Supplementary Material (ESI) for Chemical Communications

Supporting Information

For

Well-Defined Hydrocarbon Soluble Strontium Fluoride and Chloride Complexes of Composition [LSr(thf)(μ-F)$_2$Sr(thf)$_2$L] and [LSr(thf)(μ-Cl)$_2$Sr(thf)$_2$L]

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Contents:

1. General experimental details

All manipulations were performed under a dry and oxygen-free N_2 atmosphere by using Schlenk and glove box techniques. SrI_2, $AlCl_2(Me)$ (1 M solution in hexane) and $KN(SiMe_3)_2$ (95%) were purchased from Aldrich and used as such. ^1H and ^{13}C NMR spectra were recorded on a Bruker Avance 500 NMR spectrometer. Chemical shifts are reported in ppm with reference to $SiMe_4$ (external). All NMR measurements were carried out at room temperature. EI-mass spectra were obtained using a Finnigan MAT 8230 or with a Varian MAT CH5 instrument (70 eV). Melting points were measured in sealed glass tubes on a Büchi B-540 melting point apparatus and are uncorrected. Elemental analyses were performed by the Analytisches Labor des Instituts für Anorganische Chemie der Universität Göttingen. $LSrN(SiMe_3)_2(thf)$, $LAlCl(Me)$,[1] and Me_3SnF[2] were prepared according to literature.

2. Crystallographic details for compounds 2 and 3

The data for compounds **2** and **3** were collected on a STOE IPDS II instrument. In the structure of **2**, four methyl groups and in **3**, one of the coordinate THF molecules, respectively, are disordered. They were refined with distance restraints and restraints for the anisotropic displacement parameters. Both the structures were solved by direct methods with SHELXS-97[3] and were refined with SHELXL-97[4] on F^2.

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2 H. W. Roesky and K. Keller, *J. Fluorine Chem*., 1998, **89**, 3–4.

3 G. M. Sheldrick, *Acta Cryst. A,* 1990, **46**, 467-473.

4 G. M. Sheldrick, SHELXL-97 *Program for Crystal Structure Refinement*, University of Göttingen, Göttingen (Germany)