**Synthesis of $[(C_5Me_5)Sm(CH(SiMe_3)_2)(C_5Me_5)K(THF)_2]_n$ (1).** In a glove box, to a purple THF solution (10 mL) of $(C_5Me_5)_2Sm(THF)_2$ (0.565g, 1 mmol) in a 100 ml-flask was added a THF solution (5 mL) of $KCH(SiMe_3)_2$ (0.198g, 1 mmol). The resultant solution was stirred at room temperature for 1 h and then transferred to another flask through a glass filter. After the solution was concentrated under reduced pressure, hexane was layered to give green plate crystals of **1** suitable for X-ray analysis. Leaving **1** under vacuum (1 mmHg) at room temperature for 1 h gave **1'** (**1**–THF) (0.636 g, 0.91 mmol, 91% yield), as confirmed by elemental analysis. $^1$H NMR (THF-$d_8$, 22 °C): δ 10.20 (br s, 30 H, $C_5Me_5$), –0.02 (s, 18H, $SiMe_3$). The methine proton in $CH(SiMe_3)_2$ could not be located owing the influence of the paramagnetic Sm(II) ion. Anal. Calcd for $C_{31}H_{57}KOSi_2Sm$ (**1**–THF): C, 53.85; H, 8.31. Found: C, 53.73; H, 8.26.

**Synthesis of $[(C_5Me_5)Sm(\mu\text{-}H)_2]_6[(\mu\text{-}H)K(THF)_2]_3$ (2).** In a glove box, addition of $H_3SiPh$ (0.541 g, 5 mmol) to a THF solution (5 mL) of **1'** (0.692 g, 1 mmol) generated a dark red solution, which after being stirred at room temperature for 10 h, turned to orange-red. After the solvent was removed under reduced pressure, the residue was washed with hexane and toluene. $(Me_3Si)_2CHSiH_2Ph$ was quantitatively obtained from the hexane soluble part. The insoluble residue was recrystallized from THF/hexane, which gave **2** as orange-red crystals. Leaving **2** under vacuum (1 mmHg) at room temperature for 1 h gave **2'** (**2**–3THF) (0.145 g, 0.07 mmol, 42% based on Sm). $^1$H NMR (THF-$d_8$, 22 °C): δ 1.92 (s, $C_5Me_5$). The metal–H could not be located. IR (Nujol): 2960 (m), 2920 (s), 2852 (s), 1440 (m), 1424 (m), 1378 (w), 1259 (m, br), 1150 (m, br), 1053 (s, br), 900 (m, br), 797 (s, br) $cm^{-1}$. Anal. Calcd for $C_{72}H_{129}K_3O_3Sm_6$ (**2**–3THF): C, 41.93; H, 6.30. Found: C, 42.10, H, 6.03.

**A Typical Procedure for Hydrosilylation Reactions.** In a glove box, a benzene solution (2 ml) of an olefin (1.0 mmol) and $H_3SiPh$ (1.1 mmol) was added to **1** (0.02 mmol). The mixture was stirred at room temperature for a given time (see Table 1). After filtration through a plug of Florisil, the solvent was removed and the residue was chromatographed on silica with hexane as an eluant. The products were identified by comparison with NMR spectra reported in the literature. The $^1$H NMR spectra in $C_6D_6$ at 22 °C are given below.

**1-(Phenylsilyl)decane.**[1] δ 0.85–0.92 (m, 5 H), 1.22–1.48 (m, 16 H), 4.49 (t, $J$ = 3.6 Hz, 2 H), 7.30–7.60 (m, 5 H).

**1-(Diphenylsilyl)-2-methylbut-2-ene.**[2–4] $\delta$ 1.35 (d, $J$ = 6.8, 3 H), 1.61 (t, $J$ = 1.4 Hz, 3 H), 2.08 (d, $J$ = 3.7 Hz, 2 H), 4.89 (t, $J$ = 3.7, 1 H), 5.10 (q, $J$ = 6.8, 1 H), 7.30–7.45 (m, 6 H), 7.50–7.60 (m, 4 H).

**2-Methyl-4-(diphenylsilyl)but-2-ene.**[2–4] $\delta$ 1.45 (s, 3 H), 1.65 (s, 3 H), 2.00 (m, 2 H), 4.82 (t, $J$ = 3.9, 1 H), 5.20 (t, $J$ = 8.0, 1 H), 7.30–7.45 (m, 6 H), 7.50–7.60 (m, 4 H).

**4-[2-(Phenylsilyl)ethyl]cyclohex-1-ene.**[1] $\delta$ 0.73–0.79 (m, 2 H), 1.01–1.10 (m, 1 H), 1.25–1.59 (m 5 H), 1.87–1.91 (m, 3 H), 4.44 (t, $J$ = 3.6 Hz, 2 H), 5.56–5,65 (m, 2 H), 7.0–7.50 (m, 5 H).

**1-Phenyl-1-(phenylsilyl)ethane.**[5] $\delta$ 1.33 (d, J = 7.5 Hz, 3 H), 2.31–2.50 (m, 1 H), 4.44-4.59 (m, 2 H), 6.80–7.40 (m, 10 H).

**1-Phenyl-2-(phenylsilyl)ethane.**[5] $\delta$ 1.01–1.11 (m, 2 H), 2.50–2.62 (m, 2 H), 4.38 (t, J = 3.5 Hz, 2 H), 6.95–7.90 (m, 10 H).

**X-Ray Crystallographic Studies.** Crystals for X-ray analyses were obtained as described in the preparations. The crystals were manipulated in the glove box under a microscope mounted on the glove box window, and were sealed in thin-walled glass capillaries. Data collections were performed at 173 K for **1** and 295 K for **2** on a Bruker SMART APEX CCD diffractometer (Mo-K$\alpha$ radiation, $\lambda$ = 0.71073 Å). The SMART program package[6] was used to determine the unit cell parameters and for data collection. The raw frame data was processed using SAINT[7] and SADABS[8] to yield the reflection data file. Subsequent calculations were carried out using the SHELXTL[9] program. Structures were solved by direct methods and refined on $F^2$ by full-matrix least-squares techniques. The analytical scattering factors[10] for neutral atoms were used throughout the analysis. The hydride atoms in **2** were found by the difference Fourier syntheses and their coordinates and isotropic parameters were refined. Other hydrogen atoms were placed at the calculated positions and not refined. Non-hydrogen atoms were refined anisotropically. The residual electron densities were of no chemical significance.

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**STable 1.** Summary of Crystal data for **1**.

| | | |
|---|---|---|
| Empirical formula | C35 H65 K O2 Si2 Sm | |
| Formula weight | 763.50 | |
| Temperature | 173(2) K | |
| Wavelength | 0.71073 Å | |
| Crystal system | Monoclinic | |
| Space group | C2 | |
| Unit cell dimensions | a = 34.204(6) Å | α= 90°. |
| | b = 10.1887(17) Å | β= 102.016(4)°. |
| | c = 11.678(2) Å | γ = 90°. |
| Volume | 3980.5(12) $Å^3$ | |
| Z | 4 | |
| Density (calculated) | 1.274 $Mg/m^3$ | |
| Absorption coefficient | 1.666 $mm^{-1}$ | |
| F(000) | 1600 | |
| Crystal size | 0.6 x 0.4 x 0.2 $mm^3$ | |
| Theta range for data collection | 1.22 to 30.60°. | |
| Index ranges | -48<=h<=44, -14<=k<=13, -15<=l<=14 | |
| Reflections collected | 15301 | |
| Independent reflections | 9883 [R(int) = 0.0481] | |
| Completeness to theta = 30.60° | 91.3 % | |
| Absorption correction | SADABS | |
| Refinement method | Full-matrix least-squares on $F^2$ | |
| Data / restraints / parameters | 9883 / 1 / 341 | |
| Goodness-of-fit on $F^2$ | 0.899 | |
| Final R indices [I>2sigma(I)] | R1 = 0.0571, wR2 = 0.1277 | |
| R indices (all data) | R1 = 0.0986, wR2 = 0.1413 | |
| Absolute structure parameter | 0.42(3) | |
| Largest diff. peak and hole | 2.662 and -0.726 $e.Å^{-3}$ | |

**STable 2.** Atomic coordinates (x $10^4$) and equivalent isotropic displacement parameters ($Å^2$ x $10^3$) for **1**. U(eq) is defined as one third of the trace of the orthogonalized $U^{ij}$ tensor.

| | x | y | z | U(eq) |
|---|---|---|---|---|
| Sm(1) | 8702(1) | 734(2) | 42(1) | 33(1) |
| K(1) | 8714(1) | -4275(5) | -1659(1) | 37(1) |
| Si(1) | 8351(1) | 721(8) | 2748(2) | 52(1) |
| Si(2) | 9292(1) | 719(13) | 3399(2) | 73(1) |
| O(1) | 9369(2) | -4259(18) | -2605(6) | 79(2) |
| O(2) | 8229(2) | -4180(20) | -3889(6) | 73(2) |
| C(1) | 8428(4) | -1986(11) | -340(12) | 48(3) |
| C(2) | 8829(5) | -2099(13) | 291(9) | 93(7) |
| C(3) | 9085(3) | -1709(13) | -461(13) | 98(8) |
| C(4) | 8842(4) | -1353(11) | -1558(9) | 51(4) |
| C(5) | 8436(3) | -1525(10) | -1483(10) | 44(3) |
| C(6) | 8059(2) | -2299(5) | 121(4) | 77(4) |
| C(7) | 8960(2) | -2554(7) | 1539(5) | 61(3) |
| C(8) | 9534(2) | -1677(7) | -151(5) | 65(3) |
| C(9) | 8989(2) | -879(7) | -2614(5) | 84(4) |
| C(10) | 8077(2) | -1263(7) | -2446(5) | 77(4) |
| C(11) | 8544(4) | -6490(8) | -66(8) | 50(4) |
| C(12) | 8957(3) | -6622(10) | -78(10) | 69(5) |
| C(13) | 8989(3) | -7191(10) | -1164(12) | 69(6) |
| C(14) | 8596(4) | -7410(9) | -1825(8) | 52(3) |
| C(15) | 8322(2) | -6977(9) | -1146(9) | 35(3) |
| C(16) | 8373(2) | -5932(5) | 918(4) | 84(4) |
| C(17) | 9300(2) | -6229(7) | 893(5) | 86(4) |
| C(18) | 9372(2) | -7506(7) | -1549(5) | 75(4) |
| C(19) | 8490(2) | -7998(7) | -3033(5) | 63(3) |
| C(20) | 7873(2) | -7025(7) | -1508(5) | 61(3) |
| C(21) | 8815(3) | 1029(8) | 2343(8) | 48(3) |
| C(22) | 7938(3) | 780(30) | 1382(9) | 87(4) |
| C(23) | 8216(6) | 2120(20) | 3780(18) | 101(8) |
| C(24) | 8282(5) | -760(20) | 3406(15) | 72(5) |
| C(25) | 9366(5) | -720(30) | 4487(17) | 99(7) |
| C(26) | 9732(3) | 750(30) | 2678(8) | 79(3) |
| C(27) | 9346(8) | 2150(40) | 4260(20) | 189(16) |
| C(28) | 9770(4) | -4160(40) | -2296(12) | 136(8) |
| C(29) | 9944(4) | -3990(30) | -3242(13) | 116(8) |
| C(30) | 9664(6) | -3700(30) | -4108(16) | 214(19) |
| C(31) | 9281(5) | -4080(110) | -3766(16) | 440(30) |
| C(32) | 7824(4) | -4390(50) | -3998(11) | 201(13) |
| C(33) | 7655(4) | -3779(17) | -5222(12) | 112(7) |
| C(34) | 7907(5) | -4060(20) | -5840(12) | 115(8) |
| C(35) | 8300(4) | -3980(20) | -4980(11) | 111(8) |
| H(6A) | 7932 | -3065 | -268 | 115 |
| H(6B) | 7877 | -1571 | -24 | 115 |
| H(6C) | 8132 | -2461 | 948 | 115 |
| H(7A) | 9014 | -1806 | 2046 | 91 |
| H(7B) | 9197 | -3079 | 1612 | 91 |
| H(7C) | 8751 | -3069 | 1753 | 91 |
| H(8A) | 9637 | -2529 | -276 | 97 |
| H(8B) | 9621 | -1435 | 656 | 97 |
| H(8C) | 9631 | -1045 | -636 | 97 |
| H(9A) | 9057 | -1619 | -3043 | 126 |
| H(9B) | 9221 | -338 | -2366 | 126 |
| H(9C) | 8783 | -376 | -3107 | 126 |
| H(10A) | 7936 | -2070 | -2664 | 116 |

| | | | | |
|---|---|---|---|---|
| H(10B) | 8163 | -903 | -3112 | 116 |
| H(10C) | 7903 | -650 | -2175 | 116 |
| H(16A) | 8582 | -5848 | 1605 | 125 |
| H(16B) | 8169 | -6507 | 1079 | 125 |
| H(16C) | 8260 | -5084 | 696 | 125 |
| H(17A) | 9390 | -5368 | 738 | 129 |
| H(17B) | 9515 | -6845 | 935 | 129 |
| H(17C) | 9213 | -6224 | 1623 | 129 |
| H(18A) | 9312 | -7841 | -2334 | 112 |
| H(18B) | 9519 | -8154 | -1035 | 112 |
| H(18C) | 9530 | -6724 | -1522 | 112 |
| H(19A) | 8731 | -8204 | -3298 | 95 |
| H(19B) | 8335 | -7380 | -3560 | 95 |
| H(19C) | 8338 | -8785 | -3010 | 95 |
| H(20A) | 7757 | -6646 | -903 | 91 |
| H(20B) | 7788 | -7921 | -1632 | 91 |
| H(20C) | 7788 | -6539 | -2221 | 91 |
| H(21) | 8810(30) | 1990(100) | 2380(80) | 57 |
| H(22A) | 7990 | 139 | 830 | 130 |
| H(22B) | 7929 | 1639 | 1038 | 130 |
| H(22C) | 7686 | 593 | 1587 | 130 |
| H(23A) | 7999 | 1829 | 4125 | 151 |
| H(23B) | 8138 | 2897 | 3328 | 151 |
| H(23C) | 8445 | 2304 | 4387 | 151 |
| H(24A) | 8383 | -1464 | 3000 | 108 |
| H(24B) | 8002 | -899 | 3374 | 108 |
| H(24C) | 8423 | -751 | 4208 | 108 |
| H(25A) | 9609 | -593 | 5060 | 148 |
| H(25B) | 9383 | -1525 | 4073 | 148 |
| H(25C) | 9144 | -760 | 4871 | 148 |
| H(26A) | 9781 | 1635 | 2465 | 118 |
| H(26B) | 9677 | 211 | 1989 | 118 |
| H(26C) | 9963 | 418 | 3211 | 118 |
| H(27A) | 9188 | 2845 | 3833 | 284 |
| H(27B) | 9622 | 2413 | 4437 | 284 |
| H(27C) | 9257 | 1988 | 4972 | 284 |
| H(28A) | 9877 | -4949 | -1881 | 164 |
| H(28B) | 9839 | -3423 | -1766 | 164 |
| H(29A) | 10139 | -3283 | -3094 | 139 |
| H(29B) | 10078 | -4785 | -3401 | 139 |
| H(30A) | 9696 | -4179 | -4801 | 257 |
| H(30B) | 9665 | -2767 | -4275 | 257 |
| H(31A) | 9083 | -3391 | -3973 | 527 |
| H(31B) | 9175 | -4882 | -4161 | 527 |
| H(32A) | 7722 | -3944 | -3387 | 242 |
| H(32B) | 7763 | -5318 | -3983 | 242 |
| H(33A) | 7395 | -4150 | -5561 | 134 |
| H(33B) | 7627 | -2835 | -5163 | 134 |
| H(34A) | 7896 | -3437 | -6472 | 139 |
| H(34B) | 7861 | -4938 | -6167 | 139 |
| H(35A) | 8482 | -4649 | -5157 | 133 |
| H(35B) | 8421 | -3129 | -5026 | 133 |

**STable 3.** Anisotropic displacement parameters ($Å^2 x\ 10^3$) for **1**. The anisotropic displacement factor exponent takes the form: $-2\pi^2[\ h^2\ a^{*2}U^{11} + ...\ + 2\ h\ k\ a^*\ b^*\ U^{12}\ ]$

| | $U^{11}$ | $U^{22}$ | $U^{33}$ | $U^{23}$ | $U^{13}$ | $U^{12}$ |
|---|---|---|---|---|---|---|
| Sm(1) | 41(1) | 21(1) | 39(1) | -1(1) | 10(1) | 3(1) |
| K(1) | 41(1) | 25(1) | 45(1) | -11(2) | 9(1) | 7(2) |
| Si(1) | 54(1) | 45(1) | 54(1) | 8(4) | 9(1) | -10(4) |
| Si(2) | 51(1) | 121(2) | 43(1) | 6(6) | 5(1) | -5(6) |
| O(1) | 63(4) | 85(5) | 97(5) | -18(11) | 34(4) | 30(10) |
| O(2) | 71(4) | 68(6) | 68(4) | -4(9) | -13(3) | -9(9) |
| C(1) | 58(7) | 37(7) | 57(8) | -3(6) | 27(6) | -4(5) |
| C(2) | 138(16) | 50(10) | 72(10) | -42(8) | -21(11) | 24(11) |
| C(3) | 70(10) | 86(13) | 146(17) | -99(13) | 39(12) | -24(9) |
| C(4) | 88(11) | 27(6) | 49(7) | -7(5) | 39(8) | -32(6) |
| C(5) | 33(6) | 24(6) | 58(7) | 0(5) | -27(6) | 0(5) |
| C(6) | 73(8) | 49(7) | 112(10) | -1(7) | 27(8) | -3(6) |
| C(7) | 79(8) | 39(6) | 63(7) | 1(5) | 13(6) | 2(6) |
| C(8) | 50(6) | 55(7) | 88(8) | -26(6) | 10(6) | 6(5) |
| C(9) | 137(12) | 66(8) | 57(7) | -6(6) | 40(8) | 31(8) |
| C(10) | 90(9) | 46(6) | 76(8) | -13(6) | -26(7) | 3(6) |
| C(11) | 116(12) | 3(4) | 42(6) | 5(4) | 40(8) | 4(6) |
| C(12) | 77(9) | 25(6) | 69(8) | 21(6) | -68(8) | -56(6) |
| C(13) | 54(9) | 30(6) | 139(17) | 44(9) | 58(11) | 7(6) |
| C(14) | 83(10) | 16(5) | 57(7) | 11(5) | 10(7) | -1(6) |
| C(15) | 56(7) | 11(4) | 46(6) | 0(4) | 30(5) | 5(4) |
| C(16) | 128(12) | 35(6) | 103(10) | -16(6) | 61(9) | 5(7) |
| C(17) | 94(10) | 57(7) | 86(9) | -1(7) | -31(8) | -36(7) |
| C(18) | 75(8) | 48(6) | 116(10) | 4(7) | 54(8) | -5(6) |
| C(19) | 89(9) | 49(6) | 52(6) | -2(5) | 13(6) | 10(6) |
| C(20) | 50(6) | 53(6) | 73(7) | 20(6) | -1(5) | -3(5) |
| C(21) | 70(6) | 27(7) | 45(5) | 0(4) | 12(4) | -2(4) |
| C(22) | 63(6) | 87(8) | 97(7) | 3(18) | -12(5) | 27(14) |
| C(23) | 76(11) | 117(15) | 120(17) | -63(13) | 47(10) | 5(10) |
| C(24) | 57(9) | 88(11) | 72(10) | 30(8) | 15(7) | -14(8) |
| C(25) | 61(11) | 160(20) | 64(11) | 53(11) | -6(8) | -16(11) |
| C(26) | 65(6) | 98(8) | 76(6) | -32(15) | 21(5) | -18(16) |
| C(27) | 150(20) | 340(40) | 59(12) | -84(19) | -20(13) | 60(30) |
| C(28) | 70(8) | 240(20) | 111(10) | -80(20) | 45(8) | -62(19) |
| C(29) | 89(10) | 140(20) | 130(11) | 6(14) | 43(9) | -50(14) |
| C(30) | 200(20) | 340(50) | 143(15) | 150(20) | 116(15) | 170(30) |
| C(31) | 56(10) | 1160(110) | 104(13) | -10(80) | 14(9) | 30(70) |
| C(32) | 58(8) | 460(40) | 84(9) | 100(30) | 1(7) | 40(30) |
| C(33) | 89(10) | 139(19) | 88(10) | -6(10) | -25(8) | 40(10) |
| C(34) | 166(14) | 84(19) | 79(8) | 19(11) | -15(9) | -55(16) |
| C(35) | 83(8) | 130(20) | 107(9) | 78(13) | -17(7) | -3(10) |

**STable 4.** Bond lengths [Å] and angles [°] for **1**.

| | | | |
|---|---|---|---|
| Sm(1)-C(1) | 2.930(12) | Sm(1)-C(2) | 2.924(13) |
| Sm(1)-C(3) | 2.927(11) | Sm(1)-C(4) | 2.934(10) |
| Sm(1)-C(5) | 2.936(10) | Sm(1)-C(11)#1 | 2.878(10) |
| Sm(1)-C(12)#1 | 2.84(5) | Sm(1)-C(13)#1 | 2.83(5) |
| Sm(1)-C(14)#1 | 2.85(5) | Sm(1)-C(15)#1 | 2.88(5) |
| Sm(1)-C(21) | 2.652(9) | K(1)-O(1) | 2.698(6) |
| K(1)-O(2) | 2.783(6) | K(1)-C(1) | 3.065(13) |
| K(1)-C(2) | 3.143(12) | K(1)-C(3) | 3.109(11) |
| K(1)-C(4) | 3.008(11) | K(1)-C(5) | 2.980(11) |
| K(1)-C(11) | 3.055(11) | K(1)-C(12) | 3.030(11) |
| K(1)-C(13) | 3.133(11) | K(1)-C(14) | 3.220(10) |
| K(1)-C(15) | 3.173(10) | C(13)-C(18) | 1.506(10) |
| Si(1)-C(21) | 1.776(10) | Si(1)-C(22) | 1.899(9) |
| Si(1)-C(23) | 1.980(19) | Si(1)-C(24) | 1.735(18) |
| Si(2)-C(25) | 1.92(2) | Si(2)-C(26) | 1.871(9) |
| Si(2)-C(27) | 1.76(3) | Si(2)-C(21) | 1.857(10) |
| O(1)-C(31) | 1.34(2) | O(1)-C(28) | 1.348(12) |
| O(2)-C(35) | 1.359(14) | O(2)-C(32) | 1.382(16) |
| C(1)-C(2) | 1.420(8) | C(3)-C(4) | 1.420(8) |
| C(4)-C(5) | 1.420(8) | C(2)-C(3) | 1.420(8) |
| C(1)-C(5) | 1.420(8) | C(1)-C(6) | 1.506(11) |
| C(2)-C(7) | 1.506(11) | C(3)-C(8) | 1.506(11) |
| C(4)-C(9) | 1.506(10) | C(5)-C(10) | 1.506(9) |
| C(11)-C(12) | 1.420(7) | C(11)-C(15) | 1.420(7) |
| C(11)-C(16) | 1.506(10) | C(12)-C(13) | 1.420(7) |
| C(12)-C(17) | 1.506(9) | C(13)-C(14) | 1.420(7) |
| C(14)-C(15) | 1.420(7) | C(14)-C(19) | 1.506(10) |
| C(15)-C(20) | 1.506(9) | C(28)-C(29) | 1.371(17) |
| C(29)-C(30) | 1.27(2) | C(30)-C(31) | 1.50(4) |
| C(32)-C(33) | 1.56(2) | C(33)-C(34) | 1.267(19) |
| C(34)-C(35) | 1.504(17) | | |
| C(21)-Sm(1)-C(13)#1 | 115.3(13) | C(21)-Sm(1)-C(12)#1 | 87.8(14) |
| C(13)#1-Sm(1)-C(12)#1 | 29.0(4) | C(21)-Sm(1)-C(14)#1 | 131.9(12) |
| C(13)#1-Sm(1)-C(14)#1 | 29.0(5) | C(12)#1-Sm(1)-C(14)#1 | 47.6(7) |
| C(21)-Sm(1)-C(11)#1 | 85.4(2) | C(13)#1-Sm(1)-C(11)#1 | 47.5(12) |
| C(12)#1-Sm(1)-C(11)#1 | 28.7(13) | C(14)#1-Sm(1)-C(11)#1 | 47.3(11) |
| C(21)-Sm(1)-C(15)#1 | 110.6(13) | C(13)#1-Sm(1)-C(15)#1 | 47.4(7) |
| C(12)#1-Sm(1)-C(15)#1 | 47.3(6) | C(14)#1-Sm(1)-C(15)#1 | 28.7(4) |
| C(11)#1-Sm(1)-C(15)#1 | 28.5(12) | C(21)-Sm(1)-C(2) | 91.4(3) |
| C(13)#1-Sm(1)-C(2) | 136.8(13) | C(12)#1-Sm(1)-C(2) | 154.1(16) |
| C(14)#1-Sm(1)-C(2) | 136.3(11) | C(11)#1-Sm(1)-C(2) | 175.7(3) |
| C(15)#1-Sm(1)-C(2) | 152.8(13) | C(21)-Sm(1)-C(3) | 108.9(3) |
| C(13)#1-Sm(1)-C(3) | 108.7(13) | C(12)#1-Sm(1)-C(3) | 129.9(15) |
| C(14)#1-Sm(1)-C(3) | 113.7(12) | C(11)#1-Sm(1)-C(3) | 156.2(4) |
| C(15)#1-Sm(1)-C(3) | 140.1(13) | C(2)-Sm(1)-C(3) | 28.09(16) |
| C(21)-Sm(1)-C(1) | 103.6(3) | C(13)#1-Sm(1)-C(1) | 139.9(12) |
| C(12)#1-Sm(1)-C(1) | 168.6(14) | C(14)#1-Sm(1)-C(1) | 121.7(13) |
| C(11)#1-Sm(1)-C(1) | 150.6(4) | C(15)#1-Sm(1)-C(1) | 126.4(14) |
| C(2)-Sm(1)-C(1) | 28.07(17) | C(3)-Sm(1)-C(1) | 46.2(2) |
| C(21)-Sm(1)-C(4) | 136.0(3) | C(13)#1-Sm(1)-C(4) | 96.1(13) |
| C(12)#1-Sm(1)-C(4) | 124.3(14) | C(14)#1-Sm(1)-C(4) | 90.3(12) |
| C(11)#1-Sm(1)-C(4) | 137.6(3) | C(15)#1-Sm(1)-C(4) | 113.4(13) |
| C(2)-Sm(1)-C(4) | 46.2(2) | C(1)-Sm(1)-C(4) | 46.1(2) |
| C(3)-Sm(1)-C(4) | 28.04(15) | C(21)-Sm(1)-C(5) | 131.7(3) |
| C(13)#1-Sm(1)-C(5) | 112.4(13) | C(12)#1-Sm(1)-C(5) | 140.6(14) |
| C(14)#1-Sm(1)-C(5) | 94.7(13) | C(11)#1-Sm(1)-C(5) | 135.4(3) |

| | |
|---|---|
| C(15)#1-Sm(1)-C(5) | 106.9(14) |
| C(3)-Sm(1)-C(5) | 46.1(2) |
| C(4)-Sm(1)-C(5) | 28.00(15) |
| O(1)-K(1)-C(5) | 109.1(5) |
| O(1)-K(1)-C(4) | 83.3(5) |
| C(5)-K(1)-C(4) | 27.43(16) |
| O(2)-K(1)-C(12) | 129.3(5) |
| C(4)-K(1)-C(12) | 137.6(3) |
| O(2)-K(1)-C(11) | 116.4(5) |
| C(4)-K(1)-C(11) | 138.7(2) |
| O(1)-K(1)-C(1) | 125.5(5) |
| C(5)-K(1)-C(1) | 27.12(16) |
| C(12)-K(1)-C(1) | 111.7(3) |
| O(1)-K(1)-C(3) | 83.3(4) |
| C(5)-K(1)-C(3) | 44.3(2) |
| C(12)-K(1)-C(3) | 110.8(3) |
| C(1)-K(1)-C(3) | 43.7(2) |
| O(2)-K(1)-C(13) | 107.7(6) |
| C(4)-K(1)-C(13) | 153.6(4) |
| C(11)-K(1)-C(13) | 43.6(2) |
| C(3)-K(1)-C(13) | 129.5(4) |
| O(2)-K(1)-C(2) | 127.8(5) |
| C(4)-K(1)-C(2) | 43.8(2) |
| C(11)-K(1)-C(2) | 95.2(2) |
| C(3)-K(1)-C(2) | 26.25(15) |
| O(1)-K(1)-C(15) | 120.2(5) |
| C(5)-K(1)-C(15) | 130.5(3) |
| C(12)-K(1)-C(15) | 43.4(2) |
| C(1)-K(1)-C(15) | 112.0(3) |
| C(13)-K(1)-C(15) | 42.7(2) |
| O(1)-K(1)-C(14) | 94.9(5) |
| C(5)-K(1)-C(14) | 154.1(4) |
| C(12)-K(1)-C(14) | 43.0(2) |
| C(1)-K(1)-C(14) | 137.4(3) |
| C(13)-K(1)-C(14) | 25.79(13) |
| C(2)-K(1)-C(14) | 137.6(3) |
| C(24)-Si(1)-C(22) | 104.7(11) |
| C(24)-Si(1)-C(23) | 106.7(7) |
| C(22)-Si(1)-C(23) | 105.2(10) |
| C(27)-Si(2)-C(26) | 104.1(14) |
| C(21)-Si(2)-C(26) | 112.1(5) |
| C(26)-Si(2)-C(25) | 107.6(11) |
| C(31)-O(1)-K(1) | 112.5(8) |
| C(35)-O(2)-C(32) | 107.9(8) |
| C(35)-O(2)-K(1) | 134.0(7) |
| C(5)-C(1)-C(6) | 126.0(12) |
| C(5)-C(1)-Sm(1) | 76.2(4) |
| C(6)-C(1)-Sm(1) | 114.3(6) |
| C(2)-C(1)-K(1) | 79.9(4) |
| Sm(1)-C(1)-K(1) | 132.1(3) |
| C(3)-C(2)-C(7) | 126.0(12) |
| C(3)-C(2)-Sm(1) | 76.1(4) |
| C(7)-C(2)-Sm(1) | 114.1(7) |
| C(1)-C(2)-K(1) | 73.7(4) |
| Sm(1)-C(2)-K(1) | 129.1(4) |
| C(2)-C(3)-C(8) | 126.0(12) |
| C(2)-C(3)-Sm(1) | 75.9(5) |
| C(8)-C(3)-Sm(1) | 114.2(6) |
| C(4)-C(3)-K(1) | 72.6(4) |
| C(2)-Sm(1)-C(5) | 46.2(2) |
| C(1)-Sm(1)-C(5) | 28.02(16) |
| O(1)-K(1)-O(2) | 90.0(2) |
| O(2)-K(1)-C(5) | 84.0(5) |
| O(2)-K(1)-C(4) | 93.1(5) |
| O(1)-K(1)-C(12) | 96.2(4) |
| C(5)-K(1)-C(12) | 138.7(3) |
| O(1)-K(1)-C(11) | 122.2(4) |
| C(5)-K(1)-C(11) | 123.3(3) |
| C(12)-K(1)-C(11) | 26.99(13) |
| O(2)-K(1)-C(1) | 104.7(5) |
| C(4)-K(1)-C(1) | 44.4(2) |
| C(11)-K(1)-C(1) | 97.8(2) |
| O(2)-K(1)-C(3) | 119.9(6) |
| C(4)-K(1)-C(3) | 26.78(15) |
| C(11)-K(1)-C(3) | 117.3(3) |
| O(1)-K(1)-C(13) | 80.7(4) |
| C(5)-K(1)-C(13) | 165.2(2) |
| C(12)-K(1)-C(13) | 26.57(13) |
| C(1)-K(1)-C(13) | 138.1(3) |
| O(1)-K(1)-C(2) | 107.6(4) |
| C(5)-K(1)-C(2) | 44.0(2) |
| C(12)-K(1)-C(2) | 98.0(3) |
| C(1)-K(1)-C(2) | 26.40(15) |
| C(13)-K(1)-C(2) | 123.2(3) |
| O(2)-K(1)-C(15) | 90.9(5) |
| C(4)-K(1)-C(15) | 156.2(3) |
| C(11)-K(1)-C(15) | 26.27(13) |
| C(3)-K(1)-C(15) | 142.6(3) |
| C(2)-K(1)-C(15) | 118.0(3) |
| O(2)-K(1)-C(14) | 86.4(5) |
| C(4)-K(1)-C(14) | 178.1(3) |
| C(11)-K(1)-C(14) | 42.9(2) |
| C(3)-K(1)-C(14) | 153.6(4) |
| C(15)-K(1)-C(14) | 25.66(13) |
| C(24)-Si(1)-C(21) | 118.9(8) |
| C(21)-Si(1)-C(22) | 108.7(5) |
| C(21)-Si(1)-C(23) | 111.7(8) |
| C(27)-Si(2)-C(21) | 102.1(11) |
| C(27)-Si(2)-C(25) | 105.9(8) |
| C(21)-Si(2)-C(25) | 123.0(8) |
| C(31)-O(1)-C(28) | 105.3(13) |
| C(28)-O(1)-K(1) | 141.0(6) |
| C(32)-O(2)-K(1) | 118.1(7) |
| C(5)-C(1)-C(2) | 108.0 |
| C(2)-C(1)-C(6) | 126.0(12) |
| C(2)-C(1)-Sm(1) | 75.7(4) |
| C(5)-C(1)-K(1) | 73.1(4) |
| C(6)-C(1)-K(1) | 113.4(6) |
| C(3)-C(2)-C(1) | 108.0 |
| C(1)-C(2)-C(7) | 126.0(12) |
| C(1)-C(2)-Sm(1) | 76.2(4) |
| C(3)-C(2)-K(1) | 75.5(4) |
| C(7)-C(2)-K(1) | 116.8(7) |
| C(2)-C(3)-C(4) | 108.0 |
| C(4)-C(3)-C(8) | 126.0(12) |
| C(4)-C(3)-Sm(1) | 76.3(4) |
| C(2)-C(3)-K(1) | 78.2(4) |
| C(8)-C(3)-K(1) | 115.3(6) |

| | | | |
|---|---|---|---|
| Sm(1)-C(3)-K(1) | 130.4(3) | C(5)-C(4)-C(3) | 108.0 |
| C(5)-C(4)-C(9) | 126.0(12) | C(3)-C(4)-C(9) | 126.0(12) |
| C(5)-C(4)-Sm(1) | 76.1(4) | C(3)-C(4)-Sm(1) | 75.7(4) |
| C(9)-C(4)-Sm(1) | 114.5(6) | C(5)-C(4)-K(1) | 75.2(4) |
| C(3)-C(4)-K(1) | 80.6(4) | C(9)-C(4)-K(1) | 110.9(6) |
| Sm(1)-C(4)-K(1) | 134.5(3) | C(4)-C(5)-C(1) | 108.0 |
| C(4)-C(5)-C(10) | 126.0(11) | C(1)-C(5)-C(10) | 126.0(11) |
| C(4)-C(5)-Sm(1) | 75.9(4) | C(1)-C(5)-Sm(1) | 75.8(5) |
| C(10)-C(5)-Sm(1) | 114.6(6) | C(4)-C(5)-K(1) | 77.4(4) |
| C(1)-C(5)-K(1) | 79.8(4) | C(10)-C(5)-K(1) | 109.7(6) |
| Sm(1)-C(5)-K(1) | 135.7(3) | C(12)-C(11)-C(15) | 108.0 |
| C(12)-C(11)-C(16) | 126.0(10) | C(15)-C(11)-C(16) | 126.0(10) |
| C(12)-C(11)-K(1) | 75.5(4) | C(15)-C(11)-K(1) | 81.5(4) |
| C(16)-C(11)-K(1) | 109.8(5) | C(13)-C(12)-C(11) | 108.0 |
| C(13)-C(12)-C(17) | 126.0(11) | C(11)-C(12)-C(17) | 126.0(11) |
| C(13)-C(12)-K(1) | 80.8(4) | C(11)-C(12)-K(1) | 77.5(4) |
| C(17)-C(12)-K(1) | 108.7(5) | C(12)-C(13)-C(14) | 108.0 |
| C(12)-C(13)-C(18) | 126.0(11) | C(14)-C(13)-C(18) | 126.0(11) |
| C(12)-C(13)-K(1) | 72.6(4) | C(14)-C(13)-K(1) | 80.5(4) |
| C(18)-C(13)-K(1) | 113.2(5) | C(15)-C(14)-C(13) | 108.0 |
| C(15)-C(14)-C(19) | 126.0(10) | C(13)-C(14)-C(19) | 126.0(10) |
| C(15)-C(14)-K(1) | 75.3(4) | C(13)-C(14)-K(1) | 73.7(3) |
| C(19)-C(14)-K(1) | 117.0(5) | C(14)-C(15)-C(11) | 108.0 |
| C(14)-C(15)-C(20) | 126.0(9) | C(11)-C(15)-C(20) | 126.0(9) |
| C(14)-C(15)-K(1) | 79.0(4) | C(11)-C(15)-K(1) | 72.2(3) |
| C(20)-C(15)-K(1) | 114.9(5) | Si(1)-C(21)-Si(2) | 120.3(5) |
| Si(1)-C(21)-Sm(1) | 107.5(4) | Si(2)-C(21)-Sm(1) | 125.1(5) |
| O(1)-C(28)-C(29) | 112.5(12) | C(30)-C(29)-C(28) | 106.7(15) |
| C(29)-C(30)-C(31) | 107(2) | O(1)-C(31)-C(30) | 106.2(17) |
| O(1)-C(31)-K(1) | 46.4(6) | C(30)-C(31)-K(1) | 149(3) |
| O(2)-C(32)-C(33) | 101.4(15) | C(34)-C(33)-C(32) | 105.3(15) |
| C(33)-C(34)-C(35) | 103.2(13) | O(2)-C(35)-C(34) | 108.0(11) |

Symmetry transformations used to generate equivalent atoms:
#1 x,y+1,z  #2 x,y-1,z

**STable 5.** Summary of crystal data for **2**.

| | |
|---|---|
| Empirical formula | C84 H153 K3 O6 Sm6 |
| Formula weight | 2278.32 |
| Temperature | 293(2) K |
| Wavelength | 0.71073 Å |
| Crystal system | Rhombohedral |
| Space group | R-3c |
| Unit cell dimensions | a = 24.6009(12) Å α= 90°.<br>b = 24.6009(12) Å β= 90°.<br>c = 27.958(2) Å γ = 120°. |
| Volume | 14653.5(15) $Å^3$ |
| Z | 6 |
| Density (calculated) | 1.549 $Mg/m^3$ |
| Absorption coefficient | 3.718 $mm^{-1}$ |
| F(000) | 6803 |
| Crystal size | 0.3 x 0.2 x 0.2 $mm^3$ |
| Theta range for data collection | 1.66 to 30.47°. |
| Index ranges | -34<=h<=33, -16<=k<=34, -39<=l<=39 |
| Reflections collected | 36993 |
| Independent reflections | 4746 [R(int) = 0.0573] |
| Completeness to theta = 30.47° | 95.5 % |
| Absorption correction | SADABS |
| Refinement method | Full-matrix least-squares on $F^2$ |
| Data / restraints / parameters | 4746 / 0 / 166 |
| Goodness-of-fit on $F^2$ | 0.826 |
| Final R indices [I>2sigma(I)] | R1 = 0.0374, wR2 = 0.0856 |
| R indices (all data) | R1 = 0.1004, wR2 = 0.1067 |
| Largest diff. peak and hole | 1.930 and -0.391 $e.Å^{-3}$ |

**STable 6.** Atomic coordinates ( x $10^4$) and equivalent isotropic displacement parameters ($Å^2$x $10^3$) for **2**. U(eq) is defined as one third of the trace of the orthogonalized $U^{ij}$ tensor.

| | x | y | z | U(eq) |
|---|---|---|---|---|
| Sm(1) | 5809(1) | 3360(1) | 188(1) | 44(1) |
| K(1) | 6667 | 5081(1) | 833 | 70(1) |
| O(1) | 7186(3) | 6235(3) | 355(2) | 113(2) |
| C(1) | 4959(3) | 3718(3) | -83(2) | 61(2) |
| C(2) | 5472(3) | 4044(3) | -391(2) | 60(2) |
| C(3) | 4657(3) | 3071(3) | -187(2) | 60(2) |
| C(4) | 4988(3) | 2996(3) | -568(2) | 58(2) |
| C(5) | 5498(3) | 3601(3) | -689(2) | 57(2) |
| C(6) | 4726(4) | 4012(4) | 278(3) | 94(3) |
| C(7) | 4046(3) | 2551(4) | 24(3) | 89(2) |
| C(8) | 4786(3) | 2398(3) | -834(3) | 85(2) |
| C(9) | 5951(3) | 3748(4) | -1101(2) | 85(2) |
| C(10) | 5873(4) | 4737(3) | -4303) | 88(2) |
| C(11) | 7102(6) | 6417(5) | -100(4) | 136(4) |
| C(12) | 7403(6) | 7075(5) | -130(4) | 152(5) |
| C(13) | 7650(8) | 7300(5) | 318(5) | 232(8) |
| C(14) | 7574(5) | 6780(5) | 607(4) | 135(4) |
| H(1) | 6667 | 3333 | -50(30) | 90(20) |
| H(2) | 5260(20) | 2760(20) | 809(15) | 43(13) |
| H(3) | 6730(30) | 4270(30) | 110(30) | 70(30) |
| H(4) | 6667 | 3333 | 833 | 140(80) |
| H(6A) | 4927 | 4048 | 580 | 141 |
| H(6B) | 4280 | 3752 | 314 | 141 |
| H(6C) | 4824 | 4421 | 169 | 141 |
| H(7A) | 3719 | 2413 | -211 | 133 |
| H(7B) | 3935 | 2708 | 299 | 133 |
| H(7C) | 4100 | 2205 | 116 | 133 |
| H(8A) | 4689 | 2066 | -611 | 127 |
| H(8B) | 5119 | 2448 | -1041 | 127 |
| H(8C) | 4421 | 2297 | -1022 | 127 |
| H(9A) | 6014 | 4120 | -1265 | 128 |
| H(9B) | 5779 | 3402 | -1324 | 128 |
| H(9C) | 6345 | 3814 | -984 | 128 |
| H(10A) | 5667 | 4900 | -623 | 132 |
| H(10B) | 6269 | 4839 | -570 | 132 |
| H(10C) | 5943 | 4918 | -114 | 132 |
| H(11A) | 7273 | 6259 | -340 | 163 |
| H(11B) | 6657 | 6239 | -163 | 163 |
| H(12A) | 7734 | 7230 | -368 | 183 |
| H(12B) | 7106 | 7208 | -218 | 183 |
| H(13A) | 7433 | 7496 | 465 | 279 |
| H(13B) | 8092 | 7613 | 291 | 279 |
| H(14A) | 7978 | 6813 | 665 | 162 |
| H(14B) | 7386 | 6779 | 912 | 162 |

**STable 7.** Anisotropic displacement parameters ($Å^2 x\ 10^3$) for **2**. The anisotropic displacement factor exponent takes the form: $-2\pi^2[\ h^2\ a^{*2}U^{11} + ...\ + 2\ h\ k\ a^*\ b^*\ U^{12}\ ]$

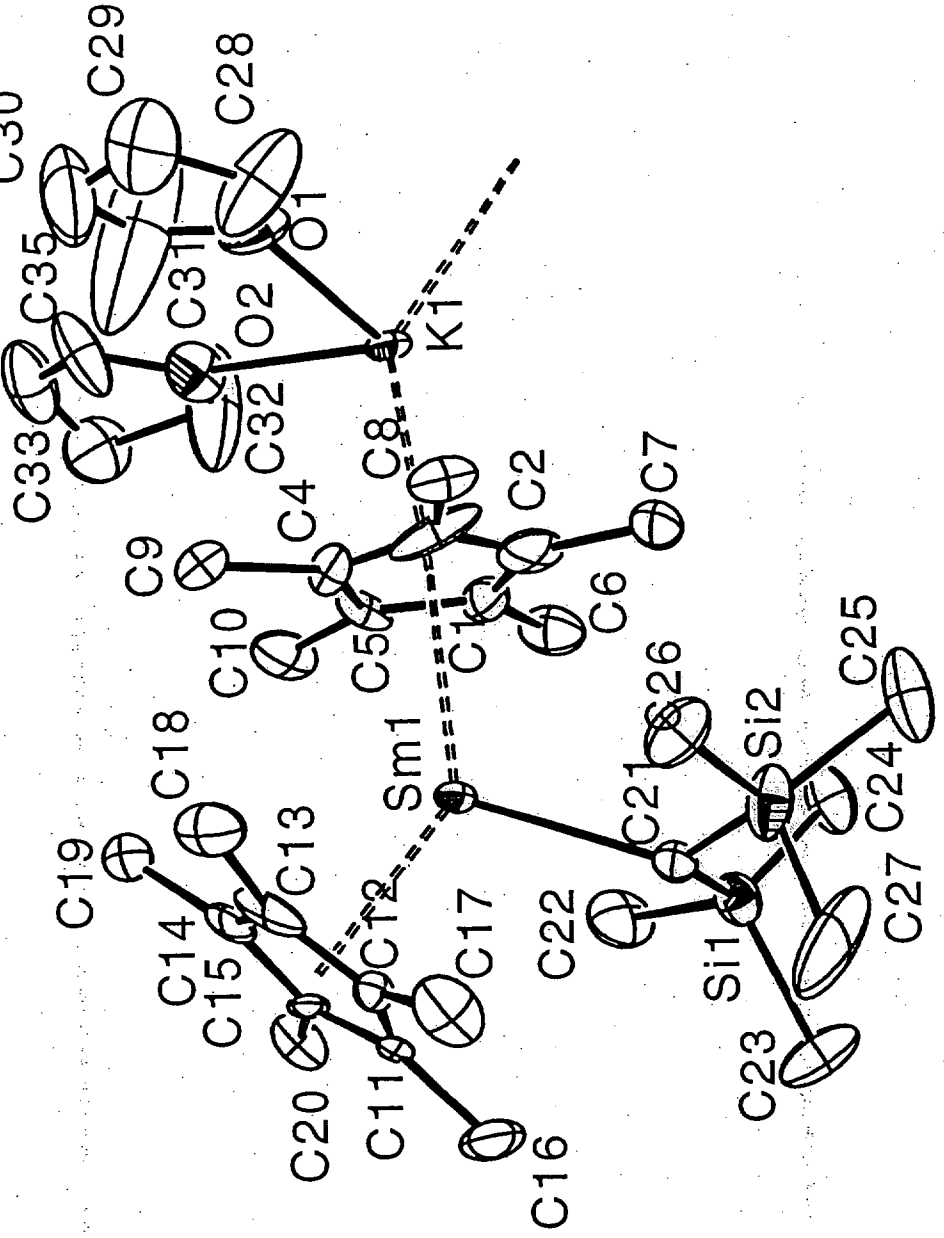
| | $U^{11}$ | $U^{22}$ | $U^{33}$ | $U^{23}$ | $U^{13}$ | $U^{12}$ |
|---|---|---|---|---|---|---|
| Sm(1) | 44(1) | 47(1) | 43(1) | -2(1) | -2(1) | 25(1) |
| K(1) | 80(2) | 61(1) | 76(1) | -2(1) | -4(1) | 40(1) |
| O(1) | 135(6) | 76(4) | 108(5) | 7(4) | 0(4) | 39(4) |
| C(1) | 67(4) | 73(5) | 64(4) | -10(3) | -15(3) | 50(4) |
| C(2) | 63(4) | 57(4) | 66(4) | 3(3) | -12(3) | 36(3) |
| C(3) | 49(4) | 70(4) | 63(4) | 2(3) | -8(3) | 31(3) |
| C(4) | 64(4) | 63(4) | 53(3) | -10(3) | -15(3) | 37(4) |
| C(5) | 59(4) | 66(4) | 50(3) | 4(3) | -1(3) | 36(3) |
| C(6) | 110(6) | 135(8) | 84(5) | -29(5) | -19(5) | 96(6) |
| C(7) | 54(4) | 101(6) | 94(6) | 8(5) | 2(4) | 27(4) |
| C(8) | 82(5) | 82(5) | 85(5) | -29(4) | -26(4) | 38(4) |
| C(9) | 79(5) | 127(7) | 57(4) | 11(4) | 6(4) | 58(5) |
| C(10) | 96(6) | 61(4) | 112(6) | 2(4) | -21(5) | 43(4) |
| C(11) | 174(12) | 77(7) | 133(8) | -8(6) | -37(8) | 44(8) |
| C(12) | 180(13) | 98(8) | 127(9) | 9(7) | -9(8) | 31(8) |
| C(13) | 350(20) | 72(7) | 164(13) | -21(8) | -109(13) | 21(10) |
| C(14) | 163(11) | 106(7) | 106(7) | -27(6) | -40(7) | 46(7) |

**STable 8.** Bond lengths [Å] and angles [°] for **2**.

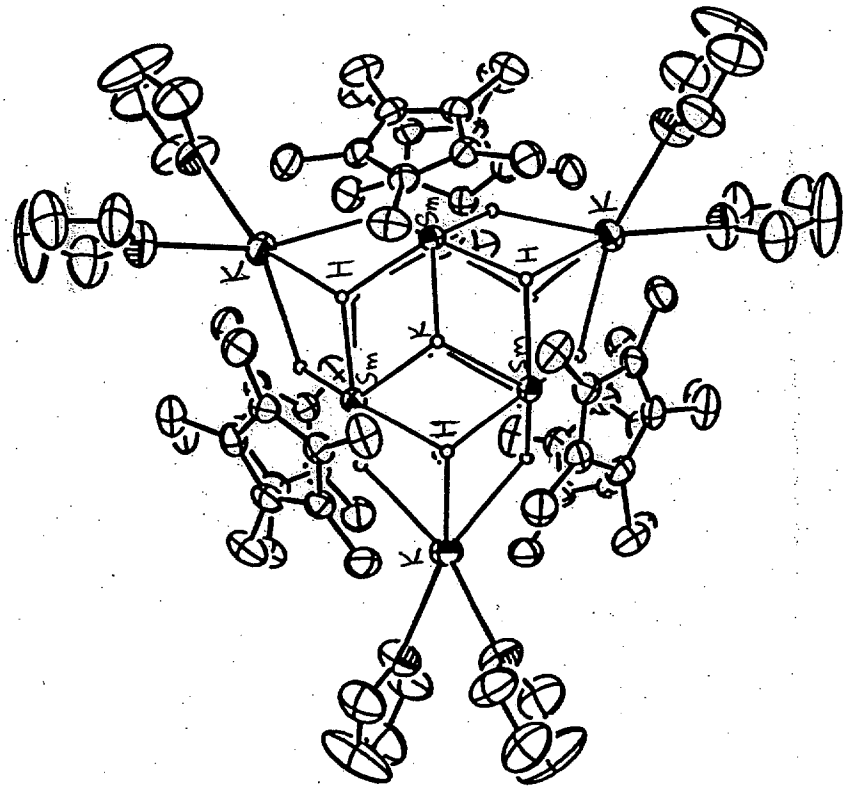
| | | | |
|---|---|---|---|
| Sm(1)-C(1) | 2.750(6) | Sm(1)-C(2) | 2.745(6) |
| Sm(1)-C(3) | 2.760(6) | Sm(1)-C(4) | 2.746(6) |
| Sm(1)-C(5) | 2.722(6) | Sm(1)-H(1) | 2.25(2) |
| Sm(1)-H(2) | 2.23(4) | Sm(1)-H(3) | 2.26(6) |
| Sm(1)-H(4) | 2.8010(3) | Sm(1)-Sm(1)#1 | 3.6084(6) |
| Sm(1)-Sm(1)#2 | 3.7133(5) | Sm(1)-K(1)#3 | 4.1871(17) |
| Sm(1)-K(1) | 4.0864(17) | K(1)-O(1)#4 | 2.802(6) |
| K(1)-O(1) | 2.802(6) | K(1)-Sm(1)#4 | 4.0864(16) |
| K(1)-Sm(1)#2 | 4.1871(17) | K(1)-Sm(1)#1 | 4.1871(17) |
| K(1)-H(3) | 2.89(7) | K(1)-H(2) | 2.58(4) |
| O(1)-C(14) | 1.388(10) | O(1)-C(11) | 1.399(10) |
| C(1)-C(2) | 1.404(9) | C(1)-C(3) | 1.409(9) |
| C(1)-C(6) | 1.510(9) | C(2)-C(5) | 1.397(8) |
| C(2)-C(10) | 1.486(9) | C(3)-C(4) | 1.406(9) |
| C(3)-C(7) | 1.524(9) | C(4)-C(5) | 1.427(8) |
| C(4)-C(8) | 1.495(9) | C(5)-C(9) | 1.521(8) |
| C(11)-C(12) | 1.406(13) | C(12)-C(13) | 1.380(14) |
| C(13)-C(14) | 1.444(14) | | |

| | | | |
|---|---|---|---|
| C(5)-Sm(1)-C(1) | 48.75(19) | C(5)-Sm(1)-C(4) | 30.26(18) |
| C(1)-Sm(1)-C(4) | 48.64(18) | C(5)-Sm(1)-C(2) | 29.61(18) |
| C(1)-Sm(1)-C(2) | 29.6(2) | C(4)-Sm(1)-C(2) | 49.24(19) |
| C(5)-Sm(1)-C(3) | 49.40(19) | C(1)-Sm(1)-C(3) | 29.63(19) |
| C(4)-Sm(1)-C(3) | 29.58(18) | C(2)-Sm(1)-C(3) | 49.29(19) |
| Sm(1)#1-Sm(1)-Sm(1)#2 | 90.847(4) | Sm(1)#1-Sm(1)-Sm(1)#3 | 89.070(5) |
| Sm(1)#2-Sm(1)-Sm(1)#3 | 60.0 | Sm(1)#1-Sm(1)-K(1) | 65.590(14) |
| Sm(1)#2-Sm(1)-K(1) | 64.729(14) | Sm(1)#3-Sm(1)-K(1) | 118.041(19) |
| Sm(1)#2-Sm(1)-K(1)#3 | 115.596(18) | K(1)-Sm(1)-K(1)#3 | 128.30(2) |
| Sm(1)-H1-Sm(1)#2 | 111.4 (4) | Sm(1)-H1-Sm(1)#3 | 111.4 (4) |
| Sm(1)-H2-Sm(1)#1 | 106.0(11) | Sm(1)-H2-K(1) | 120.7(11) |
| Sm(1)#1-H2-K(1) | 114.3(11) | Sm(1)-H3-Sm(1)#2 | 114.6(12) |
| Sm(1)-H3-K(1) | 104.3(6) | Sm(1)#2-H3-K(1) | 111.5(6) |
| Sm(1)-H4-Sm(1)#1 | 80.2(5) | Sm(1)-H4-Sm(1)#2 | 83(1) |
| Sm(1)-H4-Sm(1)#4 | 137.2(5) | H(1)-Sm(1)-H(2) | 118.4(18) |
| H(1)-Sm(1)-H(3) | 61.0(16) | H(2)-Sm(1)-H(3) | 134(2) |
| O(1)#4-K(1)-O(1) | 76.5(3) | O(1)#4-K(1)-H(3) | 155.6(12) |
| O(1)-K(1)-H(3) | 102.0(14) | C(14)-O(1)-C(11) | 106.9(7) |
| C(14)-O(1)-K(1) | 118.9(6) | C(11)-O(1)-K(1) | 133.9(6) |
| C(2)-C(1)-C(3) | 109.4(6) | C(2)-C(1)-C(6) | 125.9(7) |
| C(3)-C(1)-C(6) | 124.6(7) | C(2)-C(1)-Sm(1) | 75.0(3) |
| C(3)-C(1)-Sm(1) | 75.6(3) | C(6)-C(1)-Sm(1) | 120.0(4) |
| C(1)-C(2)-C(5) | 107.5(6) | C(1)-C(2)-C(10) | 126.1(7) |
| C(5)-C(2)-C(10) | 126.2(7) | C(1)-C(2)-Sm(1) | 75.4(3) |
| C(5)-C(2)-Sm(1) | 74.3(3) | C(10)-C(2)-Sm(1) | 120.9(4) |
| C(4)-C(3)-C(1) | 107.1(6) | C(4)-C(3)-C(7) | 125.1(7) |
| C(1)-C(3)-C(7) | 127.5(7) | C(4)-C(3)-Sm(1) | 74.7(3) |
| C(1)-C(3)-Sm(1) | 74.8(3) | C(7)-C(3)-Sm(1) | 121.5(5) |
| C(3)-C(4)-C(5) | 107.9(5) | C(3)-C(4)-C(8) | 125.3(6) |
| C(5)-C(4)-C(8) | 126.4(6) | C(3)-C(4)-Sm(1) | 75.8(3) |
| C(5)-C(4)-Sm(1) | 73.9(3) | C(8)-C(4)-Sm(1) | 122.1(4) |
| C(2)-C(5)-C(4) | 108.2(6) | C(2)-C(5)-C(9) | 125.6(6) |
| C(4)-C(5)-C(9) | 125.9(6) | C(2)-C(5)-Sm(1) | 76.1(3) |
| C(4)-C(5)-Sm(1) | 75.8(3) | C(9)-C(5)-Sm(1) | 119.1(4) |
| C(12)-C(11)-O(1) | 110.2(9) | C(13)-C(12)-C(11) | 106.3(11) |
| C(12)-C(13)-C(14) | 108.4(10) | O(1)-C(14)-C(13) | 107.2(8) |

#1 x-y+1/3,-y+2/3,-z+1/6 #2 -x+y+1,-x+1,z #3 -y+1,x-y,z #4 -x+4/3,-x+y+2/3,-z+1/6




**SFigure 1.** ORTEP drawing of **1**



**SFigure 2.** ORTEP drawing of **2**