ORGANOMETALLICS
Organometallics, 1998, 17(22), 4904-4909, DOI:10.1021/om980280f

Terms & Conditions

Electronic Supporting Information files are available without a subscription to ACS Web Editions. The American Chemical Society holds a copyright ownership interest in any copyrightable Supporting Information. Files available from the ACS website may be downloaded for personal use only. Users are not otherwise permitted to reproduce, republish, redistribute, or sell any Supporting Information from the ACS website, either in whole or in part, in either machine-readable form or any other form without permission from the American Chemical Society. For permission to reproduce, republish and redistribute this material, requesters must process their own requests via the RightsLink permission system. Information about how to use the RightsLink permission system can be found at http://pubs.acs.org/page/copyright/permissions.html

ACS Publications
MOST TRUSTED. MOST CITED. MOST READ.

Copyright © 1998 American Chemical Society

Table 1. Classification of Dihedral Angles in Si-Si-Si- Fragments of 3[a]

Polysilane Chain	Conformation
9-8-7-6-3-4	AAA
9-8-7-6-3-5	AAG
10-8-7-6-3-4	GAA
10-8-7-6-3-5	GAG
11-8-7-6-3-4	GAA
11-8-7-6-3-5	GAG
9-8-7-6-3-2-1-22-23-24	AAGGAGG
9-8-7-6-3-2-1-22-23-25	AAGGAGA
10-8-7-6-3-2-1-22-23-24	GAGGAGG
10-8-7-6-3-2-1-22-23-25	GAGGAGA
11-8-7-6-3-2-1-22-23-24	GAGGAGG
11-8-7-6-3-2-1-22-23-25	GAGGAGA
9-8-7-6-3-2-1-22-23-26-27-28-29	AAGGAGGGAA
9-8-7-6-3-2-1-22-23-26-27-28-30	AAGGAGGGAO
9-8-7-6-3-2-1-22-23-26-27-28-30′	AAGGAGGGAG
9-8-7-6-3-2-1-22-23-26-27-28-31	AAGGAGGGAG
9-8-7-6-3-2-1-22-23-26-27-28-31′	AAGGAGGGAG
10-8-7-6-3-2-1-22-23-26-27-28-29	GAGGAGGGAA
10-8-7-6-3-2-1-22-23-26-27-28-30	GAGGAGGGAO
10-8-7-6-3-2-1-22-23-26-27-28-30′	GAGGAGGGAG
10-8-7-6-3-2-1-22-23-26-27-28-31	GAGGAGGGAG
10-8-7-6-3-2-1-22-23-26-27-28-31′	GAGGAGGGAG
11-8-7-6-3-2-1-22-23-26-27-28-29	GAGGAGGGAA
11-8-7-6-3-2-1-22-23-26-27-28-30	GAGGAGGGAO
11-8-7-6-3-2-1-22-23-26-27-28-30′	GAGGAGGGAG
11-8-7-6-3-2-1-22-23-26-27-28-31	GAGGAGGGAG
11-8-7-6-3-2-1-22-23-26-27-28-31	GAGGAGGGAG
4-3-2-1-22-23-24	OAGG
4-3-2-1-22-23-25	OAGA
5-3-2-1-22-23-24	AAGG

5-3-2-1-22-23-25	AAGA
4-3-2-1-22-23-26-27-28-29	OAGGGAA
4-3-2-1-22-23-26-27-28-30	OAGGGAO
4-3-2-1-22-23-26-27-28-30′	OAGGGAG
4-3-2-1-22-23-26-27-28-31	OAGGGAG
4-3-2-1-22-23-26-27-28-31′	OAGGGAG
5-3-2-1-22-23-26-27-28-29	AAGGGAA
5-3-2-1-22-23-26-27-28-30	AAGGGAO
5-3-2-1-22-23-26-27-28-30′	AAGGGAG
5-3-2-1-22-23-26-27-28-31	AAGGGAG
5-3-2-1-22-23-26-27-28-31′	AAGGGAG
24-23-26-27-28-29	AAA
24-23-26-27-28-30	AAO
24-23-26-27-28-30′	AAG
24-23-26-27-28-31	AAG
24-23-26-27-28-31′	AAG
25-23-26-27-28-29	GAA
25-23-26-27-28-30	GAO
25-23-26-27-28-30′	GAG
25-23-26-27-28-31	GAG
25-23-26-27-28-31′	GAG
9-8-7-6-3-2-1-12-13-14	AAGGGAA
9-8-7-6-3-2-1-12-13-15	AAGGGAG
10-8-7-6-3-2-1-12-13-14	GAGGGAA
10-8-7-6-3-2-1-12-13-15	GAGGGAG
11-8-7-6-3-2-1-12-13-14	GAGGGAA
11-8-7-6-3-2-1-12-13-15	GAGGGAG
4-3-2-1-12-13-14	OGAA
4-3-2-1-12-13-15	OGAG
5-3-2-1-12-13-14	AGAA
5-3-2-1-12-13-15	AGAG
9-8-7-6-3-2-1-12-13-16-17-18-19	AAGGGAOGAO
9-8-7-6-3-2-1-12-13-16-17-18-19′	AAGGGAGGAG
9-8-7-6-3-2-1-12-13-16-17-18-20	AAGGGAGGAG

9-8-7-6-3-2-1-12-13-16-17-18-20′	AAGGGAGGAO
9-8-7-6-3-2-1-12-13-16-17-18-21	AAGGGAGGAA
9-8-7-6-3-2-1-12-13-16-17-18-21′	AAGGGAGGAA
10-8-7-6-3-2-1-12-13-16-17-18-19	GAGGGAGGAO
10-8-7-6-3-2-1-12-13-16-17-18-19′	GAGGGAGGAG
10-8-7-6-3-2-1-12-13-16-17-18-20	GAGGGAGGAG
10-8-7-6-3-2-1-12-13-16-17-18-20′	GAGGGAGGAO
10-8-7-6-3-2-1-12-13-16-17-18-21	GAGGGAGGAA
10-8-7-6-3-2-1-12-13-16-17-18-21′	GAGGGAGGAA
11-8-7-6-3-2-1-12-13-16-17-18-19	GAGGGAGGAO
11-8-7-6-3-2-1-12-13-16-17-18-19′	GAGGGAGGAG
11-8-7-6-3-2-1-12-13-16-17-18-20	GAGGGAGGAG
11-8-7-6-3-2-1-12-13-16-17-18-20′	GAGGGAGGAO
11-8-7-6-3-2-1-12-13-16-17-18-21	GAGGGAGGAA
11-8-7-6-3-2-1-12-13-16-17-18-21′	GAGGGAGGAA
14-13-16-17-18-19	AAO
14-13-16-17-18-19′	AAG
14-13-16-17-18-20	AAG
14-13-16-17-18-20′	AAO
14-13-16-17-18-21	AAA
14-13-16-17-18-21′	AAA
15-13-16-17-18-19	OAO
15-13-16-17-18-19′	OAG
15-13-16-17-18-20	OAG
15-13-16-17-18-20′	OAO
15-13-16-17-18-21	OAA
15-13-16-17-18-21′	OAA
19-18-17-16-13-12-1-22-23-24	OAGGGAG
19′-18-17-16-13-12-1-22-23-24	GAGGGAG
19-18-17-16-13-12-1-22-23-25	OAGGGAA
19′-18-17-16-13-12-1-22-23-25	GAGGGAA
20-18-17-16-13-12-1-22-23-24	GAGGGAG
20′-18-17-16-13-12-1-22-23-24	OAGGGAG
20-18-17-16-13-12-1-22-23-25	GAGGGAA

20′-18-17-16-13-12-1-22-23-25	GAGGGAA
21-18-17-16-13-12-1-22-23-24	AAGGGAG
21′-18-17-16-13-12-1-22-23-24	AAGGGAG
21-18-17-16-13-12-1-22-23-25	AAGGGAA
21′-18-17-16-13-12-1-22-23-25	AAGGGAA
19-18-17-16-13-12-1-22-23-26-27-28-29	OAGGGAGGAA
19′-18-17-16-13-12-1-22-23-26-27-28-29	GAGGGAGGAA
19-18-17-16-13-12-1-22-23-26-27-28-30	OAGGGAGGAO
19′-18-17-16-13-12-1-22-23-26-27-28-30	GAGGGAGGAO
19-18-17-16-13-12-1-22-23-26-27-28-30′	OAGGGAGGAG
19′-18-17-16-13-12-1-22-23-26-27-28-30′	GAGGGAGGAG
19-18-17-16-13-12-1-22-23-26-27-28-31	OAGGGAGGAG
19′-18-17-16-13-12-1-22-23-26-27-28-31	GAGGGAGGAG
19-18-17-16-13-12-1-22-23-26-27-28-31′	OAGGGAGGAG
19′-18-17-16-13-12-1-22-23-26-27-28-31′	GAGGGAGGAG
20-18-17-16-13-12-1-22-23-26-27-28-29	GAGGGAGGAA
20′-18-17-16-13-12-1-22-23-26-27-28-29	OAGGGAGGAA
20-18-17-16-13-12-1-22-23-26-27-28-30	GAGGGAGGAO
20′-18-17-16-13-12-1-22-23-26-27-28-30	OAGGGAGGAO
20-18-17-16-13-12-1-22-23-26-27-28-30′	GAGGGAGGAG
20′-18-17-16-13-12-1-22-23-26-27-28-30′	OAGGGAGGAG
20-18-17-16-13-12-1-22-23-26-27-28-31	GAGGGAGGAG
20′-18-17-16-13-12-1-22-23-26-27-28-31	OAGGGAGGAG
20-18-17-16-13-12-1-22-23-26-27-28-31′	GAGGGAGGAG
20′-18-17-16-13-12-1-22-23-26-27-28-31′	OAGGGAGGAG
21-18-17-16-13-12-1-22-23-26-27-28-29	AAGGGAGGAA
21′-18-17-16-13-12-1-22-23-26-27-28-29	AAGGGAGGAA
21-18-17-16-13-12-1-22-23-26-27-28-30	AAGGGAGGAO
21′-18-17-16-13-12-1-22-23-26-27-28-30	AAGGGAGGAO
21-18-17-16-13-12-1-22-23-26-27-28-30′	AAGGGAGGAG
21′-18-17-16-13-12-1-22-23-26-27-28-30′	AAGGGAGGAG
21-18-17-16-13-12-1-22-23-26-27-28-31	AAGGGAGGAG
21′-18-17-16-13-12-1-22-23-26-27-28-31	AAGGGAGGAG
21-18-17-16-13-12-1-22-23-26-27-28-31′	AAGGGAGGAG

21′-18-17-16-13-12-1-22-23-26-27-28-31′ AAGGGAGGAG

[a] G: 29-73°, O: 80-106°, A: 156-179°.

Crystallographic Parameters for Tris[2,2,5,5-tetra(trimethylsilyl)hexasilyl]methylsilane

(3)

Table 1. Atomic coordinates and B_{iso}/B_{eq}

atom	x	y	z	B_{eq}
Si(1)	0.4477(2)	0.4924(2)	0.3542(1)	2.23(8)
Si(2)	0.3987(3)	0.3950(2)	0.4047(1)	2.87(9)
Si(3)	0.4557(3)	0.2269(2)	0.3919(1)	2.73(9)
Si(4)	0.6058(3)	0.1267(3)	0.4211(1)	4.8(1)
Si(5)	0.3333(3)	0.1982(3)	0.4407(1)	4.1(1)
Si(6)	0.4843(3)	0.1631(2)	0.3150(1)	3.23(9)
Si(7)	0.3450(3)	0.2035(3)	0.2817(1)	3.9(1)
Si(8)	0.3713(2)	0.1786(2)	0.1996(1)	2.82(9)
Si(9)	0.2138(3)	0.2239(3)	0.1819(2)	4.7(1)
Si(10)	0.4788(3)	0.0177(3)	0.1724(1)	3.51(10)
Si(11)	0.4222(3)	0.2794(3)	0.1553(1)	3.52(10)
Si(12)	0.6146(2)	0.4536(2)	0.3562(1)	2.41(8)
Si(13)	0.7113(2)	0.5254(2)	0.3183(1)	2.39(8)
Si(14)	0.8518(3)	0.4544(3)	0.3572(1)	3.77(10)
Si(15)	0.6525(3)	0.6935(2)	0.3299(1)	3.25(9)
Si(16)	0.7826(3)	0.4794(3)	0.2382(1)	3.07(9)
Si(17)	0.6793(3)	0.4928(2)	0.1853(1)	2.92(9)
Si(18)	0.7341(2)	0.4987(2)	0.1039(1)	2.67(8)
Si(19')	0.9022(5)	0.4002(6)	0.0709(3)	4.2(2)
Si(19)	0.8491(5)	0.3418(5)	0.0690(2)	3.3(2)
Si(20')	0.6861(6)	0.6619(5)	0.0825(3)	4.6(2)
Si(20)	0.8000(5)	0.6006(5)	0.0812(3)	3.4(2)
Si(21)	0.5900(5)	0.5563(6)	0.0708(3)	3.6(2)
Si(21')	0.6437(6)	0.4547(6)	0.0617(3)	4.4(2)

Table 1. Atomic coordinates and B_{iso}/B_{eq} (continued)

atom	x	y	z	B_{eq}
Si(22)	0.3382(2)	0.6583(2)	0.3757(1)	2.40(8)
Si(23)	0.1634(2)	0.7521(2)	0.3782(1)	2.61(8)
Si(24)	0.0549(3)	0.7268(3)	0.4392(1)	3.71(10)
Si(25)	0.1307(3)	0.9099(3)	0.4000(1)	4.2(1)
Si(26)	0.1034(2)	0.7467(2)	0.3095(1)	3.06(9)
Si(27)	0.1634(3)	0.7963(3)	0.2388(1)	3.19(9)
Si(28)	0.0597(2)	0.8496(2)	0.1817(1)	2.96(9)
Si(29)	0.1515(3)	0.8664(3)	0.1116(1)	5.3(1)
Si(30')	-0.092(1)	0.9757(10)	0.2067(5)	4.3(4)
Si(30)	-0.0723(6)	1.0158(6)	0.1989(3)	4.8(2)
Si(31')	-0.0114(6)	0.7577(6)	0.1669(4)	3.8(2)
Si(31)	0.0393(9)	0.7183(9)	0.1551(5)	4.7(3)
C(1)	0.4341(8)	0.4711(8)	0.2936(4)	3.6(3)
C(2)	0.2621(8)	0.4606(8)	0.4030(5)	4.9(4)
C(3)	0.4062(9)	0.4154(8)	0.4667(4)	4.5(4)
C(4)	0.723(3)	0.116(3)	0.390(2)	4.9(3)
C(4')	0.724(1)	0.080(1)	0.3690(7)	4.9(1)
C(5)	0.588(3)	0.168(3)	0.488(1)	4.9(1)
C(5')	0.632(1)	0.189(1)	0.4646(7)	4.9(1)
C(6')	0.608(1)	0.009(2)	0.4418(8)	4.9(1)
C(6)	0.652(3)	-0.002(3)	0.430(2)	4.9(1)
C(7)	0.202(1)	0.272(1)	0.4299(5)	7.3(5)
C(8)	0.364(1)	0.0686(10)	0.4356(5)	6.5(4)
C(9)	0.326(1)	0.227(1)	0.5035(5)	7.8(5)

Table 1. Atomic coordinates and B_{iso}/B_{eq} (continued)

atom	x	y	z	B_{eq}
C(10)	0.5739(9)	0.1893(8)	0.2745(4)	4.0(3)
C(11)	0.545(1)	0.0281(9)	0.3199(5)	6.3(4)
C(12)	0.2474(9)	0.334(1)	0.2962(4)	6.0(4)
C(13)	0.291(1)	0.125(1)	0.3097(5)	8.8(5)
C(14)	0.1365(9)	0.3584(9)	0.1854(5)	4.9(4)
C(15)	0.226(1)	0.1799(10)	0.1210(5)	7.4(5)
C(16)	0.1447(9)	0.1736(10)	0.2240(6)	7.4(5)
C(17)	0.493(1)	0.0086(10)	0.1078(5)	6.6(4)
C(18)	0.4252(10)	-0.0600(9)	0.1984(5)	6.1(4)
C(19)	0.6042(9)	-0.0261(9)	0.1856(5)	5.1(4)
C(20)	0.3838(9)	0.2964(9)	0.0964(4)	5.0(4)
C(21)	0.5597(9)	0.2269(9)	0.1433(4)	4.5(4)
C(22)	0.3649(9)	0.4009(8)	0.1849(5)	5.0(4)
C(23)	0.6861(8)	0.3251(8)	0.3316(4)	4.0(3)
C(24)	0.6231(8)	0.4511(9)	0.4197(4)	4.1(3)
C(25)	0.9036(9)	0.3218(9)	0.3663(5)	5.4(4)
C(26)	0.8205(9)	0.5158(9)	0.4161(4)	4.4(4)
C(27)	0.9591(9)	0.467(1)	0.3239(4)	5.6(4)
C(28)	0.5672(8)	0.7416(8)	0.3867(4)	4.0(3)
C(29)	0.7569(9)	0.7200(9)	0.3307(4)	4.6(4)
C(30)	0.5877(9)	0.7658(8)	0.2822(4)	4.4(4)
C(31)	0.8828(10)	0.3479(10)	0.2347(4)	5.7(4)
C(32)	0.8450(9)	0.5531(9)	0.2177(4)	5.2(4)
C(33)	0.6619(9)	0.3833(9)	0.1916(4)	4.2(3)

Table 1. Atomic coordinates and B_{iso}/B_{eq} (continued)

atom	x	y	z	B_{eq}
C(34)	0.5558(9)	0.6033(9)	0.2016(4)	4.6(4)
C(35)	0.785(2)	0.269(2)	0.0648(8)	3.2(6)
C(35')	0.984(2)	0.450(2)	0.0838(9)	4.5(6)
C(36)	0.912(1)	0.371(1)	0.0055(4)	8.6(5)
C(37)	0.9511(10)	0.2740(9)	0.0984(5)	5.7(4)
C(38)	0.943(2)	0.533(2)	0.0822(7)	2.4(5)
C(38')	0.546(2)	0.729(2)	0.0851(9)	4.9(7)
C(39)	0.771(1)	0.6481(10)	0.0185(4)	6.9(4)
C(40)	0.7262(9)	0.7192(8)	0.1211(4)	4.4(4)
C(41)	0.513(2)	0.696(2)	0.0764(9)	5.2(7)
C(41')	0.710(2)	0.314(2)	0.0529(8)	4.3(6)
C(42)	0.5083(8)	0.5035(9)	0.0960(4)	4.2(3)
C(43)	0.6303(9)	0.5142(10)	0.0036(4)	5.4(4)
C(44)	0.3603(8)	0.6820(8)	0.4343(4)	3.5(3)
C(45)	0.3920(8)	0.7112(7)	0.3267(4)	2.4(3)
C(46)	0.1108(10)	0.6870(10)	0.4923(4)	5.9(4)
C(47)	-0.0646(9)	0.8431(9)	0.4563(4)	5.3(4)
C(48)	0.0138(8)	0.6412(9)	0.4236(4)	4.5(4)
C(49)	0.2229(9)	0.9486(8)	0.3733(5)	5.7(4)
C(50)	0.1267(9)	0.9162(9)	0.4651(5)	5.7(4)
C(51)	0.0101(9)	1.0039(9)	0.3853(5)	6.4(4)
C(52)	-0.0355(9)	0.8219(9)	0.3241(4)	4.8(4)
C(53)	0.1359(9)	0.6176(9)	0.2983(4)	4.8(4)
C(54)	0.1941(9)	0.8950(9)	0.2508(4)	4.9(4)

Table 1. Atomic coordinates and B_{iso}/B_{eq} (continued)

atom	x	y	z	B_{eq}
C(55)	0.2822(9)	0.6888(9)	0.2114(4)	5.0(4)
C(56)	0.239(1)	0.730(1)	0.0813(7)	4.6(3)
C(56')	0.283(2)	0.785(2)	0.097(1)	4.60(5)
C(57)	0.242(1)	0.904(1)	0.1196(7)	4.60(5)
C(57')	0.162(3)	0.988(3)	0.124(1)	4.60(5)
C(58)	0.075(2)	0.935(2)	0.0681(8)	4.60(5)
C(58')	0.080(3)	0.894(3)	0.059(1)	4.60(5)
C(59)	-0.012(2)	1.096(2)	0.1845(8)	6.9(7)
C(59')	-0.076(2)	1.065(2)	0.248(1)	3.6(9)
C(60)	-0.126(2)	1.045(2)	0.2607(8)	6.7(7)
C(60')	-0.182(2)	0.945(2)	0.238(1)	3.0(8)
C(61)	-0.158(1)	1.0509(10)	0.1573(5)	6.8(5)
C(62)	0.156(2)	0.622(2)	0.119(1)	5.4(9)
C(62')	0.091(2)	0.621(2)	0.1612(9)	5.2(6)
C(63)	0.007(2)	0.654(2)	0.202(1)	6.8(10)
C(63')	-0.114(2)	0.772(1)	0.2149(7)	4.1(6)
C(64)	-0.0585(9)	0.7829(9)	0.1125(4)	5.3(4)
C(65)	0.716(2)	0.073(1)	0.0313(6)	8.2(6)
C(66)	0.779(1)	-0.024(2)	0.0296(6)	8.5(6)
C(67)	0.753(1)	-0.083(1)	0.0083(8)	9.3(7)
C(68)	0.669(2)	-0.043(2)	-0.0083(8)	11.4(8)
C(69)	0.609(2)	0.051(2)	-0.0063(7)	12.1(8)
C(70)	0.634(1)	0.109(1)	0.0135(6)	9.8(7)

Table 2. Anisotropic Displacement Parameters

atom	U_{11}	U_{22}	U_{33}	U_{12}	U_{13}	U_{23}
Si(1)	0.033(2)	0.027(2)	0.026(2)	-0.016(2)	-0.002(2)	-0.001(2)
Si(2)	0.047(2)	0.026(2)	0.036(2)	-0.021(2)	0.003(2)	-0.002(2)
Si(3)	0.049(2)	0.026(2)	0.029(2)	-0.018(2)	-0.007(2)	0.002(2)
Si(4)	0.069(3)	0.036(3)	0.070(3)	-0.014(2)	-0.033(2)	0.013(2)
Si(5)	0.083(3)	0.050(2)	0.034(2)	-0.045(2)	0.000(2)	0.006(2)
Si(6)	0.064(3)	0.028(2)	0.034(2)	-0.026(2)	-0.004(2)	-0.001(2)
Si(7)	0.063(3)	0.064(3)	0.040(2)	-0.047(2)	0.002(2)	-0.008(2)
Si(8)	0.034(2)	0.036(2)	0.042(2)	-0.021(2)	-0.005(2)	-0.001(2)
Si(9)	0.044(2)	0.046(3)	0.092(3)	-0.022(2)	-0.020(2)	-0.001(2)
Si(10)	0.041(2)	0.035(2)	0.051(3)	-0.013(2)	-0.011(2)	-0.001(2)
Si(11)	0.052(2)	0.042(2)	0.044(2)	-0.027(2)	-0.009(2)	0.007(2)
Si(12)	0.032(2)	0.026(2)	0.031(2)	-0.012(2)	-0.007(2)	0.002(2)
Si(13)	0.033(2)	0.033(2)	0.026(2)	-0.018(2)	0.000(2)	-0.005(2)
Si(14)	0.035(2)	0.064(3)	0.044(2)	-0.023(2)	-0.007(2)	-0.006(2)
Si(15)	0.053(2)	0.039(2)	0.043(2)	-0.032(2)	-0.004(2)	-0.003(2)
Si(16)	0.043(2)	0.049(2)	0.029(2)	-0.028(2)	0.002(2)	-0.007(2)
Si(17)	0.042(2)	0.044(2)	0.031(2)	-0.028(2)	0.002(2)	-0.004(2)
Si(18)	0.039(2)	0.036(2)	0.029(2)	-0.021(2)	-0.002(2)	0.000(2)
Si(19')	0.045(5)	0.062(6)	0.041(5)	-0.019(4)	-0.002(4)	-0.006(4)
Si(19)	0.051(5)	0.041(5)	0.036(5)	-0.024(4)	0.001(4)	-0.013(4)
Si(20')	0.062(6)	0.039(5)	0.075(6)	-0.023(4)	-0.026(5)	0.019(5)
Si(20)	0.055(5)	0.043(5)	0.045(5)	-0.036(4)	-0.004(4)	0.006(4)
Si(21)	0.047(5)	0.047(5)	0.046(5)	-0.025(4)	-0.018(4)	0.015(4)
Si(21')	0.077(6)	0.067(6)	0.041(5)	-0.046(5)	-0.016(4)	0.001(4)

Table 2. Anisotropic Displacement Parameters (continued)

atom	U_{11}	U_{22}	U_{33}	U_{12}	U_{13}	U_{23}
Si(22)	0.032(2)	0.027(2)	0.032(2)	-0.015(2)	-0.003(2)	-0.003(2)
Si(23)	0.033(2)	0.027(2)	0.036(2)	-0.014(2)	0.000(2)	-0.003(2)
Si(24)	0.035(2)	0.047(3)	0.045(3)	-0.014(2)	0.008(2)	-0.002(2)
Si(25)	0.048(3)	0.029(2)	0.077(3)	-0.013(2)	-0.006(2)	-0.017(2)
Si(26)	0.038(2)	0.035(2)	0.048(2)	-0.021(2)	-0.007(2)	0.001(2)
Si(27)	0.035(2)	0.045(2)	0.045(2)	-0.022(2)	-0.009(2)	0.003(2)
Si(28)	0.030(2)	0.037(2)	0.046(2)	-0.018(2)	-0.007(2)	0.007(2)
Si(29)	0.058(3)	0.101(3)	0.055(3)	-0.049(2)	-0.012(2)	0.026(3)
Si(30')	0.057(9)	0.027(8)	0.07(1)	-0.008(6)	-0.029(7)	0.008(7)
Si(30)	0.038(4)	0.039(5)	0.081(6)	0.000(4)	-0.013(4)	0.013(5)
Si(31')	0.051(5)	0.027(5)	0.081(7)	-0.024(4)	-0.026(5)	0.015(4)
Si(31)	0.064(8)	0.070(9)	0.068(8)	-0.041(6)	-0.043(6)	0.026(7)
C(1)	0.045(8)	0.040(8)	0.041(8)	-0.014(7)	-0.001(7)	0.004(7)
C(2)	0.036(8)	0.029(8)	0.11(1)	-0.018(6)	0.019(8)	-0.010(8)
C(3)	0.09(1)	0.043(8)	0.040(8)	-0.045(7)	0.014(8)	-0.011(7)
C(7)	0.08(1)	0.11(1)	0.10(1)	-0.063(9)	-0.005(10)	0.05(1)
C(8)	0.13(1)	0.07(1)	0.07(1)	-0.074(9)	0.002(10)	0.008(9)
C(9)	0.16(1)	0.11(1)	0.07(1)	-0.105(10)	0.02(1)	0.003(10)
C(10)	0.055(9)	0.040(8)	0.047(9)	-0.017(7)	-0.001(7)	-0.014(7)
C(11)	0.14(1)	0.030(9)	0.055(10)	-0.035(9)	-0.001(10)	-0.014(8)
C(12)	0.044(9)	0.11(1)	0.06(1)	-0.026(9)	0.002(8)	-0.038(9)
C(13)	0.19(1)	0.18(1)	0.05(1)	-0.16(1)	0.00(1)	0.01(1)
C(14)	0.047(9)	0.040(9)	0.09(1)	-0.009(7)	-0.016(8)	0.004(8)
C(15)	0.08(1)	0.07(1)	0.13(1)	-0.021(9)	-0.04(1)	-0.03(1)

Table 2. Anisotropic Displacement Parameters (continued)

atom	U_{11}	U_{22}	U_{33}	U_{12}	U_{13}	U_{23}
C(16)	0.048(9)	0.07(1)	0.19(2)	-0.041(8)	-0.04(1)	0.04(1)
C(17)	0.09(1)	0.06(1)	0.07(1)	-0.006(9)	-0.013(9)	-0.027(9)
C(18)	0.07(1)	0.025(8)	0.13(1)	-0.016(7)	-0.007(10)	-0.006(9)
C(19)	0.049(9)	0.052(10)	0.08(1)	-0.016(7)	0.003(8)	-0.015(8)
C(20)	0.071(9)	0.07(1)	0.056(10)	-0.042(8)	-0.021(8)	0.023(8)
C(21)	0.063(9)	0.070(9)	0.052(9)	-0.044(7)	-0.006(8)	0.010(8)
C(22)	0.08(1)	0.034(8)	0.08(1)	-0.028(7)	-0.005(8)	0.004(8)
C(23)	0.041(8)	0.029(8)	0.070(10)	-0.008(6)	-0.011(7)	0.003(7)
C(24)	0.048(8)	0.075(10)	0.045(9)	-0.038(7)	-0.018(7)	0.018(7)
C(25)	0.048(9)	0.052(10)	0.09(1)	-0.008(8)	-0.017(8)	-0.007(9)
C(26)	0.050(8)	0.078(10)	0.044(9)	-0.035(7)	-0.014(7)	0.007(8)
C(27)	0.051(9)	0.12(1)	0.053(10)	-0.052(8)	-0.009(8)	-0.010(9)
C(28)	0.053(8)	0.041(8)	0.062(10)	-0.024(7)	-0.010(7)	-0.014(7)
C(29)	0.057(9)	0.055(9)	0.07(1)	-0.036(7)	-0.007(8)	0.002(8)
C(30)	0.065(9)	0.042(8)	0.067(10)	-0.034(7)	-0.004(8)	-0.007(7)
C(31)	0.07(1)	0.08(1)	0.053(10)	-0.027(9)	0.001(8)	-0.025(8)
C(32)	0.074(10)	0.09(1)	0.051(9)	-0.054(8)	0.001(8)	-0.004(8)
C(33)	0.071(9)	0.069(9)	0.032(8)	-0.048(7)	-0.001(7)	0.008(7)
C(34)	0.049(9)	0.059(9)	0.061(10)	-0.026(7)	0.012(7)	-0.020(8)
C(36)	0.08(1)	0.14(2)	0.026(9)	0.01(1)	0.022(8)	-0.021(10)
C(37)	0.07(1)	0.041(10)	0.07(1)	0.004(8)	-0.009(9)	-0.003(8)
C(39)	0.17(1)	0.11(1)	0.036(9)	-0.121(9)	-0.021(9)	0.036(8)
C(40)	0.070(9)	0.034(8)	0.069(10)	-0.029(7)	-0.015(8)	-0.009(7)
C(42)	0.046(8)	0.078(9)	0.064(9)	-0.053(7)	-0.010(7)	0.011(8)

Table 2. Anisotropic Displacement Parameters (continued)

atom	U_{11}	U_{22}	U_{33}	U_{12}	U_{13}	U_{23}
C(43)	0.10(1)	0.12(1)	0.029(8)	-0.075(9)	-0.036(7)	0.025(8)
C(44)	0.036(8)	0.045(8)	0.051(9)	-0.019(6)	-0.004(7)	-0.003(7)
C(45)	0.036(7)	0.021(7)	0.035(7)	-0.014(6)	-0.006(6)	0.000(6)
C(46)	0.07(1)	0.09(1)	0.042(9)	-0.035(9)	0.015(8)	0.008(9)
C(47)	0.056(9)	0.08(1)	0.07(1)	-0.036(8)	0.003(8)	-0.004(9)
C(48)	0.029(8)	0.063(9)	0.07(1)	-0.020(7)	-0.007(7)	0.031(8)
C(49)	0.052(9)	0.033(8)	0.13(1)	-0.018(7)	-0.008(9)	-0.017(9)
C(50)	0.065(10)	0.065(10)	0.08(1)	-0.025(8)	0.007(8)	-0.054(8)
C(51)	0.055(10)	0.026(9)	0.14(1)	-0.007(7)	-0.009(10)	-0.014(9)
C(52)	0.049(8)	0.077(10)	0.07(1)	-0.042(7)	-0.015(8)	0.021(8)
C(53)	0.080(9)	0.059(9)	0.065(10)	-0.053(7)	-0.003(8)	-0.006(8)
C(54)	0.074(9)	0.067(9)	0.07(1)	-0.055(7)	-0.027(8)	0.028(8)
C(55)	0.042(9)	0.08(1)	0.057(10)	-0.021(8)	-0.010(7)	-0.002(8)
C(61)	0.07(1)	0.06(1)	0.10(1)	-0.005(9)	-0.047(10)	0.027(9)
C(64)	0.060(9)	0.08(1)	0.07(1)	-0.031(8)	-0.037(8)	-0.001(8)
C(65)	0.17(2)	0.09(1)	0.07(1)	-0.09(1)	0.02(1)	-0.02(1)
C(66)	0.10(1)	0.16(2)	0.09(1)	-0.07(1)	-0.05(1)	0.06(1)
C(67)	0.12(2)	0.07(1)	0.16(2)	-0.06(1)	0.02(2)	0.00(1)
C(68)	0.16(2)	0.20(2)	0.09(2)	-0.12(2)	0.03(2)	-0.07(2)
C(69)	0.15(2)	0.27(3)	0.07(1)	-0.13(2)	0.00(1)	-0.04(2)
C(70)	0.11(2)	0.14(2)	0.06(1)	-0.02(1)	0.00(1)	0.05(1)

The general temperature factor expression:

$$\exp(-2\pi^2(a^{*2}U_{11}h^2 + b^{*2}U_{22}k^2 + c^{*2}U_{33}l^2 + 2a^*b^*U_{12}hk + 2a^*c^*U_{13}hl + 2b^*c^*U_{23}kl))$$

Table 3. Bond Lengths(Å)

atom	atom	distance	atom	atom	distance
Si(1)	Si(2)	2.383(5)	Si(1)	Si(12)	2.395(5)
Si(1)	Si(22)	2.374(4)	Si(1)	C(1)	1.88(1)
Si(2)	Si(3)	2.388(4)	Si(2)	C(2)	1.88(1)
Si(2)	C(3)	1.88(1)	Si(3)	Si(4)	2.397(5)
Si(3)	Si(5)	2.395(5)	Si(3)	Si(6)	2.374(5)
Si(4)	C(4)	1.83(4)	Si(4)	C(4')	2.01(2)
Si(4)	C(5)	2.01(4)	Si(4)	C(5')	1.85(2)
Si(4)	C(6')	1.92(2)	Si(4)	C(6)	1.83(5)
Si(5)	C(7)	1.89(1)	Si(5)	C(8)	1.88(1)
Si(5)	C(9)	1.87(1)	Si(6)	Si(7)	2.337(5)
Si(6)	C(10)	1.86(1)	Si(6)	C(11)	1.88(1)
Si(7)	Si(8)	2.367(5)	Si(7)	C(12)	1.89(1)
Si(7)	C(13)	1.90(1)	Si(8)	Si(9)	2.364(5)
Si(8)	Si(10)	2.347(5)	Si(8)	Si(11)	2.352(5)
Si(9)	C(14)	1.87(1)	Si(9)	C(15)	1.88(1)
Si(9)	C(16)	1.89(1)	Si(10)	C(17)	1.86(1)
Si(10)	C(18)	1.87(1)	Si(10)	C(19)	1.85(1)
Si(11)	C(20)	1.88(1)	Si(11)	C(21)	1.87(1)
Si(11)	C(22)	1.86(1)	Si(12)	Si(13)	2.404(5)
Si(12)	C(23)	1.88(1)	Si(12)	C(24)	1.87(1)
Si(13)	Si(14)	2.402(5)	Si(13)	Si(15)	2.378(5)
Si(13)	Si(16)	2.376(4)	Si(14)	C(25)	1.88(1)
Si(14)	C(26)	1.87(1)	Si(14)	C(27)	1.88(1)
Si(15)	C(28)	1.85(1)	Si(15)	C(29)	1.88(1)

Table 3. Bond Lengths(Å) (continued)

atom	atom	distance	atom	atom	distance
Si(15)	C(30)	1.87(1)	Si(16)	Si(17)	2.358(5)
Si(16)	C(31)	1.90(1)	Si(16)	C(32)	1.88(1)
Si(17)	Si(18)	2.383(5)	Si(17)	C(33)	1.88(1)
Si(17)	C(34)	1.87(1)	Si(18)	Si(19'	2.355(8)
Si(18)	Si(19)	2.386(8)	Si(18)	Si(20'	2.402(8)
Si(18)	Si(20)	2.325(8)	Si(18)	Si(21)	2.359(8)
Si(18)	Si(21'	2.383(8)	Si(19'	Si(19)	1.53(1)
Si(19'	C(35')	1.90(3)	Si(19'	C(36)	1.94(1)
Si(19'	C(37)	1.95(1)	Si(19)	C(35)	1.89(2)
Si(19)	C(36)	2.08(2)	Si(19)	C(37)	1.78(1)
Si(20'	Si(20)	1.56(1)	Si(20'	C(38')	1.91(3)
Si(20'	C(39)	2.04(1)	Si(20'	C(40)	1.84(1)
Si(20)	C(38)	1.97(2)	Si(20)	C(39)	1.98(1)
Si(20)	C(40)	1.96(1)	Si(21)	Si(21'	1.420(10)
Si(21)	C(41)	1.94(3)	Si(21)	C(42)	1.88(1)
Si(21)	C(43)	1.98(1)	Si(21'	C(41')	1.95(3)
Si(21'	C(42)	1.96(1)	Si(21'	C(43)	1.89(1)
Si(22)	Si(23)	2.391(5)	Si(22)	C(44)	1.89(1)
Si(22)	C(45)	1.90(1)	Si(23)	Si(24)	2.393(5)
Si(23)	Si(25)	2.390(5)	Si(23)	Si(26)	2.377(5)
Si(24)	C(46)	1.85(1)	Si(24)	C(47)	1.88(1)
Si(24)	C(48)	1.87(1)	Si(25)	C(49)	1.87(1)
Si(25)	C(50)	1.89(1)	Si(25)	C(51)	1.86(1)
Si(26)	Si(27)	2.368(5)	Si(26)	C(52)	1.88(1)

Table 3. Bond Lengths(Å) (continued)

atom	atom	distance	atom	atom	distance
Si(26)	C(53)	1.88(1)	Si(27)	Si(28)	2.369(5)
Si(27)	C(54)	1.91(1)	Si(27)	C(55)	1.88(1)
Si(28)	Si(29)	2.361(5)	Si(28)	Si(30'	2.25(1)
Si(28)	Si(30)	2.435(8)	Si(28)	Si(31'	2.32(1)
Si(28)	Si(31)	2.43(1)	Si(29)	C(56)	2.04(2)
Si(29)	C(56')	1.80(3)	Si(29)	C(57)	1.84(2)
Si(29)	C(57')	2.06(3)	Si(29)	C(58)	1.84(2)
Si(29)	C(58')	1.97(4)	Si(30'	Si(30)	0.84(1)
Si(30'	C(59')	2.02(4)	Si(30'	C(60)	1.80(3)
Si(30'	C(60')	1.81(3)	Si(30'	C(61)	1.93(2)
Si(30)	C(59)	1.92(2)	Si(30)	C(59')	1.63(3)
Si(30)	C(60)	1.82(2)	Si(30)	C(61)	1.83(2)
Si(31'	Si(31)	0.76(1)	Si(31'	C(62')	1.97(3)
Si(31'	C(63)	1.82(3)	Si(31'	C(63')	1.86(2)
Si(31'	C(64)	1.81(2)	Si(31)	C(62)	1.88(3)
Si(31)	C(62')	1.38(3)	Si(31)	C(63)	1.81(4)
Si(31)	C(64)	1.99(2)	C(1)	H(1)	0.95
C(1)	H(2)	0.95	C(1)	H(3)	0.95
C(2)	H(4)	0.95	C(2)	H(5)	0.95
C(2)	H(6)	0.95	C(3)	H(7)	0.94
C(3)	H(8)	0.95	C(3)	H(9)	0.95
C(4)	C(4')	0.86(4)	C(5)	C(5')	1.04(4)
C(6')	C(6)	0.66(4)	C(7)	H(16)	0.95
C(7)	H(17)	0.94	C(7)	H(18)	0.95

Table 3. Bond Lengths(Å) (continued)

atom	atom	distance	atom	atom	distance
C(8)	H(19)	0.95	C(8)	H(20)	0.95
C(8)	H(21)	0.94	C(9)	H(22)	0.94
C(9)	H(23)	0.95	C(9)	H(24)	0.95
C(10)	H(25)	0.95	C(10)	H(26)	0.95
C(10)	H(27)	0.95	C(11)	H(28)	0.95
C(11)	H(29)	0.95	C(11)	H(30)	0.94
C(12)	H(31)	0.94	C(12)	H(32)	0.95
C(12)	H(33)	0.95	C(13)	H(34)	0.95
C(13)	H(35)	0.95	C(13)	H(36)	0.94
C(14)	H(37)	0.95	C(14)	H(38)	0.95
C(14)	H(39)	0.95	C(15)	H(40)	0.95
C(15)	H(41)	0.94	C(15)	H(42)	0.95
C(16)	H(43)	0.95	C(16)	H(44)	0.95
C(16)	H(45)	0.95	C(17)	H(46)	0.95
C(17)	H(47)	0.94	C(17)	H(48)	0.95
C(18)	H(49)	0.94	C(18)	H(50)	0.95
C(18)	H(51)	0.95	C(19)	H(52)	0.95
C(19)	H(53)	0.94	C(19)	H(54)	0.94
C(20)	H(55)	0.95	C(20)	H(56)	0.95
C(20)	H(57)	0.95	C(21)	H(58)	0.95
C(21)	H(59)	0.95	C(21)	H(60)	0.95
C(22)	H(61)	0.95	C(22)	H(62)	0.95
C(22)	H(63)	0.95	C(23)	H(64)	0.95
C(23)	H(65)	0.95	C(23)	H(66)	0.95

Table 3. Bond Lengths(Å) (continued)

atom	atom	distance	atom	atom	distance
C(24)	H(67)	0.95	C(24)	H(68)	0.95
C(24)	H(69)	0.95	C(25)	H(70)	0.95
C(25)	H(71)	0.95	C(25)	H(72)	0.95
C(26)	H(73)	0.95	C(26)	H(74)	0.95
C(26)	H(75)	0.95	C(27)	H(76)	0.95
C(27)	H(77)	0.95	C(27)	H(78)	0.94
C(28)	H(79)	0.95	C(28)	H(80)	0.95
C(28)	H(81)	0.94	C(29)	H(82)	0.95
C(29)	H(83)	0.95	C(29)	H(84)	0.95
C(30)	H(85)	0.95	C(30)	H(86)	0.95
C(30)	H(87)	0.95	C(31)	H(88)	0.95
C(31)	H(89)	0.95	C(31)	H(90)	0.94
C(32)	H(91)	0.95	C(32)	H(92)	0.95
C(32)	H(93)	0.94	C(33)	H(94)	0.95
C(33)	H(95)	0.95	C(33)	H(96)	0.95
C(34)	H(97)	0.95	C(34)	H(98)	0.95
C(34)	H(99)	0.95	C(35)	C(41')	1.15(3)
C(35')	C(38)	1.15(3)	C(38')	C(41)	0.97(3)
C(44)	H(112)	0.95	C(44)	H(113)	0.95
C(44)	H(114)	0.95	C(45)	H(115)	0.95
C(45)	H(116)	0.95	C(45)	H(117)	0.95
C(46)	H(118)	0.95	C(46)	H(119)	0.94
C(46)	H(120)	0.94	C(47)	H(121)	0.95
C(47)	H(122)	0.95	C(47)	H(123)	0.95

Table 3. Bond Lengths(Å) (continued)

atom	atom	distance	atom	atom	distance
C(48)	H(124)	0.95	C(48)	H(125)	0.95
C(48)	H(126)	0.95	C(49)	H(127)	0.95
C(49)	H(128)	0.94	C(49)	H(129)	0.95
C(50)	H(130)	0.94	C(50)	H(131)	0.95
C(50)	H(132)	0.95	C(51)	H(133)	0.95
C(51)	H(134)	0.95	C(51)	H(135)	0.95
C(52)	H(136)	0.95	C(52)	H(137)	0.95
C(52)	H(138)	0.95	C(53)	H(139)	0.95
C(53)	H(140)	0.95	C(53)	H(141)	0.95
C(54)	H(142)	0.95	C(54)	H(143)	0.95
C(54)	H(144)	0.95	C(55)	H(145)	0.94
C(55)	H(146)	0.95	C(55)	H(147)	0.95
C(56)	C(56')	1.47(4)	C(56')	C(57)	1.79(4)
C(57)	C(57')	1.30(3)	C(58)	C(58')	0.68(4)
C(59')	C(60)	1.00(4)	C(62)	C(62')	1.45(3)
C(62')	C(63)	1.50(4)	C(65)	C(66)	1.36(2)
C(65)	C(70)	1.33(2)	C(65)	H(157)	0.96
C(66)	C(67)	1.39(2)	C(66)	H(158)	0.96
C(67)	C(68)	1.33(3)	C(67)	H(159)	0.95
C(68)	C(69)	1.32(3)	C(68)	H(160)	0.95
C(69)	C(70)	1.34(3)	C(69)	H(161)	0.94
C(70)	H(162)	0.95			

Table 4. Bond Angles(°)

atom	atom	atom	angle	atom	atom	atom	angle
Si(2)	Si(1)	Si(12)	111.5(2)	Si(2)	Si(1)	Si(22)	109.8(2)
Si(2)	Si(1)	C(1)	107.2(4)	Si(12)	Si(1)	Si(22)	110.1(2)
Si(12)	Si(1)	C(1)	110.8(4)	Si(22)	Si(1)	C(1)	107.3(4)
Si(1)	Si(2)	Si(3)	126.0(2)	Si(1)	Si(2)	C(2)	99.1(4)
Si(1)	Si(2)	C(3)	109.8(4)	Si(3)	Si(2)	C(2)	107.0(4)
Si(3)	Si(2)	C(3)	108.1(4)	C(2)	Si(2)	C(3)	104.6(6)
Si(2)	Si(3)	Si(4)	112.4(2)	Si(2)	Si(3)	Si(5)	104.7(2)
Si(2)	Si(3)	Si(6)	119.8(2)	Si(4)	Si(3)	Si(5)	104.7(2)
Si(4)	Si(3)	Si(6)	105.2(2)	Si(5)	Si(3)	Si(6)	109.1(2)
Si(3)	Si(4)	C(4)	119(1)	Si(3)	Si(4)	C(4')	110.7(6)
Si(3)	Si(4)	C(5)	109(1)	Si(3)	Si(4)	C(5')	114.4(6)
Si(3)	Si(4)	C(6')	109.3(7)	Si(3)	Si(4)	C(6)	122(1)
C(4)	Si(4)	C(4')	25(1)	C(4)	Si(4)	C(5)	107(1)
C(4)	Si(4)	C(5')	79(1)	C(4)	Si(4)	C(6')	116(1)
C(4)	Si(4)	C(6)	96(1)	C(4')	Si(4)	C(5)	131(1)
C(4')	Si(4)	C(5')	104.8(8)	C(4')	Si(4)	C(6')	102.8(8)
C(4')	Si(4)	C(6)	83(1)	C(5)	Si(4)	C(5')	30(1)
C(5)	Si(4)	C(6')	89(1)	C(5)	Si(4)	C(6)	97(1)
C(5')	Si(4)	C(6')	114.1(9)	C(5')	Si(4)	C(6)	114(1)
C(6')	Si(4)	C(6)	20(1)	Si(3)	Si(5)	C(7)	116.4(4)
Si(3)	Si(5)	C(8)	111.7(5)	Si(3)	Si(5)	C(9)	110.2(5)
C(7)	Si(5)	C(8)	105.8(7)	C(7)	Si(5)	C(9)	104.6(7)
C(8)	Si(5)	C(9)	107.5(6)	Si(3)	Si(6)	Si(7)	117.1(2)
Si(3)	Si(6)	C(10)	111.1(4)	Si(3)	Si(6)	C(11)	105.4(4)

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(7)	Si(6)	C(10)	110.4(4)	Si(7)	Si(6)	C(11)	105.0(5)
C(10)	Si(6)	C(11)	107.1(6)	Si(6)	Si(7)	Si(8)	117.0(2)
Si(6)	Si(7)	C(12)	111.3(4)	Si(6)	Si(7)	C(13)	106.3(5)
Si(8)	Si(7)	C(12)	106.9(4)	Si(8)	Si(7)	C(13)	107.4(4)
C(12)	Si(7)	C(13)	107.6(7)	Si(7)	Si(8)	Si(9)	105.4(2)
Si(7)	Si(8)	Si(10)	114.2(2)	Si(7)	Si(8)	Si(11)	115.0(2)
Si(9)	Si(8)	Si(10)	107.9(2)	Si(9)	Si(8)	Si(11)	104.5(2)
Si(10)	Si(8)	Si(11)	109.1(2)	Si(8)	Si(9)	C(14)	110.0(4)
Si(8)	Si(9)	C(15)	110.9(5)	Si(8)	Si(9)	C(16)	112.1(5)
C(14)	Si(9)	C(15)	108.0(6)	C(14)	Si(9)	C(16)	107.8(6)
C(15)	Si(9)	C(16)	108.0(7)	Si(8)	Si(10)	C(17)	109.6(5)
Si(8)	Si(10)	C(18)	109.6(4)	Si(8)	Si(10)	C(19)	111.5(4)
C(17)	Si(10)	C(18)	108.3(7)	C(17)	Si(10)	C(19)	106.6(6)
C(18)	Si(10)	C(19)	111.2(6)	Si(8)	Si(11)	C(20)	110.4(4)
Si(8)	Si(11)	C(21)	112.4(4)	Si(8)	Si(11)	C(22)	111.2(4)
C(20)	Si(11)	C(21)	105.9(6)	C(20)	Si(11)	C(22)	107.6(6)
C(21)	Si(11)	C(22)	109.0(6)	Si(1)	Si(12)	Si(13)	130.6(2)
Si(1)	Si(12)	C(23)	101.6(4)	Si(1)	Si(12)	C(24)	105.6(4)
Si(13)	Si(12)	C(23)	103.6(4)	Si(13)	Si(12)	C(24)	106.2(4)
C(23)	Si(12)	C(24)	107.5(6)	Si(12)	Si(13)	Si(14)	102.1(2)
Si(12)	Si(13)	Si(15)	120.2(2)	Si(12)	Si(13)	Si(16)	116.8(2)
Si(14)	Si(13)	Si(15)	102.3(2)	Si(14)	Si(13)	Si(16)	103.7(2)
Si(15)	Si(13)	Si(16)	108.9(2)	Si(13)	Si(14)	C(25)	114.9(4)
Si(13)	Si(14)	C(26)	110.9(4)	Si(13)	Si(14)	C(27)	112.2(4)

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
C(25)	Si(14)	C(26)	107.2(6)	C(25)	Si(14)	C(27)	105.1(6)
C(26)	Si(14)	C(27)	105.9(6)	Si(13)	Si(15)	C(28)	111.4(4)
Si(13)	Si(15)	C(29)	111.7(4)	Si(13)	Si(15)	C(30)	112.6(4)
C(28)	Si(15)	C(29)	106.5(5)	C(28)	Si(15)	C(30)	108.7(5)
C(29)	Si(15)	C(30)	105.6(5)	Si(13)	Si(16)	Si(17)	118.8(2)
Si(13)	Si(16)	C(31)	107.8(4)	Si(13)	Si(16)	C(32)	106.7(4)
Si(17)	Si(16)	C(31)	106.6(4)	Si(17)	Si(16)	C(32)	109.0(4)
C(31)	Si(16)	C(32)	107.5(6)	Si(16)	Si(17)	Si(18)	118.6(2)
Si(16)	Si(17)	C(33)	106.9(4)	Si(16)	Si(17)	C(34)	109.6(4)
Si(18)	Si(17)	C(33)	106.0(4)	Si(18)	Si(17)	C(34)	106.6(4)
C(33)	Si(17)	C(34)	108.8(5)	Si(17)	Si(18)	Si(19'	119.5(2)
Si(17)	Si(18)	Si(19)	111.8(2)	Si(17)	Si(18)	Si(20'	111.0(2)
Si(17)	Si(18)	Si(20)	118.1(2)	Si(17)	Si(18)	Si(21)	104.4(2)
Si(17)	Si(18)	Si(21'	107.9(2)	Si(19'	Si(18)	Si(19)	37.6(2)
Si(19'	Si(18)	Si(20'	108.3(3)	Si(19'	Si(18)	Si(20)	72.8(3)
Si(19'	Si(18)	Si(21)	130.6(3)	Si(19'	Si(18)	Si(21'	105.6(3)
Si(19)	Si(18)	Si(20'	135.7(3)	Si(19)	Si(18)	Si(20)	108.1(3)
Si(19)	Si(18)	Si(21)	107.2(3)	Si(19)	Si(18)	Si(21'	74.0(3)
Si(20'	Si(18)	Si(20)	38.5(3)	Si(20'	Si(18)	Si(21)	72.3(3)
Si(20'	Si(18)	Si(21'	103.3(3)	Si(20)	Si(18)	Si(21)	106.5(3)
Si(20)	Si(18)	Si(21'	127.7(3)	Si(21)	Si(18)	Si(21'	34.8(2)
Si(18)	Si(19'	Si(19)	72.3(4)	Si(18)	Si(19'	C(35')	112.7(8)
Si(18)	Si(19'	C(36)	109.1(6)	Si(18)	Si(19'	C(37)	109.2(5)
Si(19)	Si(19'	C(35')	165.8(10)	Si(19)	Si(19'	C(36)	72.7(7)

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(19)	Si(19'	C(37)	60.2(6)	C(35')	Si(19'	C(36)	115.9(10)
C(35')	Si(19'	C(37)	105.9(10)	C(36)	Si(19'	C(37)	103.3(7)
Si(18)	Si(19)	Si(19'	70.1(4)	Si(18)	Si(19)	C(35)	111.0(8)
Si(18)	Si(19)	C(36)	103.2(5)	Si(18)	Si(19)	C(37)	114.3(5)
Si(19'	Si(19)	C(35)	178.2(9)	Si(19'	Si(19)	C(36)	62.8(6)
Si(19'	Si(19)	C(37)	71.8(6)	C(35)	Si(19)	C(36)	115.5(9)
C(35)	Si(19)	C(37)	108.6(9)	C(36)	Si(19)	C(37)	104.1(7)
Si(18)	Si(20'	Si(20)	68.1(4)	Si(18)	Si(20'	C(38')	108.1(9)
Si(18)	Si(20'	C(39)	104.5(5)	Si(18)	Si(20'	C(40)	110.3(5)
Si(20)	Si(20'	C(38')	176(1)	Si(20)	Si(20'	C(39)	65.3(6)
Si(20)	Si(20'	C(40)	69.7(5)	C(38')	Si(20'	C(39)	116.2(10)
C(38')	Si(20'	C(40)	112.6(10)	C(39)	Si(20'	C(40)	104.8(6)
Si(18)	Si(20)	Si(20'	73.4(4)	Si(18)	Si(20)	C(38)	110.0(7)
Si(18)	Si(20)	C(39)	109.3(5)	Si(18)	Si(20)	C(40)	109.1(5)
Si(20'	Si(20)	C(38)	175.1(8)	Si(20'	Si(20)	C(39)	69.1(6)
Si(20'	Si(20)	C(40)	61.9(5)	C(38)	Si(20)	C(39)	112.2(8)
C(38)	Si(20)	C(40)	113.3(8)	C(39)	Si(20)	C(40)	102.7(6)
Si(18)	Si(21)	Si(21'	73.5(4)	Si(18)	Si(21)	C(41)	111.5(9)
Si(18)	Si(21)	C(42)	113.6(5)	Si(18)	Si(21)	C(43)	108.5(5)
Si(21'	Si(21)	C(41)	173(1)	Si(21'	Si(21)	C(42)	71.1(6)
Si(21'	Si(21)	C(43)	65.1(6)	C(41)	Si(21)	C(42)	109.2(10)
C(41)	Si(21)	C(43)	109.1(10)	C(42)	Si(21)	C(43)	104.6(6)
Si(18)	Si(21'	Si(21)	71.7(4)	Si(18)	Si(21'	C(41')	109.5(8)
Si(18)	Si(21'	C(42)	109.8(5)	Si(18)	Si(21'	C(43)	110.9(5)

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(21)	Si(21'	C(41')	175.6(10)	Si(21)	Si(21'	C(42)	65.5(6)
Si(21)	Si(21'	C(43)	72.0(6)	C(41')	Si(21'	C(42)	110.3(9)
C(41')	Si(21'	C(43)	111.0(9)	C(42)	Si(21'	C(43)	105.3(7)
Si(1)	Si(22)	Si(23)	129.9(2)	Si(1)	Si(22)	C(44)	107.2(4)
Si(1)	Si(22)	C(45)	98.0(3)	Si(23)	Si(22)	C(44)	105.9(4)
Si(23)	Si(22)	C(45)	103.6(4)	C(44)	Si(22)	C(45)	111.4(5)
Si(22)	Si(23)	Si(24)	118.6(2)	Si(22)	Si(23)	Si(25)	102.1(2)
Si(22)	Si(23)	Si(26)	117.0(2)	Si(24)	Si(23)	Si(25)	101.5(2)
Si(24)	Si(23)	Si(26)	103.3(2)	Si(25)	Si(23)	Si(26)	113.7(2)
Si(23)	Si(24)	C(46)	110.9(4)	Si(23)	Si(24)	C(47)	110.4(4)
Si(23)	Si(24)	C(48)	115.5(4)	C(46)	Si(24)	C(47)	106.7(6)
C(46)	Si(24)	C(48)	109.1(6)	C(47)	Si(24)	C(48)	103.7(5)
Si(23)	Si(25)	C(49)	117.7(4)	Si(23)	Si(25)	C(50)	108.5(4)
Si(23)	Si(25)	C(51)	110.6(4)	C(49)	Si(25)	C(50)	104.7(6)
C(49)	Si(25)	C(51)	105.4(6)	C(50)	Si(25)	C(51)	109.7(6)
Si(23)	Si(26)	Si(27)	118.6(2)	Si(23)	Si(26)	C(52)	106.1(4)
Si(23)	Si(26)	C(53)	107.2(4)	Si(27)	Si(26)	C(52)	109.8(4)
Si(27)	Si(26)	C(53)	106.5(4)	C(52)	Si(26)	C(53)	108.4(5)
Si(26)	Si(27)	Si(28)	116.2(2)	Si(26)	Si(27)	C(54)	110.9(4)
Si(26)	Si(27)	C(55)	107.0(4)	Si(28)	Si(27)	C(54)	108.5(4)
Si(28)	Si(27)	C(55)	106.5(4)	C(54)	Si(27)	C(55)	107.3(6)
Si(27)	Si(28)	Si(29)	107.7(2)	Si(27)	Si(28)	Si(30'	113.9(4)
Si(27)	Si(28)	Si(30)	111.5(3)	Si(27)	Si(28)	Si(31'	117.7(3)
Si(27)	Si(28)	Si(31)	110.5(3)	Si(29)	Si(28)	Si(30'	116.9(4)

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(29)	Si(28)	Si(30)	100.9(3)	Si(29)	Si(28)	Si(31'	109.9(3)
Si(29)	Si(28)	Si(31)	98.4(3)	Si(30'	Si(28)	Si(30)	20.1(4)
Si(30'	Si(28)	Si(31'	90.3(5)	Si(30'	Si(28)	Si(31)	108.4(5)
Si(30)	Si(28)	Si(31'	107.9(3)	Si(30)	Si(28)	Si(31)	125.1(4)
Si(31'	Si(28)	Si(31)	18.2(3)	Si(28)	Si(29)	C(56)	105.9(6)
Si(28)	Si(29)	C(56')	119(1)	Si(28)	Si(29)	C(57)	114.8(7)
Si(28)	Si(29)	C(57')	104.8(9)	Si(28)	Si(29)	C(58)	113.6(7)
Si(28)	Si(29)	C(58')	112(1)	C(56)	Si(29)	C(56')	44(1)
C(56)	Si(29)	C(57)	103.2(8)	C(56)	Si(29)	C(57')	139(1)
C(56)	Si(29)	C(58)	104.5(9)	C(56)	Si(29)	C(58')	86(1)
C(56')	Si(29)	C(57)	58(1)	C(56')	Si(29)	C(57')	96(1)
C(56')	Si(29)	C(58)	123(1)	C(56')	Si(29)	C(58')	114(1)
C(57)	Si(29)	C(57')	38.4(10)	C(57)	Si(29)	C(58)	113.3(9)
C(57)	Si(29)	C(58')	127(1)	C(57')	Si(29)	C(58)	86(1)
C(57')	Si(29)	C(58')	106(1)	C(58)	Si(29)	C(58')	20(1)
Si(28)	Si(30'	Si(30)	92(1)	Si(28)	Si(30'	C(59')	107(1)
Si(28)	Si(30'	C(60)	124(1)	Si(28)	Si(30'	C(60')	115(1)
Si(28)	Si(30'	C(61)	114.4(8)	Si(30)	Si(30'	C(59')	50(1)
Si(30)	Si(30'	C(60)	77(1)	Si(30)	Si(30'	C(60')	151(1)
Si(30)	Si(30'	C(61)	70(1)	C(59')	Si(30'	C(60)	29(1)
C(59')	Si(30'	C(60')	109(1)	C(59')	Si(30'	C(61)	107(1)
C(60)	Si(30'	C(60')	80(1)	C(60)	Si(30'	C(61)	113(1)
C(60')	Si(30'	C(61)	101(1)	Si(28)	Si(30)	Si(30'	67(1)
Si(28)	Si(30)	C(59)	106.8(7)	Si(28)	Si(30)	C(59')	115(1)

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(28)	Si(30)	C(60)	114.3(8)	Si(28)	Si(30)	C(61)	110.3(6)
Si(30'	Si(30)	C(59)	172(1)	Si(30'	Si(30)	C(59')	105(2)
Si(30'	Si(30)	C(60)	75(1)	Si(30'	Si(30)	C(61)	83(1)
C(59)	Si(30)	C(59')	71(1)	C(59)	Si(30)	C(60)	103(1)
C(59)	Si(30)	C(61)	103.3(9)	C(59')	Si(30)	C(60)	33(1)
C(59')	Si(30)	C(61)	133(1)	C(60)	Si(30)	C(61)	117.5(10)
Si(28)	Si(31'	Si(31)	89(1)	Si(28)	Si(31'	C(62')	108.3(8)
Si(28)	Si(31'	C(63)	119(1)	Si(28)	Si(31'	C(63')	112.1(8)
Si(28)	Si(31'	C(64)	113.9(6)	Si(31)	Si(31'	C(62')	31(1)
Si(31)	Si(31'	C(63)	77(1)	Si(31)	Si(31'	C(63')	139(1)
Si(31)	Si(31'	C(64)	92(1)	C(62')	Si(31'	C(63)	46(1)
C(62')	Si(31'	C(63')	108(1)	C(62')	Si(31'	C(64)	106.1(9)
C(63)	Si(31'	C(63')	62(1)	C(63)	Si(31'	C(64)	125(1)
C(63')	Si(31'	C(64)	108.1(9)	Si(28)	Si(31)	Si(31'	72(1)
Si(28)	Si(31)	C(62)	112(1)	Si(28)	Si(31)	C(62')	129(1)
Si(28)	Si(31)	C(63)	114(1)	Si(28)	Si(31)	C(64)	102.9(7)
Si(31'	Si(31)	C(62)	172(2)	Si(31'	Si(31)	C(62')	132(2)
Si(31'	Si(31)	C(63)	78(1)	Si(31'	Si(31)	C(64)	65(1)
C(62)	Si(31)	C(62')	50(1)	C(62)	Si(31)	C(63)	104(1)
C(62)	Si(31)	C(64)	107(1)	C(62')	Si(31)	C(63)	54(1)
C(62')	Si(31)	C(64)	126(1)	C(63)	Si(31)	C(64)	115(1)
Si(1)	C(1)	H(1)	109.1	Si(1)	C(1)	H(2)	109.0
Si(1)	C(1)	H(3)	109.1	H(1)	C(1)	H(2)	109.8
H(1)	C(1)	H(3)	109.9	H(2)	C(1)	H(3)	109.8

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(2)	C(2)	H(4)	109.2	Si(2)	C(2)	H(5)	109.2
Si(2)	C(2)	H(6)	109.2	H(4)	C(2)	H(5)	109.8
H(4)	C(2)	H(6)	109.8	H(5)	C(2)	H(6)	109.8
Si(2)	C(3)	H(7)	109.2	Si(2)	C(3)	H(8)	108.9
Si(2)	C(3)	H(9)	109.0	H(7)	C(3)	H(8)	110.0
H(7)	C(3)	H(9)	110.1	H(8)	C(3)	H(9)	109.6
Si(4)	C(4)	C(4')	89(3)	Si(4)	C(4')	C(4)	65(3)
Si(4)	C(5)	C(5')	65(2)	Si(4)	C(5')	C(5)	83(2)
Si(4)	C(6')	C(6)	72(5)	Si(4)	C(6)	C(6')	87(5)
Si(5)	C(7)	H(16)	108.8	Si(5)	C(7)	H(17)	109.1
Si(5)	C(7)	H(18)	108.9	H(16)	C(7)	H(17)	110.0
H(16)	C(7)	H(18)	109.7	H(17)	C(7)	H(18)	110.2
Si(5)	C(8)	H(19)	108.9	Si(5)	C(8)	H(20)	109.1
Si(5)	C(8)	H(21)	109.3	H(19)	C(8)	H(20)	109.5
H(19)	C(8)	H(21)	109.9	H(20)	C(8)	H(21)	110.1
Si(5)	C(9)	H(22)	109.2	Si(5)	C(9)	H(23)	108.7
Si(5)	C(9)	H(24)	108.6	H(22)	C(9)	H(23)	110.5
H(22)	C(9)	H(24)	110.4	H(23)	C(9)	H(24)	109.4
Si(6)	C(10)	H(25)	109.0	Si(6)	C(10)	H(26)	109.1
Si(6)	C(10)	H(27)	109.0	H(25)	C(10)	H(26)	110.0
H(25)	C(10)	H(27)	109.8	H(26)	C(10)	H(27)	109.9
Si(6)	C(11)	H(28)	109.0	Si(6)	C(11)	H(29)	108.8
Si(6)	C(11)	H(30)	109.3	H(28)	C(11)	H(29)	109.4
H(28)	C(11)	H(30)	110.3	H(29)	C(11)	H(30)	110.0

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle
Si(7)	C(12)	H(31)	109.1
Si(7)	C(12)	H(33)	108.9
H(31)	C(12)	H(33)	110.1
Si(7)	C(13)	H(34)	108.9
Si(7)	C(13)	H(36)	109.3
H(34)	C(13)	H(36)	110.7
Si(9)	C(14)	H(37)	109.0
Si(9)	C(14)	H(39)	108.9
H(37)	C(14)	H(39)	110.1
Si(9)	C(15)	H(40)	108.3
Si(9)	C(15)	H(42)	108.6
H(40)	C(15)	H(42)	109.8
Si(9)	C(16)	H(43)	109.5
Si(9)	C(16)	H(45)	109.1
H(43)	C(16)	H(45)	109.5
Si(10)	C(17)	H(46)	108.8
Si(10)	C(17)	H(48)	108.8
H(46)	C(17)	H(48)	109.5
Si(10)	C(18)	H(49)	109.1
Si(10)	C(18)	H(51)	108.7
H(49)	C(18)	H(51)	110.3
Si(10)	C(19)	H(52)	108.5
Si(10)	C(19)	H(54)	108.8
H(52)	C(19)	H(54)	110.2

atom	atom	atom	angle
Si(7)	C(12)	H(32)	108.9
H(31)	C(12)	H(32)	110.0
H(32)	C(12)	H(33)	109.7
Si(7)	C(13)	H(35)	108.5
H(34)	C(13)	H(35)	109.4
H(35)	C(13)	H(36)	110.0
Si(9)	C(14)	H(38)	108.9
H(37)	C(14)	H(38)	110.0
H(38)	C(14)	H(39)	109.9
Si(9)	C(15)	H(41)	109.0
H(40)	C(15)	H(41)	110.3
H(41)	C(15)	H(42)	110.8
Si(9)	C(16)	H(44)	109.4
H(43)	C(16)	H(44)	110.0
H(44)	C(16)	H(45)	109.4
Si(10)	C(17)	H(47)	109.2
H(46)	C(17)	H(47)	110.2
H(47)	C(17)	H(48)	110.2
Si(10)	C(18)	H(50)	108.8
H(49)	C(18)	H(50)	110.3
H(50)	C(18)	H(51)	109.6
Si(10)	C(19)	H(53)	108.7
H(52)	C(19)	H(53)	110.0
H(53)	C(19)	H(54)	110.6

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(11)	C(20)	H(55)	109.1	Si(11)	C(20)	H(56)	109.1
Si(11)	C(20)	H(57)	109.3	H(55)	C(20)	H(56)	109.6
H(55)	C(20)	H(57)	109.8	H(56)	C(20)	H(57)	109.8
Si(11)	C(21)	H(58)	109.0	Si(11)	C(21)	H(59)	109.1
Si(11)	C(21)	H(60)	108.9	H(58)	C(21)	H(59)	110.1
H(58)	C(21)	H(60)	109.9	H(59)	C(21)	H(60)	109.9
Si(11)	C(22)	H(61)	109.3	Si(11)	C(22)	H(62)	109.2
Si(11)	C(22)	H(63)	109.1	H(61)	C(22)	H(62)	109.9
H(61)	C(22)	H(63)	109.8	H(62)	C(22)	H(63)	109.5
Si(12)	C(23)	H(64)	109.1	Si(12)	C(23)	H(65)	109.1
Si(12)	C(23)	H(66)	108.9	H(64)	C(23)	H(65)	110.1
H(64)	C(23)	H(66)	109.8	H(65)	C(23)	H(66)	109.8
Si(12)	C(24)	H(67)	109.1	Si(12)	C(24)	H(68)	109.0
Si(12)	C(24)	H(69)	109.2	H(67)	C(24)	H(68)	109.7
H(67)	C(24)	H(69)	110.0	H(68)	C(24)	H(69)	109.9
Si(14)	C(25)	H(70)	109.0	Si(14)	C(25)	H(71)	109.0
Si(14)	C(25)	H(72)	108.8	H(70)	C(25)	H(71)	110.2
H(70)	C(25)	H(72)	109.8	H(71)	C(25)	H(72)	109.9
Si(14)	C(26)	H(73)	109.1	Si(14)	C(26)	H(74)	109.2
Si(14)	C(26)	H(75)	109.1	H(73)	C(26)	H(74)	109.9
H(73)	C(26)	H(75)	109.6	H(74)	C(26)	H(75)	109.9
Si(14)	C(27)	H(76)	109.0	Si(14)	C(27)	H(77)	108.9
Si(14)	C(27)	H(78)	109.3	H(76)	C(27)	H(77)	109.4
H(76)	C(27)	H(78)	110.1	H(77)	C(27)	H(78)	110.0

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(15)	C(28)	H(79)	108.9	Si(15)	C(28)	H(80)	109.0
Si(15)	C(28)	H(81)	109.2	H(79)	C(28)	H(80)	109.6
H(79)	C(28)	H(81)	109.9	H(80)	C(28)	H(81)	110.1
Si(15)	C(29)	H(82)	109.4	Si(15)	C(29)	H(83)	109.4
Si(15)	C(29)	H(84)	109.2	H(82)	C(29)	H(83)	109.9
H(82)	C(29)	H(84)	109.5	H(83)	C(29)	H(84)	109.5
Si(15)	C(30)	H(85)	109.3	Si(15)	C(30)	H(86)	109.1
Si(15)	C(30)	H(87)	109.2	H(85)	C(30)	H(86)	109.7
H(85)	C(30)	H(87)	109.9	H(86)	C(30)	H(87)	109.6
Si(16)	C(31)	H(88)	108.8	Si(16)	C(31)	H(89)	108.9
Si(16)	C(31)	H(90)	109.0	H(88)	C(31)	H(89)	109.8
H(88)	C(31)	H(90)	110.1	H(89)	C(31)	H(90)	110.2
Si(16)	C(32)	H(91)	108.9	Si(16)	C(32)	H(92)	109.1
Si(16)	C(32)	H(93)	109.4	H(91)	C(32)	H(92)	109.4
H(91)	C(32)	H(93)	109.9	H(92)	C(32)	H(93)	110.2
Si(17)	C(33)	H(94)	108.9	Si(17)	C(33)	H(95)	108.9
Si(17)	C(33)	H(96)	109.0	H(94)	C(33)	H(95)	110.0
H(94)	C(33)	H(96)	110.0	H(95)	C(33)	H(96)	110.0
Si(17)	C(34)	H(97)	109.2	Si(17)	C(34)	H(98)	109.1
Si(17)	C(34)	H(99)	109.0	H(97)	C(34)	H(98)	110.0
H(97)	C(34)	H(99)	109.8	H(98)	C(34)	H(99)	109.7
Si(19)	C(35)	C(41')	111(2)	Si(19'	C(35')	C(38)	109(2)
Si(19'	C(36)	Si(19)	44.5(4)	Si(19'	C(37)	Si(19)	48.0(5)
Si(20)	C(38)	C(35')	118(2)	Si(20'	C(38')	C(41)	120(2)

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(20'	C(39)	Si(20)	45.6(4)	Si(20'	C(40)	Si(20)	48.3(4)
Si(21)	C(41)	C(38')	116(2)	Si(21'	C(41')	C(35)	119(2)
Si(21)	C(42)	Si(21'	43.4(4)	Si(21)	C(43)	Si(21'	42.9(4)
Si(22)	C(44)	H(112)	109.3	Si(22)	C(44)	H(113)	109.0
Si(22)	C(44)	H(114)	109.2	H(112)	C(44)	H(113)	109.8
H(112)	C(44)	H(114)	110.0	H(113)	C(44)	H(114)	109.5
Si(22)	C(45)	H(115)	109.3	Si(22)	C(45)	H(116)	109.2
Si(22)	C(45)	H(117)	109.4	H(115)	C(45)	H(116)	109.5
H(115)	C(45)	H(117)	109.8	H(116)	C(45)	H(117)	109.6
Si(24)	C(46)	H(118)	108.5	Si(24)	C(46)	H(119)	108.8
Si(24)	C(46)	H(120)	108.8	H(118)	C(46)	H(119)	110.0
H(118)	C(46)	H(120)	110.0	H(119)	C(46)	H(120)	110.6
Si(24)	C(47)	H(121)	109.0	Si(24)	C(47)	H(122)	109.2
Si(24)	C(47)	H(123)	109.0	H(121)	C(47)	H(122)	110.0
H(121)	C(47)	H(123)	109.7	H(122)	C(47)	H(123)	109.9
Si(24)	C(48)	H(124)	108.9	Si(24)	C(48)	H(125)	109.2
Si(24)	C(48)	H(126)	109.2	H(124)	C(48)	H(125)	109.7
H(124)	C(48)	H(126)	109.7	H(125)	C(48)	H(126)	110.2
Si(25)	C(49)	H(127)	108.6	Si(25)	C(49)	H(128)	109.1
Si(25)	C(49)	H(129)	108.9	H(127)	C(49)	H(128)	110.0
H(127)	C(49)	H(129)	109.6	H(128)	C(49)	H(129)	110.5
Si(25)	C(50)	H(130)	109.4	Si(25)	C(50)	H(131)	108.7
Si(25)	C(50)	H(132)	109.1	H(130)	C(50)	H(131)	109.9
H(130)	C(50)	H(132)	110.4	H(131)	C(50)	H(132)	109.4

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(25)	C(51)	H(133)	109.4	Si(25)	C(51)	H(134)	109.4
Si(25)	C(51)	H(135)	109.4	H(133)	C(51)	H(134)	109.6
H(133)	C(51)	H(135)	109.5	H(134)	C(51)	H(135)	109.6
Si(26)	C(52)	H(136)	108.8	Si(26)	C(52)	H(137)	108.8
Si(26)	C(52)	H(138)	108.9	H(136)	C(52)	H(137)	110.0
H(136)	C(52)	H(138)	110.1	H(137)	C(52)	H(138)	110.2
Si(26)	C(53)	H(139)	109.2	Si(26)	C(53)	H(140)	109.3
Si(26)	C(53)	H(141)	109.1	H(139)	C(53)	H(140)	109.9
H(139)	C(53)	H(141)	109.6	H(140)	C(53)	H(141)	109.8
Si(27)	C(54)	H(142)	109.0	Si(27)	C(54)	H(143)	108.9
Si(27)	C(54)	H(144)	109.0	H(142)	C(54)	H(143)	109.9
H(142)	C(54)	H(144)	110.1	H(143)	C(54)	H(144)	110.0
Si(27)	C(55)	H(145)	109.1	Si(27)	C(55)	H(146)	109.0
Si(27)	C(55)	H(147)	108.7	H(145)	C(55)	H(146)	110.4
H(145)	C(55)	H(147)	109.9	H(146)	C(55)	H(147)	109.7
Si(29)	C(56)	C(56')	59(1)	Si(29)	C(56')	C(56)	76(1)
Si(29)	C(56')	C(57)	61(1)	C(56)	C(56')	C(57)	137(2)
Si(29)	C(57)	C(56')	59(1)	Si(29)	C(57)	C(57')	80(1)
C(56')	C(57)	C(57')	137(2)	Si(29)	C(57')	C(57)	61(1)
Si(29)	C(58)	C(58')	90(4)	Si(29)	C(58')	C(58)	68(4)
Si(30'	C(59')	Si(30)	23.4(7)	Si(30'	C(59')	C(60)	63(2)
Si(30)	C(59')	C(60)	84(2)	Si(30'	C(60)	Si(30)	26.7(5)
Si(30'	C(60)	C(59')	87(2)	Si(30)	C(60)	C(59')	62(2)
Si(30'	C(61)	Si(30)	25.5(4)	Si(31)	C(62)	C(62')	46(1)

Table 4. Bond Angles(°) (continued)

atom	atom	atom	angle	atom	atom	atom	angle
Si(31'	C(62')	Si(31)	16.7(8)	Si(31'	C(62')	C(62)	99(1)
Si(31'	C(62')	C(63)	61(1)	Si(31)	C(62')	C(62)	83(1)
Si(31)	C(62')	C(63)	77(1)	C(62)	C(62')	C(63)	161(2)
Si(31'	C(63)	Si(31)	24.3(6)	Si(31'	C(63)	C(62')	72(1)
Si(31)	C(63)	C(62')	48(1)	Si(31'	C(64)	Si(31)	22.5(4)
C(66)	C(65)	C(70)	120(1)	C(66)	C(65)	H(157)	119.4
C(70)	C(65)	H(157)	119.9	C(65)	C(66)	C(67)	117(1)
C(65)	C(66)	H(158)	122.3	C(67)	C(66)	H(158)	120.3
C(66)	C(67)	C(68)	119(1)	C(66)	C(67)	H(159)	120.9
C(68)	C(67)	H(159)	119.9	C(67)	C(68)	C(69)	122(2)
C(67)	C(68)	H(160)	119.2	C(69)	C(68)	H(160)	118.6
C(68)	C(69)	C(70)	119(2)	C(68)	C(69)	H(161)	120.0
C(70)	C(69)	H(161)	120.6	C(65)	C(70)	C(69)	121(2)
C(65)	C(70)	H(162)	120.2	C(69)	C(70)	H(162)	118.7

Table 5. Torsion Angles(°)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Si(1)	Si(2)	Si(3)	Si(4)	86.8(3)	Si(1)	Si(2)	Si(3)	Si(5)	-160.1(2)
Si(1)	Si(2)	Si(3)	Si(6)	-37.4(3)	Si(1)	Si(12)	Si(13)	Si(14)	168.3(2)
Si(1)	Si(12)	Si(13)	Si(15)	56.1(3)	Si(1)	Si(12)	Si(13)	Si(16)	-79.5(3)
Si(1)	Si(22)	Si(23)	Si(24)	72.7(3)	Si(1)	Si(22)	Si(23)	Si(25)	-176.8(2)
Si(1)	Si(22)	Si(23)	Si(26)	-52.0(3)	Si(2)	Si(1)	Si(12)	Si(13)	-176.5(2)
Si(2)	Si(1)	Si(12)	C(23)	64.0(4)	Si(2)	Si(1)	Si(12)	C(24)	-48.2(4)
Si(2)	Si(1)	Si(22)	Si(23)	-60.4(3)	Si(2)	Si(1)	Si(22)	C(44)	68.8(4)
Si(2)	Si(1)	Si(22)	C(45)	-175.7(4)	Si(2)	Si(3)	Si(4)	C(4)	-73(1)
Si(2)	Si(3)	Si(4)	C(4')	-99.2(7)	Si(2)	Si(3)	Si(4)	C(5)	51(1)
Si(2)	Si(3)	Si(4)	C(5')	18.9(8)	Si(2)	Si(3)	Si(4)	C(6')	148.2(7)
Si(2)	Si(3)	Si(4)	C(6)	164(1)	Si(2)	Si(3)	Si(5)	C(7)	58.0(6)
Si(2)	Si(3)	Si(5)	C(8)	179.7(5)	Si(2)	Si(3)	Si(5)	C(9)	-60.9(6)
Si(2)	Si(3)	Si(6)	Si(7)	-71.7(3)	Si(2)	Si(3)	Si(6)	C(10)	56.4(5)
Si(2)	Si(3)	Si(6)	C(11)	172.0(5)	Si(3)	Si(2)	Si(1)	Si(12)	-71.5(3)
Si(3)	Si(2)	Si(1)	Si(22)	166.2(2)	Si(3)	Si(2)	Si(1)	C(1)	49.9(4)
Si(3)	Si(4)	C(4)	C(4')	-75(3)	Si(3)	Si(4)	C(4')	C(4)	116(3)
Si(3)	Si(4)	C(5)	C(5')	-105(2)	Si(3)	Si(4)	C(5')	C(5)	86(2)
Si(3)	Si(4)	C(6')	C(6)	135(5)	Si(3)	Si(4)	C(6)	C(6')	-51(5)
Si(3)	Si(6)	Si(7)	Si(8)	163.3(2)	Si(3)	Si(6)	Si(7)	C(12)	40.0(5)
Si(3)	Si(6)	Si(7)	C(13)	-76.9(5)	Si(4)	Si(3)	Si(2)	C(2)	-157.8(5)
Si(4)	Si(3)	Si(2)	C(3)	-45.7(5)	Si(4)	Si(3)	Si(5)	C(7)	176.4(6)
Si(4)	Si(3)	Si(5)	C(8)	-61.9(5)	Si(4)	Si(3)	Si(5)	C(9)	57.5(6)
Si(4)	Si(3)	Si(6)	Si(7)	160.6(2)	Si(4)	Si(3)	Si(6)	C(10)	-71.3(4)
Si(4)	Si(3)	Si(6)	C(11)	44.4(5)	Si(5)	Si(3)	Si(2)	C(2)	-44.8(5)

Table 5. Torsion Angles(°) (continued)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Si(5)	Si(3)	Si(2)	C(3)	67.3(4)	Si(5)	Si(3)	Si(4)	C(4)	173(1)
Si(5)	Si(3)	Si(4)	C(4')	147.8(7)	Si(5)	Si(3)	Si(4)	C(5)	-61(1)
Si(5)	Si(3)	Si(4)	C(5')	-94.1(8)	Si(5)	Si(3)	Si(4)	C(6')	35.2(7)
Si(5)	Si(3)	Si(4)	C(6)	51(1)	Si(5)	Si(3)	Si(6)	Si(7)	48.8(3)
Si(5)	Si(3)	Si(6)	C(10)	176.9(4)	Si(5)	Si(3)	Si(6)	C(11)	-67.5(5)
Si(6)	Si(3)	Si(2)	C(2)	77.9(5)	Si(6)	Si(3)	Si(2)	C(3)	-170.0(4)
Si(6)	Si(3)	Si(4)	C(4)	58(1)	Si(6)	Si(3)	Si(4)	C(4')	32.8(7)
Si(6)	Si(3)	Si(4)	C(5)	-176(1)	Si(6)	Si(3)	Si(4)	C(5')	150.9(8)
Si(6)	Si(3)	Si(4)	C(6')	-79.8(7)	Si(6)	Si(3)	Si(4)	C(6)	-63(1)
Si(6)	Si(3)	Si(5)	C(7)	-71.4(6)	Si(6)	Si(3)	Si(5)	C(8)	50.3(5)
Si(6)	Si(3)	Si(5)	C(9)	169.7(5)	Si(6)	Si(7)	Si(8)	Si(9)	178.3(2)
Si(6)	Si(7)	Si(8)	Si(10)	60.1(3)	Si(6)	Si(7)	Si(8)	Si(11)	-67.1(3)
Si(7)	Si(8)	Si(9)	C(14)	74.9(5)	Si(7)	Si(8)	Si(9)	C(15)	-165.7(5)
Si(7)	Si(8)	Si(9)	C(16)	-45.0(5)	Si(7)	Si(8)	Si(10)	C(17)	-179.9(5)
Si(7)	Si(8)	Si(10)	C(18)	61.5(5)	Si(7)	Si(8)	Si(10)	C(19)	-62.0(5)
Si(7)	Si(8)	Si(11)	C(20)	-153.4(4)	Si(7)	Si(8)	Si(11)	C(21)	88.6(5)
Si(7)	Si(8)	Si(11)	C(22)	-34.0(5)	Si(8)	Si(7)	Si(6)	C(10)	34.9(5)
Si(8)	Si(7)	Si(6)	C(11)	-80.3(5)	Si(9)	Si(8)	Si(7)	C(12)	-56.2(5)
Si(9)	Si(8)	Si(7)	C(13)	59.1(6)	Si(9)	Si(8)	Si(10)	C(17)	63.3(6)
Si(9)	Si(8)	Si(10)	C(18)	-55.4(5)	Si(9)	Si(8)	Si(10)	C(19)	-178.9(5)
Si(9)	Si(8)	Si(11)	C(20)	-38.3(5)	Si(9)	Si(8)	Si(11)	C(21)	-156.3(4)
Si(9)	Si(8)	Si(11)	C(22)	81.1(5)	Si(10)	Si(8)	Si(7)	C(12)	-174.4(4)
Si(10)	Si(8)	Si(7)	C(13)	-59.2(6)	Si(10)	Si(8)	Si(9)	C(14)	-162.7(5)
Si(10)	Si(8)	Si(9)	C(15)	-43.3(6)	Si(10)	Si(8)	Si(9)	C(16)	77.4(5)

Table 5. Torsion Angles(°) (continued)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Si(10)	Si(8)	Si(11)	C(20)	76.9(5)	Si(10)	Si(8)	Si(11)	C(21)	-41.1(5)
Si(10)	Si(8)	Si(11)	C(22)	-163.7(5)	Si(11)	Si(8)	Si(7)	C(12)	58.4(5)
Si(11)	Si(8)	Si(7)	C(13)	173.6(6)	Si(11)	Si(8)	Si(9)	C(14)	-46.7(5)
Si(11)	Si(8)	Si(9)	C(15)	72.7(5)	Si(11)	Si(8)	Si(9)	C(16)	-166.6(5)
Si(11)	Si(8)	Si(10)	C(17)	-49.7(6)	Si(11)	Si(8)	Si(10)	C(18)	-168.4(5)
Si(11)	Si(8)	Si(10)	C(19)	68.1(5)	Si(12)	Si(1)	Si(2)	C(2)	169.6(4)
Si(12)	Si(1)	Si(2)	C(3)	60.4(5)	Si(12)	Si(1)	Si(22)	Si(23)	176.5(2)
Si(12)	Si(1)	Si(22)	C(44)	-54.3(4)	Si(12)	Si(1)	Si(22)	C(45)	61.2(4)
Si(12)	Si(13)	Si(14)	C(25)	43.0(5)	Si(12)	Si(13)	Si(14)	C(26)	-78.7(5)
Si(12)	Si(13)	Si(14)	C(27)	163.1(5)	Si(12)	Si(13)	Si(15)	C(28)	26.1(5)
Si(12)	Si(13)	Si(15)	C(29)	145.0(5)	Si(12)	Si(13)	Si(15)	C(30)	-96.3(4)
Si(12)	Si(13)	Si(16)	Si(17)	52.6(3)	Si(12)	Si(13)	Si(16)	C(31)	-68.7(5)
Si(12)	Si(13)	Si(16)	C(32)	176.1(5)	Si(13)	Si(12)	Si(1)	Si(22)	-54.3(3)
Si(13)	Si(12)	Si(1)	C(1)	64.2(5)	Si(13)	Si(16)	Si(17)	Si(18)	159.7(2)
Si(13)	Si(16)	Si(17)	C(33)	-80.7(4)	Si(13)	Si(16)	Si(17)	C(34)	37.0(5)
Si(14)	Si(13)	Si(12)	C(23)	-73.0(4)	Si(14)	Si(13)	Si(12)	C(24)	40.2(4)
Si(14)	Si(13)	Si(15)	C(28)	-85.9(4)	Si(14)	Si(13)	Si(15)	C(29)	33.0(5)
Si(14)	Si(13)	Si(15)	C(30)	151.7(4)	Si(14)	Si(13)	Si(16)	Si(17)	163.9(2)
Si(14)	Si(13)	Si(16)	C(31)	42.6(5)	Si(14)	Si(13)	Si(16)	C(32)	-72.5(5)
Si(15)	Si(13)	Si(12)	C(23)	174.9(4)	Si(15)	Si(13)	Si(12)	C(24)	-72.0(4)
Si(15)	Si(13)	Si(14)	C(25)	168.0(5)	Si(15)	Si(13)	Si(14)	C(26)	46.3(5)
Si(15)	Si(13)	Si(14)	C(27)	-71.9(5)	Si(15)	Si(13)	Si(16)	Si(17)	-87.7(2)
Si(15)	Si(13)	Si(16)	C(31)	151.0(5)	Si(15)	Si(13)	Si(16)	C(32)	35.8(5)
Si(16)	Si(13)	Si(12)	C(23)	39.2(4)	Si(16)	Si(13)	Si(12)	C(24)	152.4(4)

Table 5. Torsion Angles(°) (continued)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Si(16)	Si(13)	Si(14)	C(25)	-78.7(5)	Si(16)	Si(13)	Si(14)	C(26)	159.6(4)
Si(16)	Si(13)	Si(14)	C(27)	41.4(5)	Si(16)	Si(13)	Si(15)	C(28)	164.8(4)
Si(16)	Si(13)	Si(15)	C(29)	-76.3(5)	Si(16)	Si(13)	Si(15)	C(30)	42.4(5)
Si(16)	Si(17)	Si(18)	Si(19'	39.2(4)	Si(16)	Si(17)	Si(18)	Si(19)	80.3(3)
Si(16)	Si(17)	Si(18)	Si(20'	-87.8(3)	Si(16)	Si(17)	Si(18)	Si(20)	-46.1(3)
Si(16)	Si(17)	Si(18)	Si(21)	-164.1(3)	Si(16)	Si(17)	Si(18)	Si(21'	159.7(3)
Si(17)	Si(18)	Si(19'	Si(19)	87.9(4)	Si(17)	Si(18)	Si(19'	C(35')	-78.0(9)
Si(17)	Si(18)	Si(19'	C(36)	151.7(6)	Si(17)	Si(18)	Si(19'	C(37)	39.5(6)
Si(17)	Si(18)	Si(19)	Si(19'	-110.6(4)	Si(17)	Si(18)	Si(19)	C(35)	70.9(8)
Si(17)	Si(18)	Si(19)	C(36)	-164.8(5)	Si(17)	Si(18)	Si(19)	C(37)	-52.4(7)
Si(17)	Si(18)	Si(20'	Si(20)	109.2(4)	Si(17)	Si(18)	Si(20'	C(38')	-71.2(9)
Si(17)	Si(18)	Si(20'	C(39)	164.4(5)	Si(17)	Si(18)	Si(20'	C(40)	52.3(6)
Si(17)	Si(18)	Si(20)	Si(20'	-88.9(4)	Si(17)	Si(18)	Si(20)	C(38)	87.4(7)
Si(17)	Si(18)	Si(20)	C(39)	-148.9(5)	Si(17)	Si(18)	Si(20)	C(40)	-37.4(6)
Si(17)	Si(18)	Si(21)	Si(21'	-100.7(4)	Si(17)	Si(18)	Si(21)	C(41)	83.4(9)
Si(17)	Si(18)	Si(21)	C(42)	-40.6(6)	Si(17)	Si(18)	Si(21)	C(43)	-156.4(5)
Si(17)	Si(18)	Si(21'	Si(21)	89.7(4)	Si(17)	Si(18)	Si(21'	C(41')	-85.8(8)
Si(17)	Si(18)	Si(21'	C(42)	35.4(6)	Si(17)	Si(18)	Si(21'	C(43)	151.4(5)
Si(18)	Si(17)	Si(16)	C(31)	-78.4(5)	Si(18)	Si(17)	Si(16)	C(32)	37.3(5)
Si(18)	Si(19'	Si(19)	C(35)	130(29)	Si(18)	Si(19'	Si(19)	C(36)	117.3(5)
Si(18)	Si(19'	Si(19)	C(37)	-125.5(5)	Si(18)	Si(19'	C(35')	C(38)	-38(2)
Si(18)	Si(19'	C(36)	Si(19)	-63.6(5)	Si(18)	Si(19'	C(37)	Si(19)	55.3(5)
Si(18)	Si(19)	Si(19'	C(35')	113(3)	Si(18)	Si(19)	Si(19'	C(36)	-117.3(5)
Si(18)	Si(19)	Si(19'	C(37)	125.5(5)	Si(18)	Si(19)	C(35)	C(41')	41(2)

Table 5. Torsion Angles(°) (continued)

atom	atom	atom	atom	angle	atom	atom	atom	atom	angle
Si(18)	Si(19)	C(36)	Si(19'	59.1(5)	Si(18)	Si(19)	C(37)	Si(19'	-57.2(5)
Si(18)	Si(20'	Si(20)	C(38)	-135(9)	Si(18)	Si(20'	Si(20)	C(39)	118.9(5)
Si(18)	Si(20'	Si(20)	C(40)	-123.1(5)	Si(18)	Si(20'	C(38')	C(41)	-34(3)
Si(18)	Si(20'	C(39)	Si(20)	-57.1(4)	Si(18)	Si(20'	C(40)	Si(20)	55.9(5)
Si(18)	Si(20)	Si(20'	C(38')	-5(15)	Si(18)	Si(20)	Si(20'	C(39)	-118.9(5)
Si(18)	Si(20)	Si(20'	C(40)	123.1(5)	Si(18)	Si(20)	C(38)	C(35')	15(2)
Si(18)	Si(20)	C(39)	Si(20'	62.8(5)	Si(18)	Si(20)	C(40)	Si(20'	-58.2(5)
Si(18)	Si(21)	Si(21'	C(41')	105(12)	Si(18)	Si(21)	Si(21'	C(42)	122.9(5)
Si(18)	Si(21)	Si(21'	C(43)	-120.2(5)	Si(18)	Si(21)	C(41)	C(38')	13(3)
Si(18)	Si(21)	C(42)	Si(21'	-61.5(5)	Si(18)	Si(21)	C(43)	Si(21'	60.9(5)
Si(18)	Si(21'	Si(21)	C(41)	142(9)	Si(18)	Si(21'	Si(21)	C(42)	-122.9(5)
Si(18)	Si(21'	Si(21)	C(43)	120.2(5)	Si(18)	Si(21'	C(41')	C(35)	-5(2)
Si(18)	Si(21'	C(42)	Si(21)	57.9(5)	Si(18)	Si(21'	C(43)	Si(21)	-61.4(5)
Si(19'	Si(18)	Si(17)	C(33)	-80.8(5)	Si(19'	Si(18)	Si(17)	C(34)	163.5(5)
Si(19'	Si(18)	Si(19)	C(35)	-178.6(10)	Si(19'	Si(18)	Si(19)	C(36)	-54.3(6)
Si(19'	Si(18)	Si(19)	C(37)	58.1(6)	Si(19'	Si(18)	Si(20'	Si(20)	-23.8(5)
Si(19'	Si(18)	Si(20'	C(38')	155.8(9)	Si(19'	Si(18)	Si(20'	C(39)	31.4(6)
Si(19'	Si(18)	Si(20'	C(40)	-80.7(6)	Si(19'	Si(18)	Si(20)	Si(20'	156.3(5)
Si(19'	Si(18)	Si(20)	C(38)	-27.4(7)	Si(19'	Si(18)	Si(20)	C(39)	96.2(6)
Si(19'	Si(18)	Si(20)	C(40)	-152.2(6)	Si(19'	Si(18)	Si(21)	Si(21'	52.3(6)
Si(19'	Si(18)	Si(21)	C(41)	-123.6(10)	Si(19'	Si(18)	Si(21)	C(42)	112.4(6)
Si(19'	Si(18)	Si(21)	C(43)	-3.4(7)	Si(19'	Si(18)	Si(21'	Si(21)	-141.4(5)
Si(19'	Si(18)	Si(21'	C(41')	43.1(9)	Si(19'	Si(18)	Si(21'	C(42)	164.3(5)
Si(19'	Si(18)	Si(21'	C(43)	-79.8(6)	Si(19'	Si(19)	Si(18)	Si(20'	53.5(6)