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Synthesis and structures of some heterometallic [(Li, Y)$_2$, (M$_3$, Ce) (M = Li or Na), (Li, Zr$_2$) and (Li, Zr)$_4$] oligomeric diamides derived from 1,2-bis(neopentylamino)benzene

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The molecular structure of the crystalline alkali metal (Li/Na) tris(amido)cerate(III) [Ce{μ-κ^2-(NCH$_2$Bu^t)$_2$C$_6$H$_4$-1,2}M]$_3$]·0.5Et$_2$O (**4**) is illustrated in Fig. 1S. Selected geometric parameters (which are to be regarded with caution because of extensive disorder) are listed in Table 1S.

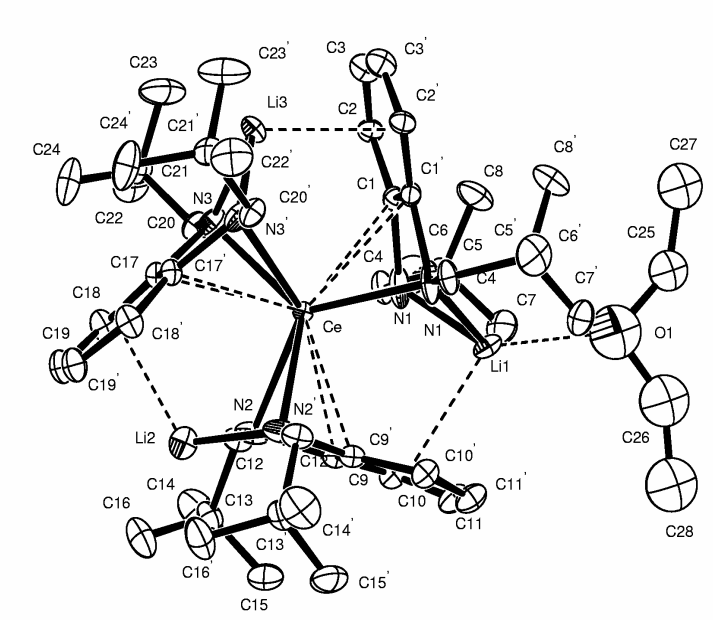

Fig. 1S The molecular structure of **4** (for "Li" read "M")

Table 1S Selected bond lengths (Å) and angles (°) for **4**

Ce-N(1)	2.541(4)	Li(3)-N(3)	2.139(9)
Ce-N(2)	2.590(4)	N(1)-C(1)	1.681(10)
Ce-N(3)	2.545(4)	N(1)-C(4)	1.454(6)
Ce-C(1A)	2.753(7)	N(2)-C(12)	1.457(5)
Ce-C(9)	2.772(9)	N(2)-C(9)	1.612(10)
Ce-C(17A)	2.781(7)	N(3)-C(17)	1.598(9)
Li(1)-N(1)	2.191(9)	N(3)-C(20)	1.457(5)
Li(2)-N(2)	2.050(11)	Li(1)-O(1)	2.456(11)
Li(1)-N(1)-Ce	96.9(3)	N(1)-Ce-N(3)	95.44(15)
Li(2)-N(2)-Ce	87.5(4)	N(3)-Ce-N(3) ′	62.04(17)
Li(3)-N(3)-Ce	90.6(3)	N(2)-Ce-N(1) ′	129.65(17)
N(1)′-Li(1)-N(1)	73.6(4)	N(1)-Ce-N(2)	96.67(16)
N(2)′-Li(2)-N(2)	79.3(5)	N(2)-Ce-N(3) ′	128.93(16)
N(3)′-Li(3)-N(3)	75.6(4)	N(2)-Ce-N(3)	96.18(15)
N(1)′-Ce-N(1)	62.22(19)	N(1)′-Ce-N(2)′	96.67(16)
N(1)′-Ce-N(3)′	95.44(15)	N(1)-Ce-N(2)′	129.65(17)
N(1)-Ce-N(3) ′	128.85(17)	N(2)′-Ce-N(3)′	96.18(15)
N(1)′-Ce-N(3)	128.85(17)	N(2)′-Ce-N(3)	128.93(16)

Symmetry transformations to generate equivalent atoms: ′ *x*, *y* +1/2, *z*