Syntheses, Structures, and Spectroscopic Properties of Alkoxide, Hydroxide, and Siloxide Complexes with (η^3-Allyl)Mo Moieties

Cornelia Borgmann, Christian Limberg*, László Zsolnai, Katja Heinze

Universität Heidelberg, Anorganisch-Chemisches Institut,
Im Neuenheimer Feld 270, D-69120 Heidelberg, Germany

Z. Naturforsch. **54 b,** 473–481 (1999); received October 28, 1998

Molybdenum Complexes, Allyl, Alkoxides, Hydroxides, NMR Data

Salts with binuclear anions of the general formula $[(\eta^3\text{-}C_3H_4R)(CO)_2Mo(\mu\text{-}OR')_2(\mu\text{-}OR'')\text{-}Mo(CO)_2(\eta^3\text{-}C_3H_4R)]^-$ (R = H, R',R'' = Me, **2**; R = CH_3, R' = $CH(CH_3)_2$, R'' = OH, **3**; R = CH_3, R' = OH, R'' = $OSiMe_3$, **4**) have been synthesised *via* reaction of $[(\eta^3\text{-}C_3H_4R)\text{-}Mo(CO)_2(CH_3CN)_2(thf)]^+BF_4^-$, **1**, with NaOMe, NaO^{i}Pr, and $KOSiMe_3$. All products were characterised spectroscopically and investigated by single crystal X-ray analysis. In the case of **3** low temperature 2D-NMR spectra revealed that the solid state structure is maintained in solution and that the compound shows a trigonal twist-rearrangement at room temperature.

* Reprint requests to Dr. Ch. Limberg. Fax:+49 6221 545707, e-mail: Limberg@sun0.urz.uni-heidelberg.de