Untersuchungen zur Reaktivität des Lithiumphosphanids Li[PtBu₂] gegenüber GaCl₃

Investigations of the Reactivity of the Lithiumphosphanide Li[PtBu₂] towards GaCl₃

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Single crystals suitable for X-ray diffraction of (tBu₂P)₃Ga (monoclinic, space group Cc) were obtained from GaCl₃ and two equivalents of Li[PtBu₂] at room temperature in benzene. The phosphanyl gallane (tBu₂P)₃Ga was also produced via a one-pot approach by reaction of GaCl₃ with three or more than three equivalents of Li[PtBu₂]. However, treatment of one equivalent of GaCl₃ with one equivalent of Li[PtBu₂] and subsequent protolysis yielded [tBu₂PH₂][tBu₂P(GaCl₃)₂-Li(Cl₃Ga)₂PrBu₂]. Single crystals of this phosphonium salt (monoclinic, space group Cc) were obtained from benzene at room temperature.

Key words: Gallium, Phosphorus, Addition Compounds, X-Ray Structure Analysis