A very labile monomeric 1,5-cyclooctadiene complex of W(II) and its transformation to dimeric $[(\mu\text{-}Cl)_2W_2(GeCl_3)_2(CO)_6(NCMe)_2]$.

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Streszczenie

The photochemical oxidative addition of 1 equiv. of $GeCl_4$ to $[W(CO)_4(\eta^2,\eta^2\text{-}1,5\text{-}C_8H_{12})]$ affords the very labile seven-coordinate complex of tungsten(II) $[WCl(GeCl_3)(CO)_3(\eta^2,\eta^2\text{-}1,5\text{-}C_8H_{12})]$ (**1**). The structure of compound **1** has been established by IR and ^1H NMR spectroscopic methods. A very labile 1,5-cyclooctadiene ligand of **1** in dichloromethane/acetonitrile solution leaves the coordination sphere of tungsten to give a dimeric seven-coordinate compound of tungsten(II) $[(\mu\text{-}Cl)_2W_2(GeCl_3)_2(CO)_6(NCMe)_2]$ (**2**). The crystal structure of a new dimeric compound containing W–Ge bonds (**2**) was determined by X-ray diffraction studies.

Słowa kluczowe

Tungsten, Germanium, Heterobimetallic compound, Cyclooctadiene complex, Crystal structure, NMR

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