

Supporting Information

Formation of Al_2H_7^- anions – Indirect evidence of volatile AlH_3 on sodium alanate using solid-state NMR spectroscopy

Michael Felderhoff and Bodo Zibrowius

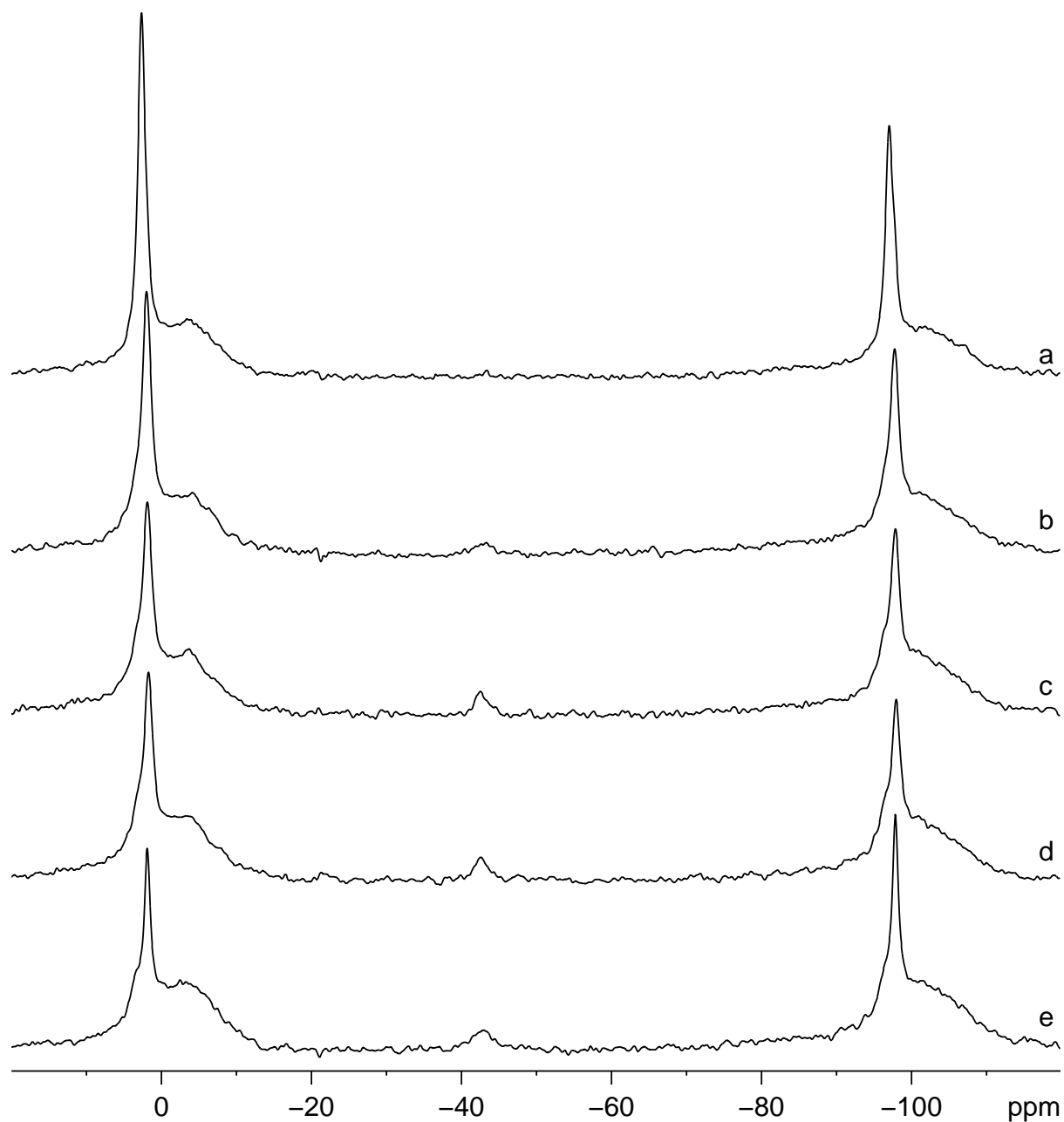


Fig. S1 ^{27}Al MAS NMR spectra of a 10:1 mixture of NaAlH_4 and 18C6 after ball-milling recorded (a) at 311 K, (b) after 10 min at 338 K, (c) after 100 min at 338 K, (d) after additional 10 min at 343 K, and (e) after overnight cooling to 311 K. These are the same spectra as in Fig. 1, but showing the region with the growing line of Na_3AlH_6 at -42.5 ppm.

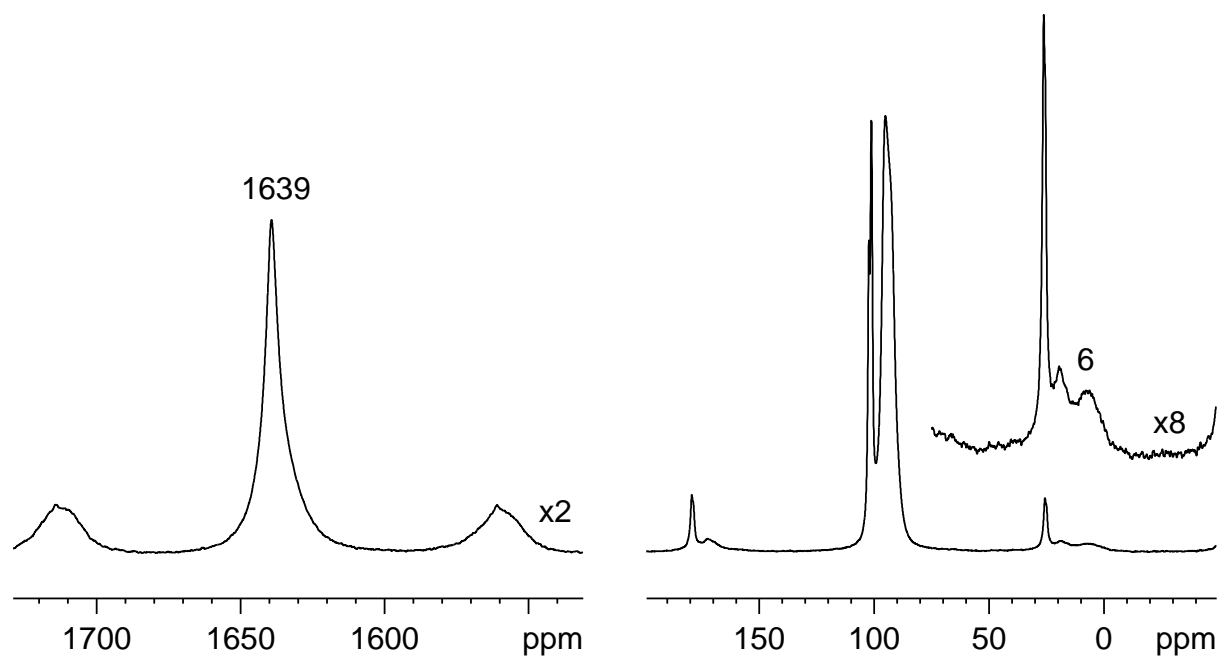


Fig. S2 ^{27}Al MAS NMR spectra of a 10:1:1 mixture of NaAlH_4 , 18C6 and polymeric AlH_3 after ball-milling at $T = 77$ K recorded at 304 K and $\nu_{\text{MAS}} = 10$ kHz. This is the same spectrum as in Fig. 4a, but showing the regions with the lines of metallic aluminium (at about 1639 ppm, left) and the polymeric AlH_3 (at about 6 ppm, inset on the right).