

OM 0306170

Supplementary material:

Compound **3**  $(\text{O}_2\text{C}-\text{C}_{10}\text{H}_6-\text{CO}_2)_4\{[(\text{Me}_3\text{Si})_2\text{CH}]_2\text{Ga}_2\}_4$

Table 1. Atomic Coordinates and Equivalent Isotropic Displacement Parameters of **3**

Table 2. Bond Lengths (Å) and Bond Angles (deg) of **3**

Table 3. Anisotropic Displacement Parameters of **3**

Table 4. Hydrogen Coordinates of **3**

Table 1. Atomic coordinates ( $\times 10^4$ ) and equivalent isotropic displacement parameters ( $\text{\AA}^2 \times 10^3$ ) for 3.

$U(\text{eq})$  is defined as one third of the trace of the orthogonalized  $U_{ij}$  tensor.

	x	y	z	$U(\text{eq})$
Ga(1)	3674(1)	5037(1)	2241(1)	43(1)
Ga(2)	2170(1)	4807(1)	2645(1)	45(1)
Ga(3)	4563(1)	-2019(1)	3377(1)	54(1)
Ga(4)	3115(1)	-2196(1)	3826(1)	52(1)
C(1)	5113(4)	5541(4)	2218(3)	48(1)
Si(1)	5266(1)	5494(1)	1327(1)	56(1)
C(11)	6669(6)	5885(6)	1329(4)	79(2)
C(12)	4565(6)	6127(5)	779(4)	75(2)
C(13)	4725(6)	4453(5)	912(4)	72(2)
Si(2)	6035(1)	5211(1)	2931(1)	59(1)
C(21)	5541(7)	5018(6)	3715(4)	87(3)
C(22)	7327(6)	6003(6)	3229(4)	84(2)
C(23)	6235(6)	4290(5)	2649(4)	75(2)
C(2)	1319(5)	4949(4)	3229(3)	54(2)
Si(3)	2018(2)	4933(1)	4160(1)	59(1)
C(31)	1458(8)	5306(5)	4786(4)	86(3)
C(32)	2004(8)	3921(6)	4368(4)	89(3)
C(33)	3384(6)	5609(6)	4323(4)	87(3)
Si(4)	-82(2)	4338(1)	2895(1)	64(1)
C(41)	-217(7)	3311(6)	2587(7)	110(4)
C(42)	-749(6)	4784(6)	2149(4)	85(3)
C(43)	-827(7)	4266(7)	3537(5)	103(3)
C(3)	5953(5)	-2014(4)	3349(4)	64(2)
Si(5)	6790(2)	-1838(1)	4271(1)	78(1)
C(51)	8177(7)	-1672(8)	4330(6)	116(4)
C(52)	6700(7)	-968(6)	4724(5)	90(3)
C(53)	6352(9)	-2714(6)	4739(5)	109(4)
Si(6)	6427(2)	-1400(2)	2674(1)	77(1)
C(61)	6962(7)	-330(6)	2996(6)	95(3)
C(62)	5379(7)	-1515(7)	1853(5)	97(3)
C(63)	7450(8)	-1736(7)	2447(7)	110(3)
C(4)	2347(5)	-2428(4)	4519(3)	57(2)
Si(7)	3286(2)	-2006(1)	5400(1)	70(1)
C(71)	2667(9)	-2023(7)	6113(4)	114(4)
C(72)	4043(6)	-954(5)	5347(4)	84(2)
C(73)	4182(8)	-2606(6)	5662(5)	106(4)
Si(8)	1077(2)	-2230(1)	4288(1)	64(1)
C(81)	209(7)	-2850(6)	4773(5)	88(3)
C(82)	1250(7)	-1172(5)	4527(6)	94(3)
C(83)	379(7)	-2467(7)	3347(5)	98(3)
O(1)	2711(3)	4754(3)	1268(2)	50(1)
O(2)	3577(3)	3887(2)	2334(2)	48(1)
O(3)	1300(3)	4539(3)	1649(2)	55(1)
O(4)	2208(3)	3690(3)	2761(2)	53(1)
O(5)	4402(3)	-977(3)	3077(2)	57(1)
O(6)	3018(3)	-1154(3)	3481(2)	57(1)
O(7)	3585(3)	-2626(3)	2486(2)	66(1)
O(8)	2218(3)	-2817(3)	2906(2)	60(1)
C(011)	1742(5)	4550(4)	1176(3)	49(1)

C(012)	1058(5)	4283(4)	448(3)	51(1)
C(013)	1501(5)	4231(5)	-102(3)	58(2)
C(014)	882(5)	3964(5)	-758(3)	62(2)
C(015)	-211(5)	3744(4)	-910(3)	52(1)
C(016)	-660(5)	3820(4)	-381(3)	54(2)
C(017)	13(5)	4085(4)	317(3)	54(2)
C(021)	2627(5)	-2868(4)	2427(4)	58(2)
C(022)	-1928(5)	3229(4)	-1718(3)	54(2)
C(023)	-2363(5)	3308(5)	-1181(4)	66(2)
C(024)	-1750(5)	3604(5)	-517(4)	64(2)
C(025)	-885(5)	3454(4)	-1594(3)	56(2)
C(031)	2903(5)	3466(4)	2608(3)	47(1)
C(032)	2920(5)	2658(4)	2757(3)	49(1)
C(033)	2249(5)	2202(4)	3131(3)	56(2)
C(034)	2270(5)	1463(4)	3275(4)	59(2)
C(035)	2938(4)	1124(4)	3068(3)	47(1)
C(036)	3617(5)	1581(4)	2693(3)	50(1)
C(037)	3595(5)	2346(4)	2545(3)	49(1)
C(041)	3689(5)	-747(4)	3211(3)	53(2)
C(042)	3649(5)	55(4)	3019(3)	52(1)
C(043)	4312(5)	493(4)	2649(4)	59(2)
C(044)	4288(5)	1240(4)	2479(3)	60(2)
C(045)	3004(3)	383(3)	3221(2)	52(1)
CB1	6610(3)	1603(3)	1735(2)	182(7)
CB2	6638(3)	2281(3)	1664(2)	187(7)
CB3	6212(3)	2541(3)	1133(2)	236(10)
CB4	5612(3)	2083(3)	496(2)	308(15)
CB5	5376(3)	1254(3)	620(2)	347(18)
CB6	6019(3)	1009(3)	1218(2)	233(10)
CB7	-29(3)	-70(3)	3267(2)	181(7)
CB8	-111(3)	296(3)	3705(2)	185(7)
CB9	-337(3)	900(3)	3688(2)	267(12)
CB10	-571(3)	1244(3)	3086(2)	195(7)
CB11	-596(3)	949(3)	2552(2)	197(8)
CB12	-223(3)	14(3)	2541(2)	216(9)
CB13	2186(18)	2323(13)	730(13)	270(12)
CB14	1695(18)	1481(18)	1023(12)	400(20)
CB15	1749(18)	661(14)	688(14)	300(14)
CB16	2290(20)	682(15)	62(14)	344
CB17	2786(19)	1524(19)	-230(12)	367
CB18	2732(16)	2344(14)	104(13)	291(13)
CB19	-946(9)	1818(7)	-255(7)	430(20)
CB20	-231(9)	1857(7)	-632(6)	312(15)
CB21	-579(10)	1582(8)	-1341(7)	302
CB22	-1644(11)	1268(9)	-1673(7)	271(12)
CB23	-2360(11)	1228(8)	-1296(7)	245(10)
CB24	-2011(10)	1503(7)	-587(7)	339
F(1A)	6951(15)	2651(13)	2078(10)	360(20)
F(2A)	6586(14)	3236(12)	920(11)	332(17)
F(1B)	4870(13)	760(12)	24(9)	370(20)
F(2B)	5786(15)	306(12)	1094(10)	335(17)
F(3)	-833(10)	1027(10)	1920(7)	368(10)
F(4)	-457(10)	-141(10)	1966(8)	436(13)

Table 2. Bond lengths [Å] and angles [deg] for 3.

Ga(1)-C(1)	1.973(6)
Ga(1)-O(1)	2.012(4)
Ga(1)-O(2)	2.024(4)
Ga(1)-Ga(2)	2.3960(9)
Ga(2)-C(2)	1.954(6)
Ga(2)-O(3)	2.006(4)
Ga(2)-O(4)	2.017(4)
Ga(3)-C(3)	1.977(7)
Ga(3)-O(7)	2.003(4)
Ga(3)-O(5)	2.011(5)
Ga(3)-Ga(4)	2.3878(11)
Ga(4)-C(4)	1.955(7)
Ga(4)-O(6)	2.013(5)
Ga(4)-O(8)	2.024(4)
C(1)-Si(1)	1.859(6)
C(1)-Si(2)	1.880(6)
Si(1)-C(13)	1.872(8)
Si(1)-C(12)	1.883(8)
Si(1)-C(11)	1.892(7)
Si(2)-C(23)	1.856(9)
Si(2)-C(21)	1.876(8)
Si(2)-C(22)	1.880(8)
C(2)-Si(3)	1.863(7)
C(2)-Si(4)	1.878(7)
Si(3)-C(32)	1.847(9)
Si(3)-C(31)	1.865(7)
Si(3)-C(33)	1.881(8)
Si(4)-C(43)	1.853(8)
Si(4)-C(42)	1.858(8)
Si(4)-C(41)	1.864(11)
C(3)-Si(5)	1.870(7)
C(3)-Si(6)	1.878(8)
Si(5)-C(52)	1.846(9)
Si(5)-C(53)	1.856(11)
Si(5)-C(51)	1.862(10)
Si(6)-C(62)	1.853(10)
Si(6)-C(61)	1.864(9)
Si(6)-C(63)	1.878(9)
C(4)-Si(8)	1.868(7)
C(4)-Si(7)	1.886(6)
Si(7)-C(71)	1.860(10)
Si(7)-C(73)	1.865(10)
Si(7)-C(72)	1.877(9)
Si(8)-C(83)	1.855(9)
Si(8)-C(82)	1.868(9)
Si(8)-C(81)	1.872(8)
O(1)-C(011)	1.266(7)
O(2)-C(031)	1.277(7)
O(3)-C(011)	1.264(7)
O(4)-C(031)	1.270(7)
O(5)-C(041)	1.284(8)
O(6)-C(041)	1.257(8)
O(7)-C(021)	1.262(8)
O(8)-C(021)	1.262(8)
C(011)-C(012)	1.497(8)

C(012)-C(017)	1.359(9)
C(012)-C(013)	1.420(9)
C(013)-C(014)	1.356(8)
C(014)-C(015)	1.418(9)
C(015)-C(016)	1.397(9)
C(015)-C(025)	1.428(8)
C(016)-C(024)	1.418(9)
C(016)-C(017)	1.446(8)
C(021)-C(022)#1	1.502(9)
C(022)-C(025)	1.356(9)
C(022)-C(023)	1.399(10)
C(022)-C(021)#1	1.502(9)
C(023)-C(024)	1.375(9)
C(031)-C(032)	1.475(9)
C(032)-C(037)	1.391(9)
C(032)-C(033)	1.431(9)
C(033)-C(034)	1.355(9)
C(034)-C(035)	1.406(9)
C(035)-C(045)	1.381(8)
C(035)-C(036)	1.439(8)
C(036)-C(037)	1.402(9)
C(036)-C(044)	1.420(9)
C(041)-C(042)	1.494(9)
C(042)-C(045)	1.361(8)
C(042)-C(043)	1.407(9)
C(043)-C(044)	1.381(10)
CB1-CB2	1.2062
CB1-CB6	1.3708
CB1-F(1A)	1.86(2)
CB2-F(1A)	0.97(2)
CB2-CB3	1.2380
CB3-F(2A)	1.31(2)
CB3-CB4	1.4143
CB3-F(1A)	1.87(2)
CB4-CB5	1.4505
CB5-F(1B)	1.365(18)
CB5-CB6	1.4504
CB6-F(2B)	1.20(2)
CB7-CB8	1.1410
CB7-CB12	1.4217
CB8-CB9	1.2072
CB9-CB10	1.3588
CB10-CB11	1.1782
CB11-F(3)	1.237(14)
CB11-CB12	1.8914
CB12-F(4)	1.118(16)
CB13-CB14	1.635(12)
CB13-CB18	1.635(12)
CB14-CB15	1.635(12)
CB15-CB16	1.635(12)
CB16-CB17	1.635(12)
CB17-CB18	1.635(12)
CB19-CB20	1.403(3)
CB19-CB24	1.403(3)
CB20-CB21	1.403(3)
CB21-CB22	1.403(3)
CB22-CB23	1.403(3)
CB23-CB24	1.403(3)

C(1)-Ga(1)-O(1)	110.54(19)
C(1)-Ga(1)-O(2)	103.6(2)
O(1)-Ga(1)-O(2)	90.29(17)
C(1)-Ga(1)-Ga(2)	157.70(17)
O(1)-Ga(1)-Ga(2)	87.49(11)
O(2)-Ga(1)-Ga(2)	88.81(11)
C(2)-Ga(2)-O(3)	109.5(2)
C(2)-Ga(2)-O(4)	103.9(2)
O(3)-Ga(2)-O(4)	93.09(19)
C(2)-Ga(2)-Ga(1)	158.1(2)
O(3)-Ga(2)-Ga(1)	88.36(12)
O(4)-Ga(2)-Ga(1)	87.12(11)
C(3)-Ga(3)-O(7)	105.4(2)
C(3)-Ga(3)-O(5)	107.2(3)
O(7)-Ga(3)-O(5)	93.5(2)
C(3)-Ga(3)-Ga(4)	158.3(2)
O(7)-Ga(3)-Ga(4)	88.60(14)
O(5)-Ga(3)-Ga(4)	87.98(13)
C(4)-Ga(4)-O(6)	107.1(2)
C(4)-Ga(4)-O(8)	109.3(2)
O(6)-Ga(4)-O(8)	93.31(19)
C(4)-Ga(4)-Ga(3)	156.31(19)
O(6)-Ga(4)-Ga(3)	88.10(13)
O(8)-Ga(4)-Ga(3)	87.32(14)
Si(1)-C(1)-Si(2)	117.3(3)
Si(1)-C(1)-Ga(1)	112.9(3)
Si(2)-C(1)-Ga(1)	110.3(3)
C(1)-Si(1)-C(13)	110.9(3)
C(1)-Si(1)-C(12)	109.2(3)
C(13)-Si(1)-C(12)	109.3(4)
C(1)-Si(1)-C(11)	112.2(3)
C(13)-Si(1)-C(11)	108.0(4)
C(12)-Si(1)-C(11)	107.2(4)
C(23)-Si(2)-C(21)	107.5(4)
C(23)-Si(2)-C(1)	112.1(3)
C(21)-Si(2)-C(1)	111.1(3)
C(23)-Si(2)-C(22)	108.6(4)
C(21)-Si(2)-C(22)	106.6(4)
C(1)-Si(2)-C(22)	110.7(4)
Si(3)-C(2)-Si(4)	118.7(3)
Si(3)-C(2)-Ga(2)	109.1(3)
Si(4)-C(2)-Ga(2)	114.0(3)
C(32)-Si(3)-C(31)	106.5(4)
C(32)-Si(3)-C(2)	111.4(3)
C(31)-Si(3)-C(2)	113.6(4)
C(32)-Si(3)-C(33)	110.8(5)
C(31)-Si(3)-C(33)	106.7(4)
C(2)-Si(3)-C(33)	107.7(3)
C(43)-Si(4)-C(42)	105.5(4)
C(43)-Si(4)-C(41)	107.6(5)
C(42)-Si(4)-C(41)	107.9(5)
C(43)-Si(4)-C(2)	114.5(4)
C(42)-Si(4)-C(2)	110.0(4)
C(41)-Si(4)-C(2)	111.1(4)
Si(5)-C(3)-Si(6)	119.4(4)
Si(5)-C(3)-Ga(3)	106.8(4)
Si(6)-C(3)-Ga(3)	113.5(4)
C(52)-Si(5)-C(53)	108.3(5)
C(52)-Si(5)-C(51)	108.0(5)

C(53)-Si(5)-C(51)	108.0(6)
C(52)-Si(5)-C(3)	110.9(4)
C(53)-Si(5)-C(3)	109.3(4)
C(51)-Si(5)-C(3)	112.3(5)
C(62)-Si(6)-C(61)	108.0(5)
C(62)-Si(6)-C(3)	111.9(4)
C(61)-Si(6)-C(3)	111.0(4)
C(62)-Si(6)-C(63)	106.5(5)
C(61)-Si(6)-C(63)	109.8(5)
C(3)-Si(6)-C(63)	109.5(5)
Si(8)-C(4)-Si(7)	117.8(4)
Si(8)-C(4)-Ga(4)	115.7(3)
Si(7)-C(4)-Ga(4)	107.8(3)
C(71)-Si(7)-C(73)	105.9(5)
C(71)-Si(7)-C(72)	108.2(5)
C(73)-Si(7)-C(72)	109.9(5)
C(71)-Si(7)-C(4)	114.3(4)
C(73)-Si(7)-C(4)	109.2(4)
C(72)-Si(7)-C(4)	109.2(3)
C(83)-Si(8)-C(82)	108.1(5)
C(83)-Si(8)-C(4)	112.6(4)
C(82)-Si(8)-C(4)	111.2(4)
C(83)-Si(8)-C(81)	106.9(4)
C(82)-Si(8)-C(81)	107.5(5)
C(4)-Si(8)-C(81)	110.2(4)
C(011)-O(1)-Ga(1)	119.5(3)
C(031)-O(2)-Ga(1)	118.3(4)
C(011)-O(3)-Ga(2)	118.9(4)
C(031)-O(4)-Ga(2)	120.8(4)
C(041)-O(5)-Ga(3)	119.3(4)
C(041)-O(6)-Ga(4)	119.7(4)
C(021)-O(7)-Ga(3)	119.0(4)
C(021)-O(8)-Ga(4)	119.2(4)
O(1)-C(011)-O(3)	125.6(5)
O(1)-C(011)-C(012)	117.4(5)
O(3)-C(011)-C(012)	117.0(5)
C(017)-C(012)-C(013)	120.3(5)
C(017)-C(012)-C(011)	119.7(5)
C(013)-C(012)-C(011)	120.0(5)
C(014)-C(013)-C(012)	120.1(6)
C(013)-C(014)-C(015)	121.0(6)
C(016)-C(015)-C(014)	119.7(5)
C(016)-C(015)-C(025)	117.8(6)
C(014)-C(015)-C(025)	122.4(6)
C(015)-C(016)-C(024)	121.0(6)
C(015)-C(016)-C(017)	118.3(5)
C(024)-C(016)-C(017)	120.6(6)
C(012)-C(017)-C(016)	120.5(6)
O(8)-C(021)-O(7)	125.6(6)
O(8)-C(021)-C(022)#1	118.2(6)
O(7)-C(021)-C(022)#1	116.2(6)
C(025)-C(022)-C(023)	120.3(6)
C(025)-C(022)-C(021)#1	120.3(6)
C(023)-C(022)-C(021)#1	119.4(6)
C(024)-C(023)-C(022)	121.2(6)
C(023)-C(024)-C(016)	118.6(6)
C(022)-C(025)-C(015)	120.9(6)
O(4)-C(031)-O(2)	124.6(6)
O(4)-C(031)-C(032)	117.2(5)

O(2)-C(031)-C(032)	118.2(5)
C(037)-C(032)-C(033)	120.1(6)
C(037)-C(032)-C(031)	120.4(5)
C(033)-C(032)-C(031)	119.6(6)
C(034)-C(033)-C(032)	119.7(6)
C(033)-C(034)-C(035)	122.0(6)
C(045)-C(035)-C(034)	123.7(5)
C(045)-C(035)-C(036)	117.7(5)
C(034)-C(035)-C(036)	118.5(6)
C(037)-C(036)-C(044)	121.8(6)
C(037)-C(036)-C(035)	119.4(5)
C(044)-C(036)-C(035)	118.7(6)
C(032)-C(037)-C(036)	120.2(6)
O(6)-C(041)-O(5)	124.6(6)
O(6)-C(041)-C(042)	118.3(6)
O(5)-C(041)-C(042)	117.1(6)
C(045)-C(042)-C(043)	119.1(6)
C(045)-C(042)-C(041)	120.8(5)
C(043)-C(042)-C(041)	120.1(6)
C(044)-C(043)-C(042)	120.2(6)
C(043)-C(044)-C(036)	120.5(6)
C(042)-C(045)-C(035)	123.7(5)
CB2-CB1-CB6	121.5
CB6-CB1-F(1A)	148.1(6)
F(1A)-CB2-CB1	117.0(13)
F(1A)-CB2-CB3	115.7(13)
CB1-CB2-CB3	126.7
CB2-CB3-F(2A)	125.7(9)
CB2-CB3-CB4	125.1
F(2A)-CB3-CB4	101.7(9)
F(2A)-CB3-F(1A)	104.0(11)
CB3-CB4-CB5	108.4
F(1B)-CB5-CB6	121.1(8)
F(1B)-CB5-CB4	112.8(8)
CB6-CB5-CB4	120.0
F(2B)-CB6-CB1	141.2(10)
F(2B)-CB6-CB5	104.0(10)
CB1-CB6-CB5	114.6
CB8-CB7-CB12	130.9
CB7-CB8-CB9	129.5
CB8-CB9-CB10	122.1
CB11-CB10-CB9	121.0
CB10-CB11-F(3)	140.8(8)
CB10-CB11-CB12	119.2
F(3)-CB11-CB12	99.9(8)
F(4)-CB12-CB11	99.3(9)
CB7-CB12-CB11	97.1
CB14-CB13-CB18	120.0
CB13-CB14-CB15	120.0
CB14-CB15-CB16	120.0
CB17-CB16-CB15	120.0
CB16-CB17-CB18	120.0
CB17-CB18-CB13	120.0
CB20-CB19-CB24	120.0
CB21-CB20-CB19	120.0
CB22-CB21-CB20	120.0
CB21-CB22-CB23	120.0
CB22-CB23-CB24	120.0
CB23-CB24-CB19	120.0



Symmetry transformations used to generate equivalent atoms:

#1 -x,-y,-z

Table 3. Anisotropic displacement parameters ( $\text{Å}^2 \times 10^3$ ) for 3.

The anisotropic displacement factor exponent takes the form:

$$-2 \pi^2 [ h^2 a^{*2} U_{11} + \dots + 2 h k a^* b^* U_{12} ]$$

	U11	U22	U33	U23	U13	U12
Ga(1)	41(1)	48(1)	41(1)	6(1)	13(1)	17(1)
Ga(2)	45(1)	49(1)	47(1)	9(1)	18(1)	21(1)
Ga(3)	43(1)	46(1)	65(1)	-1(1)	0(1)	17(1)
Ga(4)	47(1)	44(1)	58(1)	5(1)	3(1)	14(1)
C(1)	44(3)	50(4)	48(3)	0(2)	13(2)	10(3)
Si(1)	54(1)	71(1)	54(1)	11(1)	25(1)	27(1)
C(11)	62(4)	110(7)	81(5)	20(4)	41(4)	30(4)
C(12)	84(5)	91(6)	70(4)	24(4)	40(4)	42(5)
C(13)	70(4)	98(6)	57(4)	-9(4)	16(3)	42(4)
Si(2)	45(1)	73(1)	55(1)	4(1)	7(1)	18(1)
C(21)	75(5)	122(8)	57(4)	14(4)	6(4)	34(5)
C(22)	47(4)	107(7)	81(5)	0(4)	3(3)	14(4)
C(23)	57(4)	83(6)	90(5)	11(4)	16(4)	30(4)
C(2)	58(4)	52(4)	66(4)	18(3)	29(3)	29(3)
Si(3)	69(1)	66(1)	54(1)	8(1)	27(1)	28(1)
C(31)	126(7)	72(5)	86(5)	11(4)	69(5)	35(5)
C(32)	139(8)	94(6)	56(4)	22(4)	27(4)	69(6)
C(33)	73(5)	119(8)	60(4)	-13(4)	21(4)	17(5)
Si(4)	50(1)	75(1)	80(1)	27(1)	28(1)	29(1)
C(41)	55(5)	80(7)	183(11)	22(6)	25(6)	13(5)
C(42)	66(5)	118(8)	84(5)	33(5)	23(4)	44(5)
C(43)	65(5)	159(10)	103(6)	57(6)	44(5)	42(6)
C(3)	50(4)	48(4)	90(5)	-4(3)	1(3)	26(3)
Si(5)	53(1)	71(1)	97(2)	-13(1)	-13(1)	30(1)
C(51)	65(5)	136(10)	137(9)	-26(7)	-10(5)	51(6)
C(52)	80(6)	83(6)	90(6)	-23(5)	-4(4)	28(5)
C(53)	120(8)	94(7)	104(7)	8(5)	-18(6)	62(7)
Si(6)	57(1)	71(2)	104(2)	4(1)	22(1)	22(1)
C(61)	57(5)	79(6)	139(8)	2(5)	24(5)	11(4)
C(62)	86(6)	115(8)	88(6)	9(5)	25(5)	28(6)
C(63)	87(7)	102(8)	167(10)	12(7)	60(7)	44(6)
C(4)	59(4)	46(4)	57(3)	11(3)	6(3)	15(3)
Si(7)	71(1)	67(1)	60(1)	3(1)	4(1)	18(1)
C(71)	128(9)	128(9)	62(5)	9(5)	19(5)	11(7)
C(72)	65(5)	73(6)	89(5)	-9(4)	-2(4)	9(4)
C(73)	118(8)	92(7)	85(6)	-7(5)	-28(5)	49(6)
Si(8)	55(1)	62(1)	75(1)	16(1)	16(1)	19(1)
C(81)	70(5)	82(6)	111(7)	29(5)	34(5)	16(5)
C(82)	83(6)	70(6)	143(8)	24(5)	50(6)	28(5)
C(83)	60(5)	132(9)	99(6)	13(6)	12(4)	36(5)
O(1)	42(2)	70(3)	42(2)	8(2)	12(2)	22(2)
O(2)	50(2)	49(2)	51(2)	12(2)	21(2)	19(2)
O(3)	48(2)	67(3)	54(2)	5(2)	12(2)	23(2)
O(4)	53(2)	48(2)	71(3)	14(2)	30(2)	24(2)
O(5)	53(2)	50(3)	72(3)	9(2)	16(2)	23(2)
O(6)	48(2)	53(3)	72(3)	10(2)	15(2)	19(2)
O(7)	40(2)	70(3)	74(3)	-10(2)	2(2)	13(2)
O(8)	47(2)	59(3)	62(3)	0(2)	3(2)	12(2)
C(011)	47(3)	56(4)	46(3)	11(3)	13(2)	19(3)

C(012)	48(3)	55(4)	49(3)	11(3)	11(2)	18(3)
C(013)	38(3)	86(5)	52(3)	8(3)	13(2)	21(3)
C(014)	49(3)	91(5)	45(3)	7(3)	12(3)	22(3)
C(015)	46(3)	55(4)	52(3)	7(3)	10(3)	16(3)
C(016)	40(3)	55(4)	66(4)	6(3)	11(3)	18(3)
C(017)	47(3)	63(4)	53(3)	0(3)	14(3)	20(3)
C(021)	47(3)	50(4)	74(4)	-4(3)	4(3)	21(3)
C(022)	42(3)	49(4)	63(4)	-2(3)	4(3)	15(3)
C(023)	39(3)	73(5)	78(4)	-15(4)	7(3)	14(3)
C(024)	42(3)	81(5)	70(4)	-11(3)	11(3)	24(3)
C(025)	53(3)	56(4)	54(3)	7(3)	11(3)	13(3)
C(031)	50(3)	42(3)	49(3)	2(2)	12(2)	16(3)
C(032)	48(3)	53(4)	50(3)	9(3)	13(2)	20(3)
C(033)	60(4)	54(4)	65(4)	10(3)	30(3)	23(3)
C(034)	60(4)	52(4)	79(4)	23(3)	37(3)	20(3)
C(035)	45(3)	47(3)	51(3)	7(2)	15(2)	16(3)
C(036)	49(3)	52(4)	54(3)	9(3)	17(3)	22(3)
C(037)	49(3)	51(4)	51(3)	9(3)	16(2)	20(3)
C(041)	49(3)	51(4)	55(3)	1(3)	5(3)	18(3)
C(042)	50(3)	46(3)	57(3)	6(3)	10(3)	17(3)
C(043)	58(4)	59(4)	75(4)	12(3)	28(3)	32(3)
C(044)	65(4)	61(4)	68(4)	17(3)	32(3)	28(3)
C(045)	50(3)	50(4)	58(3)	11(3)	16(3)	20(3)

Table 4. Hydrogen coordinates ( $\times 10^4$ ) and isotropic displacement parameters ( $\text{\AA}^2 \times 10^3$ ) for **3**.

	x	y	z	U(eq)
H(1)	5258	6093	2347	58
H(11A)	6971	6413	1557	95
H(11B)	6709	5892	858	95
H(11C)	7039	5550	1573	95
H(12A)	3851	5953	777	89
H(12B)	4608	6081	311	89
H(12C)	4878	6669	970	89
H(13A)	5174	4157	1127	87
H(13B)	4673	4454	423	87
H(13C)	4050	4214	971	87
H(21A)	6070	4933	4095	104
H(21B)	4940	4557	3607	104
H(21C)	5361	5465	3844	104
H(22A)	7726	5884	3661	101
H(22B)	7225	6505	3295	101
H(22C)	7689	6026	2883	101
H(23A)	6523	4380	2262	90
H(23B)	5583	3876	2509	90
H(23C)	6701	4139	3028	90
H(2)	1315	5485	3190	65
H(31A)	873	4892	4840	103
H(31B)	1242	5747	4611	103
H(31C)	1972	5471	5229	103
H(32A)	2373	3731	4102	107
H(32B)	1302	3578	4254	107
H(32C)	2332	3926	4856	107
H(33A)	3696	5743	4815	104
H(33B)	3377	6082	4096	104
H(33C)	3776	5347	4140	104
H(41A)	105	3063	2968	132
H(41B)	112	3328	2223	132
H(41C)	-938	3014	2411	132
H(42A)	-1476	4496	2006	102
H(42B)	-465	4762	1767	102
H(42C)	-652	5326	2287	102
H(43A)	-1537	3963	3323	124
H(43B)	-789	4787	3696	124
H(43C)	-541	4011	3927	124
H(3)	5872	-2548	3199	77
H(51A)	8236	-2096	4063	139
H(51B)	8562	-1654	4808	139
H(51C)	8448	-1179	4149	139
H(52A)	7026	-496	4537	108
H(52B)	7041	-939	5213	108
H(52C)	5985	-1015	4659	108
H(53A)	5626	-2833	4690	131
H(53B)	6731	-2604	5224	131
H(53C)	6473	-3160	4545	131
H(61A)	6458	-173	3152	114
H(61B)	7126	-23	2626	114

H(61C)	7578	-243	3377	114
H(62A)	4820	-1374	1949	117
H(62B)	5132	-2054	1656	117
H(62C)	5642	-1175	1530	117
H(63A)	7609	-1485	2051	132
H(63B)	7200	-2300	2339	132
H(63C)	8062	-1597	2836	132
H(4)	2171	-2991	4534	68
H(71A)	3190	-1793	6541	137
H(71B)	2303	-2559	6163	137
H(71C)	2189	-1725	6002	137
H(72A)	4560	-945	5116	100
H(72B)	4373	-692	5808	100
H(72C)	3584	-686	5089	100
H(73A)	4447	-2683	5282	127
H(73B)	3814	-3110	5781	127
H(73C)	4746	-2334	6058	127
H(81A)	168	-3394	4703	105
H(81B)	-470	-2799	4604	105
H(81C)	484	-2676	5261	105
H(82A)	1869	-958	4905	113
H(82B)	665	-1137	4667	113
H(82C)	1306	-876	4132	113
H(83A)	800	-2158	3079	118
H(83B)	-260	-2346	3253	118
H(83C)	235	-3019	3221	118
H(013)	2240	4385	-9	70
H(014)	1188	3923	-1124	74
H(017)	-280	4122	692	64
H(023)	-3103	3152	-1278	79
H(024)	-2054	3663	-154	77
H(025)	-596	3417	-1970	67
H(033)	1785	2418	3280	67
H(034)	1816	1162	3526	71
H(037)	4048	2655	2296	59
H(043)	4783	273	2513	71
H(044)	4729	1530	2215	72
H(045)	2571	83	3485	62

Supplementary material:

Compound **4** (O<sub>2</sub>C-C<sub>10</sub>H<sub>6</sub>-CO<sub>2</sub>){[(Me<sub>3</sub>Si)<sub>2</sub>CH]<sub>2</sub>Ga}<sub>2</sub>

Table 1. Atomic Coordinates and Equivalent Isotropic Displacement Parameters of **4**

Table 2. Bond Lengths (Å) and Bond Angles (deg) of **4**

Table 3. Anisotropic Displacement Parameters of **4**

Table 4. Hydrogen Coordinates of **4**

Table 1. Atomic coordinates and equivalent isotropic displacement parameters ( $\text{\AA}^2 \times 10^3$ ) for 4.  
 $U(\text{eq})$  is defined as one third of the trace of the orthogonalized  $U_{ij}$  tensor.

	x	y	z	$U(\text{eq})$
Ga(1)	0.20236(3)	0.304449(18)	0.898115(17)	2.972(10)
C(1)	0.1069(3)	0.35145(16)	0.96652(16)	3.34(7)
Si(1)	0.22251(11)	0.36752(6)	1.04776(5)	4.67(2)
C(11)	0.2789(5)	0.2779(3)	1.0924(2)	7.71(13)
C(12)	0.3857(4)	0.4191(2)	1.0358(2)	6.41(11)
C(13)	0.1278(5)	0.4261(3)	1.1042(3)	8.88(16)
Si(2)	-0.06950(9)	0.30552(6)	0.96631(5)	4.59(2)
C(21)	-0.0542(4)	0.2167(2)	1.0153(3)	7.25(13)
C(22)	-0.1466(4)	0.2827(3)	0.8795(2)	7.87(14)
C(23)	-0.1969(4)	0.3688(3)	1.0005(3)	7.73(14)
C(2)	0.2025(3)	0.32934(17)	0.80414(16)	3.52(7)
Si(3)	0.22201(12)	0.24540(6)	0.74977(5)	5.08(3)
C(31)	0.0776(5)	0.1763(2)	0.7558(2)	6.59(12)
C(32)	0.3954(5)	0.1978(3)	0.7717(3)	8.58(15)
C(33)	0.2031(6)	0.2720(3)	0.6599(2)	8.22(15)
Si(4)	0.31170(10)	0.41566(5)	0.79714(5)	4.35(2)
C(41)	0.5007(4)	0.3980(3)	0.8282(3)	7.84(14)
C(42)	0.2946(5)	0.4517(2)	0.7102(2)	7.53(13)
C(43)	0.2486(4)	0.4923(2)	0.8483(2)	5.99(10)
O(1)	0.20532(19)	0.19142(11)	0.91457(10)	3.42(5)
O(2)	0.3933(2)	0.26082(11)	0.93916(11)	3.42(5)
C(5)	0.3355(3)	0.19653(17)	0.93853(14)	3.06(6)
C(51)	0.4162(3)	0.12954(16)	0.96517(15)	3.08(7)
C(52)	0.5545(3)	0.13842(17)	0.99898(16)	3.59(7)
C(53)	0.6286(3)	0.07716(17)	1.02476(16)	3.67(7)
C(54)	0.5686(3)	0.00458(16)	1.01730(15)	2.93(6)
C(55)	0.3557(3)	0.06028(16)	0.95704(15)	3.27(7)
C(6)	0.179(2)	-0.0121(15)	1.1543(13)	38.4(12)
C(61)	0.0867(11)	-0.0250(6)	1.0963(6)	20.6(4)
C(62)	0.2739(16)	-0.0579(9)	1.1705(7)	26.6(7)
C(63)	0.3726(16)	0.0032(10)	1.2022(8)	30.3(7)
C(64)	0.3340(14)	0.0839(8)	1.1944(7)	25.4(6)
C(65)	0.2117(12)	0.0665(7)	1.1364(6)	21.5(5)

Table 2. Bond lengths [Å] and angles [deg] for 4.

Ga(1)-C(2)	1.960(3)
Ga(1)-C(1)	1.962(3)
Ga(1)-O(1)	2.042(2)
Ga(1)-O(2)	2.0559(19)
C(1)-Si(1)	1.873(3)
C(1)-Si(2)	1.883(3)
Si(1)-C(12)	1.865(4)
Si(1)-C(11)	1.878(5)
Si(1)-C(13)	1.881(4)
Si(2)-C(22)	1.855(5)
Si(2)-C(21)	1.866(4)
Si(2)-C(23)	1.872(4)
C(2)-Si(3)	1.886(3)
C(2)-Si(4)	1.880(3)
Si(3)-C(32)	1.867(4)
Si(3)-C(33)	1.870(4)
Si(3)-C(31)	1.874(4)
Si(4)-C(41)	1.863(4)
Si(4)-C(42)	1.865(4)
Si(4)-C(43)	1.871(4)
O(1)-C(5)	1.279(3)
O(2)-C(5)	1.273(4)
C(5)-C(51)	1.483(4)
C(51)-C(55)	1.365(4)
C(51)-C(52)	1.414(4)
C(52)-C(53)	1.366(4)
C(53)-C(54)	1.416(4)
C(54)-C(54)#1	1.412(6)
C(54)-C(55)#1	1.424(4)
C(55)-C(54)#1	1.424(4)
C(6)-C(65)	1.49(2)
C(6)-C(61)	1.39(2)
C(6)-C(62)	1.23(2)
C(62)-C(63)	1.526(17)
C(63)-C(64)	1.488(17)
C(64)-C(65)	1.571(14)
C(2)-Ga(1)-C(1)	131.30(12)
C(2)-Ga(1)-O(1)	112.39(11)
C(1)-Ga(1)-O(1)	107.60(10)
C(2)-Ga(1)-O(2)	110.69(11)
C(1)-Ga(1)-O(2)	110.92(11)
O(1)-Ga(1)-O(2)	64.53(8)
Si(1)-C(1)-Si(2)	119.19(16)
Si(1)-C(1)-Ga(1)	114.21(15)
Si(2)-C(1)-Ga(1)	109.10(15)
C(12)-Si(1)-C(1)	111.33(17)
C(12)-Si(1)-C(11)	107.1(2)
C(1)-Si(1)-C(11)	112.81(18)
C(12)-Si(1)-C(13)	107.2(2)
C(1)-Si(1)-C(13)	110.1(2)
C(11)-Si(1)-C(13)	108.1(2)
C(22)-Si(2)-C(21)	108.1(2)
C(22)-Si(2)-C(23)	107.0(2)
C(21)-Si(2)-C(23)	108.6(2)
C(22)-Si(2)-C(1)	109.43(17)



C(21)-Si(2)-C(1)	111.53(16)
C(23)-Si(2)-C(1)	112.02(18)
Si(3)-C(2)-Si(4)	120.06(16)
Si(3)-C(2)-Ga(1)	113.90(15)
Si(4)-C(2)-Ga(1)	109.80(16)
C(32)-Si(3)-C(33)	107.8(2)
C(32)-Si(3)-C(31)	109.3(2)
C(33)-Si(3)-C(31)	105.3(2)
C(32)-Si(3)-C(2)	112.52(19)
C(33)-Si(3)-C(2)	111.52(18)
C(31)-Si(3)-C(2)	110.19(16)
C(41)-Si(4)-C(42)	109.0(2)
C(41)-Si(4)-C(43)	108.3(2)
C(42)-Si(4)-C(43)	106.5(2)
C(41)-Si(4)-C(2)	111.37(18)
C(42)-Si(4)-C(2)	112.39(18)
C(43)-Si(4)-C(2)	108.99(15)
C(5)-O(1)-Ga(1)	88.94(18)
C(5)-O(2)-Ga(1)	88.49(16)
O(2)-C(5)-O(1)	118.0(3)
O(2)-C(5)-C(51)	121.1(3)
O(1)-C(5)-C(51)	120.8(3)
C(55)-C(51)-C(52)	120.9(3)
C(55)-C(51)-C(5)	119.6(3)
C(52)-C(51)-C(5)	119.5(3)
C(53)-C(52)-C(51)	119.9(3)
C(52)-C(53)-C(54)	120.5(3)
C(53)-C(54)-C(54)#1	119.7(3)
C(53)-C(54)-C(55)#1	121.7(3)
C(54)#1-C(54)-C(55)#1	118.6(3)
C(51)-C(55)-C(54)#1	120.3(3)
C(65)-C(6)-C(61)	94.6(19)
C(65)-C(6)-C(62)	121(2)
C(61)-C(6)-C(62)	118(2)
C(6)-C(62)-C(63)	91.7(17)
C(64)-C(63)-C(62)	121.0(14)
C(65)-C(64)-C(63)	92.2(12)
C(6)-C(65)-C(64)	99.4(14)

Symmetry transformations used to generate equivalent atoms:

#1 -x+1 -y -z+2

Table 3. Anisotropic displacement parameters ( $\text{\AA}^2 \times 10^3$ ) for 4.

The anisotropic displacement factor exponent takes the form:

$$-2 \pi^2 [h^2 a^{*2} U_{11} + \dots + 2 h k a^* b^* U_{12}]$$

	U11	U22	U33	U23	U13	U12
Ga(1)	3.264(16)	2.371(15)	3.321(19)	0.437(16)	0.616(12)	0.614(15)
C(1)	3.73(16)	2.52(15)	3.92(19)	0.39(14)	1.04(14)	0.84(12)
Si(1)	5.28(6)	4.60(5)	4.22(6)	-0.78(5)	0.99(5)	-0.19(5)
C(11)	8.7(3)	8.1(3)	5.6(3)	1.4(2)	-1.2(2)	-0.6(2)
C(12)	5.4(2)	6.4(3)	7.3(3)	-2.0(2)	0.5(2)	-0.9(2)
C(13)	9.1(3)	10.6(4)	7.7(3)	-4.3(3)	3.6(3)	-1.1(3)
Si(2)	3.35(4)	4.65(5)	5.98(6)	0.18(5)	1.44(4)	0.63(4)
C(21)	5.1(2)	5.9(3)	11.1(4)	2.3(3)	2.5(2)	-0.70(19)
C(22)	4.2(2)	11.1(4)	8.2(3)	-1.7(3)	0.5(2)	-0.1(2)
C(23)	5.3(2)	8.0(3)	10.5(4)	-0.3(3)	3.1(2)	2.2(2)
C(2)	4.01(17)	3.35(16)	3.23(18)	0.54(14)	0.56(14)	0.78(13)
Si(3)	7.22(7)	4.23(5)	3.90(6)	-0.28(5)	1.19(5)	1.40(5)
C(31)	10.3(3)	4.5(2)	4.8(2)	-0.84(19)	0.4(2)	-0.4(2)
C(32)	9.5(3)	7.8(3)	8.7(4)	-1.6(3)	2.2(3)	3.7(3)
C(33)	13.9(4)	6.9(3)	4.1(3)	-0.5(2)	2.2(3)	0.6(3)
Si(4)	4.93(5)	4.08(5)	4.17(6)	0.95(5)	1.11(4)	-0.05(4)
C(41)	5.4(2)	8.0(3)	10.1(4)	1.1(3)	1.2(2)	-1.0(2)
C(42)	10.7(4)	6.2(3)	5.9(3)	1.4(2)	1.9(3)	-1.8(3)
C(43)	8.2(3)	3.69(19)	6.4(3)	0.28(19)	2.1(2)	-0.91(19)
O(1)	3.66(11)	2.37(10)	4.10(13)	0.51(10)	0.12(9)	0.41(9)
O(2)	3.44(11)	2.44(11)	4.32(14)	0.65(10)	0.40(9)	0.64(9)
C(5)	3.52(15)	2.83(14)	2.87(16)	0.18(14)	0.58(12)	0.66(14)
C(51)	3.46(16)	2.79(15)	2.98(17)	0.18(13)	0.48(13)	0.52(12)
C(52)	3.83(17)	2.51(15)	4.3(2)	0.12(14)	0.17(14)	-0.17(13)
C(53)	2.96(15)	3.08(16)	4.7(2)	0.13(15)	-0.52(14)	-0.01(13)
C(54)	3.05(14)	2.94(15)	2.72(16)	-0.04(13)	0.18(12)	0.11(12)
C(55)	3.21(15)	3.07(16)	3.37(18)	0.15(14)	-0.06(13)	0.26(12)

Table 4. Hydrogen coordinates and isotropic displacement parameters ( $\text{\AA}^2 \times 10^3$ ) for 4.

	x	y	z	U(eq)
H(1)	0.0841	0.4020	0.9494	4.0
H(11A)	0.3466	0.2888	1.1308	9.2
H(11B)	0.3202	0.2452	1.0631	9.2
H(11C)	0.1986	0.2538	1.1061	9.2
H(12A)	0.4437	0.4256	1.0781	7.7
H(12B)	0.3611	0.4674	1.0166	7.7
H(12C)	0.4362	0.3910	1.0067	7.7
H(13A)	0.1940	0.4447	1.1405	10.7
H(13B)	0.0585	0.3960	1.1213	10.7
H(13C)	0.0827	0.4676	1.0796	10.7
H(21A)	-0.1423	0.1905	1.0083	8.7
H(21B)	-0.0299	0.2281	1.0618	8.7
H(21C)	0.0175	0.1857	1.0012	8.7
H(22A)	-0.2380	0.2609	0.8792	9.4
H(22B)	-0.0869	0.2477	0.8611	9.4
H(22C)	-0.1548	0.3277	0.8533	9.4
H(23A)	-0.2855	0.3437	0.9990	9.3
H(23B)	-0.2094	0.4137	0.9742	9.3
H(23C)	-0.1610	0.3815	1.0457	9.3
H(2)	0.1062	0.3464	0.7893	4.2
H(31A)	0.0815	0.1370	0.7239	7.9
H(31B)	-0.0116	0.2013	0.7469	7.9
H(31C)	0.0889	0.1553	0.7998	7.9
H(32A)	0.4030	0.1577	0.7409	10.3
H(32B)	0.4028	0.1778	0.8160	10.3
H(32C)	0.4696	0.2333	0.7695	10.3
H(33A)	0.1962	0.2275	0.6331	9.9
H(33B)	0.2836	0.3006	0.6519	9.9
H(33C)	0.1197	0.3016	0.6485	9.9
H(41A)	0.5526	0.4439	0.8272	9.4
H(41B)	0.5367	0.3614	0.8004	9.4
H(41C)	0.5103	0.3796	0.8731	9.4
H(42A)	0.3304	0.5020	0.7105	9.0
H(42B)	0.1974	0.4515	0.6908	9.0
H(42C)	0.3472	0.4202	0.6844	9.0
H(43A)	0.2930	0.5386	0.8394	7.2
H(43B)	0.2719	0.4802	0.8947	7.2
H(43C)	0.1486	0.4973	0.8373	7.2
H(52)	0.5949	0.1859	1.0036	4.3
H(53)	0.7191	0.0832	1.0474	4.4
H(55)	0.2647	0.0554	0.9346	3.9
H(6)	0.1230	-0.0093	1.1908	46.1
H(61A)	0.0493	0.0219	1.0785	24.7
H(61B)	0.0112	-0.0564	1.1059	24.7
H(61C)	0.1356	-0.0494	1.0643	24.7
H(62)	0.3067	-0.0820	1.1328	31.9
H(62)	0.2507	-0.0950	1.2021	31.9
H(63)	0.3905	-0.0070	1.2496	36.4
H(63)	0.4613	-0.0031	1.1855	36.4
H(64)	0.3014	0.1051	1.2334	30.5
H(64)	0.4078	0.1146	1.1807	30.5

H(65A)	0.1320	0.0996	1.1372	25.9
H(65B)	0.2429	0.0692	1.0931	25.9