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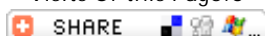
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Research Title : Reactions of the alkyltrihydroaluminate $[Li(thf)(2)\{AlH_3[C(SiMe_3)(3)]\}_2]$. Crystal structures of $[Li(tmen)(2)][AlH_3[C(SiMe_3)(3)]]$, $[AlBr_2\{-C(SiMe_3)(3)\}]center dot thf$, $[AlI_2\{C(SiMe_3)(3)\}]center dot thf$, $[Li(thf)(2)(mu-NHPh)(2)\{-AlH[C(SiMe_3)(3)]\}]$ and $\{Li(thf)(4)[Al(NHPh)(3)\{C(SiMe_3)(3)\}]\}$
Reactions of the alkyltrihydroaluminate $[Li(thf)(2)\{AlH_3[C(SiMe_3)(3)]\}_2]$. Crystal structures of $[Li(tmen)(2)][AlH_3[C(SiMe_3)(3)]]$, $[AlBr_2\{-C(SiMe_3)(3)\}]center dot thf$, $[AlI_2\{C(SiMe_3)(3)\}]center dot thf$, $[Li(thf)(2)(mu-NHPh)(2)\{-AlH[C(SiMe_3)(3)]\}]$ and $\{Li(thf)(4)[Al(NHPh)(3)\{C(SiMe_3)(3)\}]\}$

Descriptipn : The alkyltrihydroaluminate $[Li(thf)(2)\{AlH_3[C(SiMe_3)(3)]\}_2]$, (thf = tetrahydrofuran) reacted (i) with tetramethylethane-1,2-diamine (tmen) to give $[Li(tmen)(2)][AlH_3[C(SiMe_3)(3)]]$, which crystallises as solvent-separated ion pairs, (ii) with HCl, HBr or Br-2, or I-2 to give, respectively, the alkylaluminium dihalides $[AlX_2\{C(SiMe_3)(3)\}.thf]$, X = Cl, Br or I, which have been characterised spectroscopically and, when X = Br or I, by X-ray diffraction studies; and (iii) with aniline to give $[Li(thf)(2)(mu-NHPh)(2)(AlH[C(SiMe_3)(3)])]$ and $[Li(thf)(4)[Al(NHPh)(3)\{C(SiMe_3)(3)\}]]$, which crystallise as anilide-bridged and solvent-separated ion pairs respectively.

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