3,4-, 4,7- und 1,4,7-substituierte Indenyl-$TiCl_3$-Komplexe: Synthese und vergleichende Diskussion der Substituenteneinflüsse

3,4-, 4,7- and 1,4,7-Substituted Indenyl-$TiCl_3$ Complexes: Synthesis and Comparison of Substituent Effects

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Me_3Si-substituted indenes of type 1-$SiMe_3$-3,4-$(CH_2)_3C_9H_5$ (**9**), 1-$SiMe_3$-4-R-7-R′C_9H_5 (**11a**, R = R′ = Me; **11b**, R = R′ = Ph; **11c**, R = Me, R′ = Ph) and 1,1′-$(SiMe_3)_2$-4,7-$Me_2C_9H_4$ (**12**) were synthesised as precursors for piano-stool type halfsandwich indenyl-titanium trichloride complexes. Treatment of **9**, **11**, and **12** with equimolar amounts of $TiCl_4$ gives the complexes (η^5-3,4-$(CH_2)_3C_9H_5$)$TiCl_3$ (**13**), (η^5-4-R-7-R′C_9H_5)$TiCl_3$ (**14a**, R = R′ = Me; **14b**, R = R′ = Ph; **14c**, R = Me, R′ = Ph), and (η^5-1-$SiMe_3$-4,7-$Me_2C_9H_4$)$TiCl_3$ (**15**), respectively, with liberation of Me_3SiCl. Detailed UV/vis spectroscopic and cyclic voltammetric studies were carried out which allow a comparison of substituent effects in **13** – **15**.

Key words: Halfsandwich Complexes, Indenyl, Titanium, UV/vis, Cyclovoltammetry, Substituent Effects