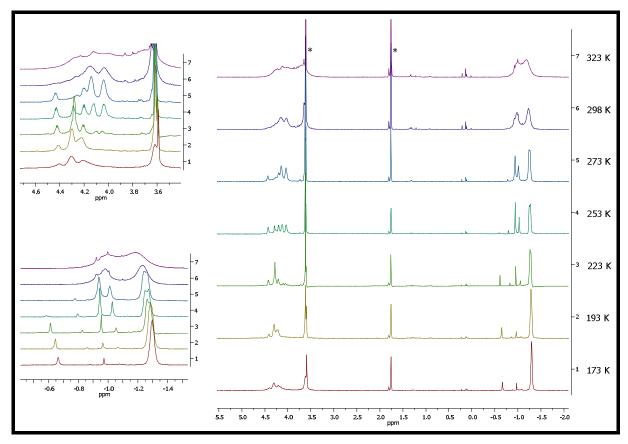
## **Supplementary Material:**

## Cationic rare-earth-metal methyl complexes: a new preparative access

Anja Nieland, Andreas Mix, Beate Neumann, Hans-Georg Stammler and Norbert W. Mitzel\*



**Figure S1**:  ${}^{1}H$  NMR Spectrum of **1** in [D<sub>8</sub>]thf at variable temperatures. Signals marked with an \* are residual signals of the solvent.

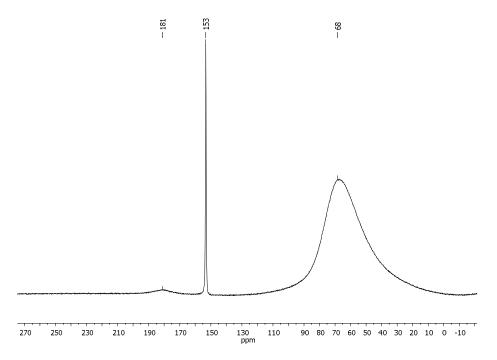


Figure S2: <sup>27</sup>Al NMR Spectrum of 1 at 298 K.

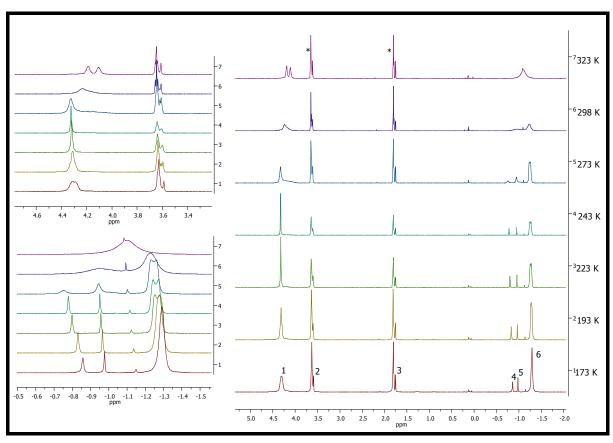


Figure S3:  ${}^{1}H$  NMR Spectrum of 3 in  $[D_{8}]$ thf at variable temperatures. Signals marked with an \* are residual signals of the solvent.

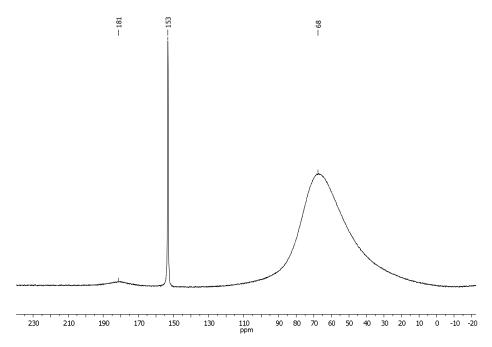


Figure S4: <sup>27</sup>Al NMR Spectrum of 3 at 298 K.

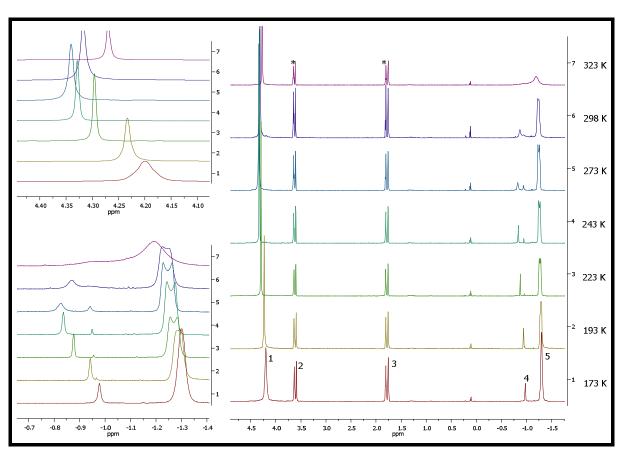


Figure S3:  $^1\text{H}$  NMR Spectrum of 5 in [D<sub>8</sub>]thf at variable temperatures. Signals marked with an \* are residual signals of the solvent.