

Structure and Reactivity of (η^5 -Cyclopentadienyl)(triphenylphosphine)-(undecamethylcyclohexasilyl)nickel(II)-Hexane (2/1)

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Z. Naturforsch. **2009**, *64b*, 1423 – 1428; received September 9, 2009

Dedicated to Professor Hubert Schmidbaur on the occasion of his 75th birthday

The nickel cyclohexasilyl complex $\text{CpNi}(\text{PPh}_3)\text{Si}_6\text{Me}_{11}$ was synthesized from nickelocene, triphenylphosphine, and undecamethylcyclohexasilyl potassium and was fully characterized. It shows a relationship between its Si–Si bond lengths and its reactivity towards oxygen. The cleavage of one cyclopentadienyl ligand from nickelocene by silyl anions in the presence of additional ligands opens a promising new pathway to nickel silyl complexes of the type $\text{CpNi}(\text{L})\text{-SiR}_3$.

Key words: Cyclohexasilyl Complexes, Nickel Silyl Complexes, Nickelocene, Silyl Anions, Structure-Reactivity Relationship