclear compounds of the type $[\{(CO)_5Cr\}_2Pb(\mu^2\text{-OR})_2Pb\{Cr(CO)_5\}_2]^{2-}$ (R = Et: **3a**; R = *n* -Pr: **3b**; R = *i*-Pr: **3c**; R = Allyl: **3d**). NMR experiments show that these dimeric compounds are in equilibrium with the monomeric species $[\{(CO)_5Cr\}_2PbR]^-$. Trialkylphosphanes react with $Na_2\cdot$**1** to give the neutral phosphane complexes $[\{(CO)_5Cr\}_2Pb(PR_3)_2]$ (R = Me: **4a**; R = Et: **4b**; R = *n*-Bu: **4c**), which show dynamic behaviour in solution. All of the novel compounds have been characterized by X-ray analysis, as well as by the usual analytic and spectroscopic techniques. ^{207}Pb-NMR data of $Cr(CO)_5$-bound lead species are reported for the first time.