On Attempts to Synthesize Lanthanide Complexes of the Dianionic Fluorenyl-alkoxo Ligand $[C_{13}H_8\text{-}cyclo\text{-}C_6H_{10}\text{-}O]^{2-}$. Crystal Structure of $(C_{13}H_9\text{-}cyclo\text{-}C_6H_{10}\text{-}O)LaI_2(DME)_2$

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Racemic *trans*-2-(9(H)-fluoren-9-yl)cyclohexanol, $C_{13}H_9\text{-}cyclo\text{-}C_6H_{10}\text{-}OH$ (**1**), reacts with two equivalents of potassium naphthalenide in THF to give the dipotassium salt $[C_{13}H_8\text{-}cyclo\text{-}C_6H_{10}\text{-}O]\text{-}K_2(THF)$ (**2**). Recrystallization of **2** from pyridine affords the solvent free salt $[C_{13}H_8\text{-}cyclo\text{-}C_6H_{10}\text{-}O]K_2$ (**3**). The reactions of $LaI_3(THF)_4$ with one equivalent of **2** or of $YbI_2(THF)_2$ with equimolar amounts of **2** produce the alkoxolanthanum diiodide $(C_{13}H_9\text{-}cyclo\text{-}C_6H_{10}\text{-}O)LaI_2(DME)_2$ (**4**) and the ytterbium dialkoxide $(C_{13}H_9\text{-}cyclo\text{-}C_6H_{10}\text{-}O)_2Yb(THF)_{0.5}$(**5**), respectively. $[(Me_3Si)_2N]_3Y$ reacts with three equivalents of **1** with elimination of hexamethyldisilazane and formation of the yttrium trialkoxide $(C_{13}H_9\text{-}cyclo\text{-}C_6H_{10}\text{-}O)_3Y$ (**6**). The compounds **2** to **5** were characterized by elemental analyses, ^1H NMR, ^{13}C NMR and IR spectra. The molecular structure of **4** was determined by single crystal X-ray diffraction.

Key words: Yttrium, Lanthanum, Ytterbium, Lanthanide(fluorenyl)alkoxides