Supporting Information to Accompany

Dimethylsilyl Bis(amidinate) Actinide Complexes: Synthesis and Reactivity Towards Oxygen Containing Substrates.[†]

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- 1. Spectroscopic Data for Complex 2
 - 1.1. ¹H-NMR Spectrum of Complex 2



1.2. ¹³C-NMR Spectrum of Complex **2**







- 2. Spectroscopic Data for Complex **3**
 - 2.1. ¹H-NMR Spectrum of Complex **3**



2.2. ¹³C-NMR Spectrum of Complex **3**





2.3. ²⁹Si-NMR Spectrum of Complex **3**



2.4. Infrared absorption Spectrum of Complex **3**.





- 3. Spectroscopic Data for Complex 4
 - 3.1. ¹H-NMR Spectrum of Complex **4**



3.2. ¹³C- NMR Spectrum of Complex **4**



3.3. ²⁹Si-NMR Spectrum of Complex 4



- 4. Spectroscopic Data for Complex 6
 4.1. ¹H-NMR Spectrum of Complex 6



4.2. 13 C-NMR Spectrum of Complex **6**



4.3. ²⁹Si-NMR Spectrum of Complex **6**



- 5. Spectroscopic Data for Stoichiometric Addition of ε-Caprolactone to Complex 2
 - 5.1. ¹H-NMR Spectrum of ε -Caprolactone



5.2. ¹H-NMR Spectrum of Stoichiometric Addition of ε-Caprolactone to Complex **2**, after 10 minutes.



5.3. Overlay of ¹H-NMR Spectra of ε-Caprolactone and ε-Caprolactone in Stoichiometric Amount with Complex **2**



6. Crystallographic data for complex **2**



Figure 1: Molecular Molecular structure of complex 2. Color code: Th, blue, Cl, green, Si, yellow, N, purple, C, grey. Hydrogen atoms are omitted for clarity.

Complex	
Empirical	C ₅₂ H ₈₄ Si ₂ Cl ₂ Th
Formula	
Formula	1068.34
weight/g·mol ⁻¹	
T/K	250(2)
λ/Å	0.71073
Crystal system	Orthorhombic
Space group	Pccn
a/Å	15.7880(5)
b/Å	18.7850(6)
c/Ă	20.1863(7)
$\alpha/°$	90
β/°	90
γ/°	90
V/Å ³	5986.8(3)
Z	4
p/g·cm ⁻³	1.336
μ (Mo-K _a) /mm ⁻¹	2.660
F(000)	2464
θ range for data	1.68 to
collection/°	25.68
Limiting indices	-19≤h≤19
	-22≤k≤22
	-24<1<15
	2121210
Reflections	23969/5626
collected/unique	(0.0195)
(R _{int})	. ,
Completeness to	98.88
θ	
GOF on F^2	1.005
R ₁ , wR ₂	0.0305,
$[I>2\sigma(I)]$	0.0884
R_1 , wR_2 (all	0.0499,
data)	0.0989
Largest diff.	1.188 and -
peak and hole	0.765

Table 1: Crystal data and structure refinement for complex 2.

	Х	У	Z	U(eq)
	2500	2500	1017(1)	25(1)
N(1)	1299(2)	2444(1)	1904(2)	29(1)
N(2)	1239(2) 1219(2)	3550(2)	2350(2)	48(1)
N(3)	2117(2)	1387(2)	1485(2)	32(1)
N(3)	3133(2)	1244(2)	743(2)	32(1)
Si(1)	1177(1)	1507(1)	1892(1)	33(1)
$C_{1}(1)$	3614(1)	2887(1)	72(1)	51(1)
C(1)	936(2)	2890(2)	2310(2)	35(1)
C(2)	869(3)	4199(2)	2688(3)	53(1)
C(3)	-45(4)	4308 (3)	2517(3)	79(2)
C(4)	1010(4)	4163(3)	3431 (3)	78(2)
C(5)	1386(4)	4812 (3)	2411 (3)	85(2)
C(6)	219(3)	2645(2)	2736(2)	42(1)
C(7)	333(4)	2514(2)	3406(2)	44(1)
C(8)	-340(4)	2240(3)	3778(3)	65(2)
C(9)	-1091(4)	2096(4)	3491(3)	76(2)
C(10)	-1212(3)	2218(3)	2822 (3)	70(2)
C(11)	-556(3)	2494(2)	2449(3)	50(1)
C(12)	2458(2)	964(2)	1006(2)	28(1)
C(13)	1986(3)	299(2)	809(2)	36(1)
C(14)	1557(3)	261(2)	220(2)	48(1)
C(15)	1099(3)	-346(3)	59(2)	57(1)
C(16)	1085(3)	-921(2)	475(3)	60(1)
C(17)	1515(3)	-886(3)	1063(3)	59(1)
C(18)	1954(3)	-283(2)	1241(2)	47(1)
C(19)	3708(3)	904(2)	260(2)	47(1)
C(20)	3442(3)	1066(3)	-448(2)	64(2)
C(21)	4577(3)	1229(3)	410(3)	64(2)
C(22)	3785(4)	88(2)	343(3)	76(2)
C(23)	227(3)	1197(3)	1430(2)	50(1)
C(24)	1228(3)	1084(2)	2726(2)	49(1)
C(25)	7168(12)	1060(12)	1263(10)	258(11)
C(26)	6987(9)	1565(9)	763(10)	244(11)
C(27)	7566(9)	2132(3)	745(13)	305(15)

Table 2: U(eq) is defined as one third of the trace of the orthogonalized Uij tensor for complex 2.

Th(1) - N(3) # 1	2 374 (3)
TH(1) = N(3)	2.374(3)
TH(1) = N(3) Th(1) - N(1)	2.611(3)
$T_{11}(T) = N(T) = T_{11}(T)$	2.011(3) 2.611(3)
$\frac{111}{1} = \frac{1}{1} = $	2.011(3)
$III(\bot) = N(4) \# \bot$	2.021(3)
III(1) - N(4)	2.021(3)
Tn(1) - CI(1) #I	2.6939(11)
Tn(1) - C1(1)	2.6939(11)
Th(1) - C(12) # 1	2.885(4)
Th(1)-C(12)	2.886(4)
Th(1)-Si(1)#1	3.3119(11)
Th(1)-Si(1)	3.3119(11)
N(1)-C(1)	1.303(5)
N(1) - Si(1)	1.772(3)
N(2)-C(1)	1.320(5)
N(2)-C(2)	1.502(5)
N(3)-C(12)	1.362(5)
N(3)-Si(1)	1.711(4)
N(4)-C(12)	1.300(5)
N(4) - C(19)	1.477(5)
Si(1)-C(23)	1.859(5)
Si(1) - C(24)	1.862(4)
C(1) - C(6)	1,494(6)
C(2) - C(3)	1 498(7)
C(2) - C(3)	1, 518(7)
C(2) - C(5)	1,518(7)
C(2) = C(3) C(6) = C(11)	1,383(7)
C(6) - C(11)	1.305(7)
C(0) - C(7)	1.300(7)
C(7) - C(8)	1.400(8)
C(8) - C(9)	1.348(9)
C(9) - C(10)	1.384(8)
C(10)-C(11)	1.381(7)
C(12)-C(13)	1.509(6)
C(13)-C(14)	1.370(6)
C(13)-C(18)	1.399(6)
C(14)-C(15)	1.389(6)
C(15)-C(16)	1.370(7)
C(16)-C(17)	1.369(7)
C(17)-C(18)	1.377(6)
C(19)-C(20)	1.520(7)
C(19)-C(21)	1.533(6)
C(19)-C(22)	1.547(6)
C(25) - C(26)	1.413(12)
C(26) - C(27)	1,405(11)
$C(27) = C(27) \pm 2$	1 397(12)
\bigcirc $(2 i j)$ \bigcirc $(2 i j) \pm 2$	±•••••••
N(3) #1 - TD(1) - N(3)	133 02(14)
$N(3) \pm 1 - \pi (1) - N(1)$	86 94 (10)
$\frac{1}{1} \left(\begin{array}{c} \begin{array}{c} \\ \end{array} \right) \pi 1 - 111 \left(1 \right) - 11 \left(1 \right) $	60.71(10)
N (J) = I II (L) = N (L) N (J) #1, mb (1) NI (1) #1	00.41(10)
$N(3) \# \bot = T\Pi(\bot) = N(\bot) \# \bot$	$0 \cup .4 \perp (\perp \cup)$
N(3) = TO(1) = N(1) # 1	00.90(TU)

$\begin{array}{llllllllllllllllllllllllllllllllllll$	N(1)-Th(1)-N(1)#1	93.34(15)
$\begin{split} & (3) = Th (1) = N (4) \# 1 & 141.27 (11) \\ & N (1) = Th (1) = N (4) \# 1 & 112.65 (9) \\ & N (3) \# 1 = Th (1) = N (4) & 141.27 (11) \\ & N (1) = Th (1) = N (4) & 141.27 (11) \\ & N (1) = Th (1) = N (4) & 141.27 (11) \\ & N (1) = Th (1) = N (4) & 155.69 (15) \\ & N (1) \# 1 = Th (1) = N (4) & 155.69 (15) \\ & N (1) \# 1 = Th (1) = N (4) & 155.69 (15) \\ & N (3) \# 1 = Th (1) = C1 (1) \# 1 & 133.33 (8) \\ & N (3) = Th (1) = C1 (1) \# 1 & 133.33 (8) \\ & N (3) = Th (1) = C1 (1) \# 1 & 166.08 (6) \\ & N (4) \# 1 = Th (1) = C1 (1) \# 1 & 81.10 (8) \\ & N (4) = Th (1) = C1 (1) \# 1 & 81.76 (8) \\ & N (3) = Th (1) = C1 (1) & 166.08 (6) \\ & N (4) \# 1 = Th (1) = C1 (1) & 166.08 (6) \\ & N (4) \# 1 = Th (1) = C1 (1) & 166.08 (6) \\ & N (4) \# 1 = Th (1) = C1 (1) & 81.90 (5) \\ & N (3) = Th (1) = C1 (1) & 81.90 (5) \\ & N (3) = Th (1) = C1 (2) \# 1 & 27.91 (10) \\ & N (4) = Th (1) = C1 (2) \# 1 & 27.91 (10) \\ & N (4) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (4) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (4) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (4) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (4) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (4) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (3) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (4) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (3) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (3) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (3) = Th (1) = C (12) \# 1 & 27.91 (10) \\ & N (3) = Th (1) = C (12) & 27.91 (10) \\ & N (3) = Th (1) = C (12) & 27.91 (10) \\ & N (3) = Th (1) = C (12) & 27.91 (10) \\ & N (4) = Th (1) = C (12) & 73.14 (7) \\ & C (11) = Th (1) = C (12) & 73.14 (7) \\ & C (11) = Th (1) = C (12) & 73.14 (7) \\ & C (11) = Th (1) = C (12) & 73.14 (7) \\ & C (12) \# 1 = Th (1) = C (12) & 73.14 (7) \\ & C (12) \# 1 = Th (1) = C (12) & 73.14 (7) \\ & C (12) \# 1 = Th (1) = C (1) \# 1 & 12.29 (8) \\ & C (11) \# 1 = Th (1) = S (1) \# 1 & 12.29 (8) \\ & N (3) = Th (1) = S (1) \# 1 & 12.29 (8) \\ & N (3) = Th (1) = S (1) \# 1 & 12.29 (8) \\ & N (3) = Th (1) = S (1) \# 1 & 12.29 (8) \\ & N (3) = Th (1) = S (1) \# 1 & 12.29 (8) \\ & N (4) = Th (1) = S ($	N(3) #1 - Th(1) - N(4) #1	52,24(11)
$\begin{split} & \text{N(1)} - \text{Th}(1) - \text{N(4)} \# 1 & \text{B4.48}(10) \\ & \text{N(1)} \# 1 - \text{Th}(1) - \text{N(4)} \# 1 & 112.65(9) \\ & \text{N(3)} \# 1 - \text{Th}(1) - \text{N(4)} & 141.27(11) \\ & \text{N(3)} - \text{Th}(1) - \text{N(4)} & 122.65(9) \\ & \text{N(1)} \# 1 - \text{Th}(1) - \text{N(4)} & 112.65(9) \\ & \text{N(1)} \# 1 - \text{Th}(1) - \text{N(4)} & 155.69(15) \\ & \text{N(3)} \# 1 - \text{Th}(1) - \text{Cl}(1) \# 1 & 133.33(8) \\ & \text{N(3)} - \text{Th}(1) - \text{Cl}(1) \# 1 & 90.04(8) \\ & \text{N(1)} \# 1 - \text{Th}(1) - \text{Cl}(1) \# 1 & 90.04(8) \\ & \text{N(1)} \# 1 - \text{Th}(1) - \text{Cl}(1) \# 1 & 81.10(8) \\ & \text{N(4)} \# 1 - \text{Th}(1) - \text{Cl}(1) \# 1 & 81.20(8) \\ & \text{N(4)} \# 1 - \text{Th}(1) - \text{Cl}(1) \# 1 & 81.20(8) \\ & \text{N(3)} = \text{Th}(1) - \text{Cl}(1) & 133.33(8) \\ & \text{N(4)} - \text{Th}(1) - \text{Cl}(1) & 133.33(8) \\ & \text{N(4)} - \text{Th}(1) - \text{Cl}(1) & 133.33(8) \\ & \text{N(4)} - \text{Th}(1) - \text{Cl}(1) & 81.20(8) \\ & \text{N(4)} \# 1 - \text{Th}(1) - \text{Cl}(1) & 81.20(8) \\ & \text{Cl}(1) \# 1 - \text{Th}(1) - \text{Cl}(2) \# 1 & 152.82(10) \\ & \text{N(4)} \# 1 - \text{Th}(1) - \text{Cl}(2) \# 1 & 87.05(9) \\ & \text{N(4)} \# 1 - \text{Th}(1) - \text{Cl}(2) \# 1 & 87.05(9) \\ & \text{N(4)} \# 1 - \text{Th}(1) - \text{Cl}(2) \# 1 & 152.84(9) \\ & \text{N(4)} \# 1 - \text{Th}(1) - \text{Cl}(2) \# 1 & 166.24(7) \\ & \text{Cl}(1) \# 1 - \text{Th}(1) - \text{Cl}(2) \# 1 & 73.14(7) \\ & \text{N(3)} \# 1 - \text{Th}(1) - \text{Cl}(2) \# 1 & 166.24(9) \\ & \text{N(4)} \# 1 - \text{Th}(1) - \text{Cl}(2) \# 1 & 166.24(7) \\ & \text{Cl}(1) - \text{Th}(1) - \text{Cl}(2) \# 1 & 166.24(7) \\ & \text{Cl}(1) - \text{Th}(1) - \text{Cl}(2) \# 1 & 166.24(7) \\ & \text{Cl}(1) - \text{Th}(1) - \text{Cl}(2) \# 1 & 166.24(7) \\ & \text{Cl}(1) - \text{Th}(1) - \text{Cl}(2) \# 1 & 166.24(7) \\ & \text{Cl}(1) - \text{Th}(1) - \text{Cl}(2) \# 1 & 166.23(7) \\ & \text{N(3)} \# 1 - \text{Th}(1) - \text{Cl}(2) & 152.84(9) \\ & \text{N(4)} = - \text{Th}(1) - \text{Cl}(2) & 152.84(9) \\ & \text{N(4)} = - \text{Th}(1) - \text{Cl}(2) & 179.15(14) \\ & \text{N(3)} \# 1 - \text{Th}(1) - \text{Cl}(2) & 179.15(14) \\ & \text{N(3)} \# 1 - \text{Th}(1) - \text{Si}(1) \# 1 & 29.57(8) \\ & \text{N(3)} - \text{Th}(1) - \text{Si}(1) \# 1 & 166.38(8) \\ & \text{N(4)} - \text{Th}(1) - \text{Si}(1) \# 1 & 166.38(8) \\ & \text{N(4)} - \text{Th}(1) - \text{Si}(1) \# 1 & 122.9(8) \\ & \text{Cl}(1) \# 1 - \text{Th}(1) - \text{Si}(1) \# 1 & 122.9(8) \\ & \text{Cl}(1) \# 1 - \text{Th}(1) - \text{Si}(1) \# 1 & 122.9(8) \\ &$	N(3) - Th(1) - N(4) #1	141.27(11)
$\begin{split} & \text{N}(1) \# 1-\text{Th}(1) - \text{N}(4) \# 1 & \text{112.65}(9) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{N}(4) & \text{141.27}(11) \\ & \text{N}(3) -\text{Th}(1) - \text{N}(4) & \text{122.65}(9) \\ & \text{N}(1) \# 1-\text{Th}(1) - \text{N}(4) & \text{112.65}(9) \\ & \text{N}(1) \# 1-\text{Th}(1) - \text{N}(4) & \text{155.69}(15) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(1) \# 1 & \text{133.33}(8) \\ & \text{N}(3) -\text{Th}(1) - \text{Cl}(1) \# 1 & \text{133.33}(8) \\ & \text{N}(3) -\text{Th}(1) - \text{Cl}(1) \# 1 & \text{166.08}(6) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) \# 1 & \text{81.10}(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) \# 1 & \text{81.10}(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) \# 1 & \text{81.76}(8) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(1) & \text{133.33}(8) \\ & \text{N}(3) -\text{Th}(1) - \text{Cl}(1) & \text{133.33}(8) \\ & \text{N}(4) -\text{Th}(1) - \text{Cl}(1) & \text{81.40}(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) & \text{81.40}(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) & \text{81.40}(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{152.82}(10) \\ & \text{N}(3) = \text{Th}(1) - \text{Cl}(2) \# 1 & \text{152.82}(10) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{152.84}(9) \\ & \text{Cl}(1) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{152.84}(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & \text{152.84}(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & \text{152.84}(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & \text{152.84}(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & \text{166.23}(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & \text{73.14}(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) & \text{73.14}(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) & \text{73.14}(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) & \text{73.14}(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) & \text{73.14}(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) & \text{73.14}(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) & \text{73.14}(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) & \text{73.14}(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) & \text{73.14}(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{S}(1) \# 1 & \text{79.27}(3) \\ & \text{C}(12) \# 1-\text{Th}(1) - \text{S}(1) \# 1 & \text{79.27}(3) \\ & \text{C}(12) \# 1-\text{Th}(1) - \text{S}(1) \# 1 & \text{79.27}(3) \\ & \text{C}(12) \# 1-\text{Th}(1) - \text{S}(1) \# 1 & \text{79.27}(3) \\ & \text{C}(12) \# 1-\text{Th}(1) - \text{S}(1) \# 1 & \text{79.27}(3) \\ & \text{C}(1) \# 1-\text{Th}(1) - \text{S}(1) \# 1 & \text{79.27}(3) \\ & C$	N(1) - Th(1) - N(4) #1	84,48(10)
$\begin{split} & \text{N}(3) \# 1-\text{Th}(1) - \text{N}(4) & 141.27(11) \\ & \text{N}(3) -\text{Th}(1) - \text{N}(4) & 52.24(11) \\ & \text{N}(1) -\text{Th}(1) - \text{N}(4) & 112.65(9) \\ & \text{N}(1) \# 1-\text{Th}(1) - \text{N}(4) & 155.69(15) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(1) \# 1 & 133.33(8) \\ & \text{N}(3) -\text{Th}(1) - \text{Cl}(1) \# 1 & 82.99(8) \\ & \text{N}(1) -\text{Th}(1) - \text{Cl}(1) \# 1 & 81.0(8) \\ & \text{N}(1) \# 1-\text{Th}(1) - \text{Cl}(1) \# 1 & 81.10(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) \# 1 & 81.76(8) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(1) \# 1 & 81.76(8) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(1) & 133.33(8) \\ & \text{N}(3) -\text{Th}(1) - \text{Cl}(1) & 133.33(8) \\ & \text{N}(3) -\text{Th}(1) - \text{Cl}(1) & 133.33(8) \\ & \text{N}(4) = \text{Th}(1) - \text{Cl}(1) & 81.76(8) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(1) & 81.76(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) & 81.76(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) & 81.76(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) & 81.90(5) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & 152.82(10) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & 152.82(10) \\ & \text{N}(1) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & 152.84(9) \\ & \text{Cl}(1) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & 73.14(7) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & 73.5(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & 73.5(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & 73.5(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) \# 1 & 73.5(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.82(10) \\ & \text{N}(3) = \text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 152.84(9) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{C}(12) & 163.8(8) \\ & \text{N}(3) -$	N(1) #1 - Th(1) - N(4) #1	112.65(9)
$\begin{split} & \text{N(3)} = \text{Th}(1) = \text{N(4)} & \text{S2.24}(11) \\ & \text{N(1)} = \text{Th}(1) = \text{N(4)} & \text{S2.24}(11) \\ & \text{N(1)} = \text{Th}(1) = \text{N(4)} & \text{S2.24}(11) \\ & \text{N(1)} = \text{Th}(1) = \text{N(4)} & \text{S2.24}(11) \\ & \text{N(3)} = \text{Th}(1) = \text{C1}(1) \# 1 & \text{S2.99}(8) \\ & \text{N(3)} = \text{Th}(1) = \text{C1}(1) \# 1 & \text{S2.99}(8) \\ & \text{N(1)} = \text{Th}(1) = \text{C1}(1) \# 1 & \text{S2.99}(8) \\ & \text{N(1)} = \text{Th}(1) = \text{C1}(1) \# 1 & \text{S2.99}(8) \\ & \text{N(1)} = \text{Th}(1) = \text{C1}(1) \# 1 & \text{S2.99}(8) \\ & \text{N(3)} = \text{Th}(1) = \text{C1}(1) \# 1 & \text{S2.99}(8) \\ & \text{N(3)} = \text{Th}(1) = \text{C1}(1) & \text{S2.99}(8) \\ & \text{N(3)} = \text{Th}(1) = \text{C1}(1) & \text{S2.99}(8) \\ & \text{N(3)} = \text{Th}(1) = \text{C1}(1) & \text{S2.99}(8) \\ & \text{N(3)} = \text{Th}(1) = \text{C1}(1) & \text{S2.99}(8) \\ & \text{N(3)} = \text{Th}(1) = \text{C1}(1) & \text{S2.99}(8) \\ & \text{N(4)} = \text{Th}(1) = \text{C1}(1) & \text{S2.99}(8) \\ & \text{N(4)} = \text{Th}(1) = \text{C1}(1) & \text{S2.99}(8) \\ & \text{N(4)} = \text{Th}(1) = \text{C1}(1) & \text{S2.99}(8) \\ & \text{N(4)} = \text{Th}(1) = \text{C1}(1) & \text{S2.99}(8) \\ & \text{N(4)} = \text{Th}(1) = \text{C1}(2) \# 1 & \text{S2.82}(10) \\ & \text{N(3)} = \text{Th}(1) = \text{C1}(2) \# 1 & \text{S2.82}(10) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) \# 1 & \text{S2.84}(9) \\ & \text{C1}(1) = \text{Th}(1) = \text{C}(12) \# 1 & \text{S2.84}(9) \\ & \text{C1}(1) = \text{Th}(1) = \text{C}(12) \# 1 & \text{S2.84}(9) \\ & \text{C1}(1) = \text{Th}(1) = \text{C}(12) \# 1 & \text{S2.84}(9) \\ & \text{N(4)} = \text{Th}(1) = \text{C}(12) \# 1 & \text{S2.84}(9) \\ & \text{N(4)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(1)} = \text{Th}(1) = \text{C}(12) & \text{S2.84}(9) \\ & \text{N(2)} = \text{Th}(1) = \text{S}(1) \# 1 & \text{S2.95}(7) \\ & \text{N(3)} = $	N(3) #1 - Th(1) - N(4)	141.27(11)
$\begin{split} & \text{N}(1) - \text{Th}(1) - \text{N}(4) & \text{112.65}(9) \\ & \text{N}(1) \# 1 - \text{Th}(1) - \text{N}(4) & \text{112.65}(9) \\ & \text{N}(1) \# 1 - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{133.33}(8) \\ & \text{N}(3) - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{133.33}(8) \\ & \text{N}(3) - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{133.33}(8) \\ & \text{N}(1) - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{166.08}(6) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{81.10}(8) \\ & \text{N}(4) - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{81.10}(8) \\ & \text{N}(3) \# 1 - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{81.10}(8) \\ & \text{N}(3) \# 1 - \text{Th}(1) - \text{Cl}(1) & \text{133.33}(8) \\ & \text{N}(3) - \text{Th}(1) - \text{Cl}(1) & \text{133.33}(8) \\ & \text{N}(3) - \text{Th}(1) - \text{Cl}(1) & \text{133.33}(8) \\ & \text{N}(4) - \text{Th}(1) - \text{Cl}(1) & \text{81.76}(8) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{Cl}(1) & \text{81.76}(8) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{Cl}(1) & \text{81.90}(8) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{Cl}(2) \# 1 & \text{27.91}(10) \\ & \text{N}(3) - \text{Th}(1) - \text{Cl}(2) \# 1 & \text{27.91}(10) \\ & \text{N}(3) - \text{Th}(1) - \text{C}(12) \# 1 & \text{27.91}(10) \\ & \text{N}(3) - \text{Th}(1) - \text{C}(12) \# 1 & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) \# 1 & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) \# 1 & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) \# 1 & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) \# 1 & \text{27.91}(10) \\ & \text{N}(3) \# 1 - \text{Th}(1) - \text{C}(12) \# 1 & \text{27.91}(10) \\ & \text{N}(3) \# 1 - \text{Th}(1) - \text{C}(12) \# 1 & \text{27.91}(10) \\ & \text{N}(3) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(3) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# 1 - \text{Th}(1) - \text{C}(12) & \text{27.91}(10) \\ & \text{N}(4) \# $	N(3) - Th(1) - N(4)	52,24(11)
$\begin{split} & \text{N}(1) \# 1-\text{Th}(1) - \text{N}(4) & \text{B4.48}(10) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) \# 1 & \text{B3.33}(8) \\ & \text{N}(3) - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{B2.99}(8) \\ & \text{N}(1) - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{B2.99}(8) \\ & \text{N}(1) - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{B1.10}(8) \\ & \text{N}(1) \# 1-\text{Th}(1) - \text{Cl}(1) \# 1 & \text{B1.10}(8) \\ & \text{N}(4) + \text{Th}(1) - \text{Cl}(1) \# 1 & \text{B1.10}(8) \\ & \text{N}(4) - \text{Th}(1) - \text{Cl}(1) \# 1 & \text{B1.10}(8) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(1) & \text{B1.76}(8) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(1) & \text{B1.76}(8) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(1) & \text{B1.76}(8) \\ & \text{N}(4) - \text{Th}(1) - \text{Cl}(1) & \text{B1.76}(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) & \text{B1.76}(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(1) & \text{B1.76}(8) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{Cl}(2) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{Sl}(2) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{Sl}(2) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{Sl}(2) \\ & \text{N}(4) - \text{Th}(1) - \text{Cl}(2) \# 1 & \text{Sl}(2) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{Sl}(2) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{Sl}(2) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{Sl}(2) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{Sl}(2) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{Sl}(2) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) \# 1 & \text{Sl}(2) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) & \text{Sl}(4) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) & \text{Sl}(4) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) & \text{Sl}(4) \\ & \text{N}(3) \# 1-\text{Th}(1) - \text{Cl}(2) & \text{Sl}(4) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(2) & \text{Sl}(4) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Cl}(2) & \text{Sl}(4) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Sl}(1) \# 1 & \text{Sl}(3) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Sl}(1) \# 1 & \text{Sl}(3) \\ & \text{N}(3) - \text{Th}(1) - \text{Sl}(1) \# 1 & \text{Sl}(3) \\ & \text{N}(4) - \text{Th}(1) - \text{Sl}(1) \# 1 & \text{Sl}(3) \\ & \text{N}(4) - \text{Th}(1) - \text{Sl}(1) \# 1 & \text{Sl}(3) \\ & \text{N}(4) = \text{Th}(1) - \text{Sl}(1) \# 1 & \text{Sl}(3) \\ & \text{N}(4) \# 1-\text{Th}(1) - \text{Sl}(1) \# 1 & \text{Sl}(3) \\ & \text{N}(3) = \text{Sl}(1) \\ & \text{Sl}(1) \# 1 & \text{Sl}(3) \\ & \text{N}(4) = \text{Th}(1) - \text{Sl}(1) \# 1 & \text{Sl}(3) \\ & \text{N}(3) = \text{Sl}(1) \\ & \text{Sl}(1) = $	N(1) - Th(1) - N(4)	112.65(9)
$\begin{split} & (4) \# 1 - Th (1) - N(4) & 155.69 (15) \\ & (3) \# 1 - Th (1) - Cl (1) \# 1 & 133.33 (8) \\ & N(3) - Th (1) - Cl (1) \# 1 & 90.04 (8) \\ & N(1) \# 1 - Th (1) - Cl (1) \# 1 & 90.04 (8) \\ & N(1) \# 1 - Th (1) - Cl (1) \# 1 & 81.70 (8) \\ & N(4) \# 1 - Th (1) - Cl (1) \# 1 & 81.70 (8) \\ & N(3) \# 1 - Th (1) - Cl (1) & 133.33 (8) \\ & N(3) - Th (1) - Cl (1) & 133.33 (8) \\ & N(3) - Th (1) - Cl (1) & 133.33 (8) \\ & N(4) - Th (1) - Cl (1) & 133.33 (8) \\ & N(4) - Th (1) - Cl (1) & 166.08 (6) \\ & N(4) \# 1 - Th (1) - Cl (1) & 81.70 (8) \\ & N(4) \# 1 - Th (1) - Cl (1) & 81.70 (8) \\ & N(4) \# 1 - Th (1) - Cl (2) \# 1 & 152.82 (10) \\ & N(3) \# 1 - Th (1) - C(12) \# 1 & 152.82 (10) \\ & N(3) - Th (1) - C (12) \# 1 & 152.82 (10) \\ & N(4) \# 1 - Th (1) - C (12) \# 1 & 152.84 (9) \\ & Cl (1) \# 1 - Th (1) - C (12) \# 1 & 152.84 (9) \\ & Cl (1) \# 1 - Th (1) - C (12) \# 1 & 152.84 (9) \\ & Cl (1) \# 1 - Th (1) - C (12) \# 1 & 152.84 (9) \\ & Cl (1) \# 1 - Th (1) - C (12) \# 1 & 152.84 (9) \\ & Cl (1) \# 1 - Th (1) - C (12) & 152.84 (9) \\ & N(3) - Th (1) - C (12) & 152.84 (9) \\ & N(4) \# 1 - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - C (12) & 152.84 (9) \\ & N(4) - Th (1) - S (1) \# 1 & 16.38 (8) \\ & N(1) - Th (1) - S (1) \# 1 & 16.38 (8) \\ & N(1) - Th (1) - S (1) \# 1 & 16.38 (8) \\ & N(3) - Th (1) - S (1) \# 1 & 16.38 (8) \\ & N(3) - Th (1) - S (1) \# 1 & 122.99 (8) \\ & N(4) - Th (1) - S (1) \# 1 & 122.99 (8) \\ & N(4) - Th (1) - S (1) & 112.29 (8) \\ & N(4) - Th (1) - S (1) & 112.29 (8) \\ & N(4) - Th (1) - S (1) & 112.29 (8) \\ & N(4) - Th (1) - S (1) & 112.29 (8) \\ & N(4) - Th (1) - S (1) & 112.29 (8) \\ & N(4) - Th (1) - S (1) & 112.$	N(1) #1 - Th(1) - N(4)	84.48(10)
$\begin{split} & (3) \# 1 - Th (1) - Cl (1) \# 1 & (3) 3 (8) \\ & (3) - Th (1) - Cl (1) \# 1 & (82.99(8)) \\ & (1) - Th (1) - Cl (1) \# 1 & (90.04(8)) \\ & (1) \# 1 - Th (1) - Cl (1) \# 1 & (90.04(8)) \\ & (4) \# 1 - Th (1) - Cl (1) \# 1 & (90.04(8)) \\ & (4) \# 1 - Th (1) - Cl (1) \# 1 & (90.04(8)) \\ & (3) \# 1 - Th (1) - Cl (1) & (10.08(6)) \\ & (3) \# 1 - Th (1) - Cl (1) & (10.08(6)) \\ & (1) \# 1 - Th (1) - Cl (1) & (10.08(6)) \\ & (1) \# 1 - Th (1) - Cl (1) & (10.08(6)) \\ & (1) \# 1 - Th (1) - Cl (1) & (10.08(6)) \\ & (1) \# 1 - Th (1) - Cl (1) & (10.08(6)) \\ & (1) \# 1 - Th (1) - Cl (1) & (10.08(6)) \\ & (1) \# 1 - Th (1) - Cl (1) & (10.08(6)) \\ & (1) \# 1 - Th (1) - Cl (1) & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) & (10.08(6)) \\ & (1) \# 1 - Th (1) - C(12) & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1 - Th (1) - S(1) \# 1 & (10.08(6)) \\ & (1) \# 1$	N(4) #1 - Th(1) - N(4)	155.69(15)
$\begin{split} &N(3) - Th(1) - Cl(1) \# 1 & graphone{2} $	N(3) #1-Th(1)-Cl(1) #1	133.33(8)
$\begin{split} & N(1) - Th(1) - Cl(1) \# 1 & 90.04(8) \\ & N(1) \# 1 - Th(1) - Cl(1) \# 1 & 166.08(6) \\ & N(4) \# 1 - Th(1) - Cl(1) \# 1 & 81.76(8) \\ & N(3) \# 1 - Th(1) - Cl(1) & 133.33(8) \\ & N(3) - Th(1) - Cl(1) & 133.33(8) \\ & N(3) - Th(1) - Cl(1) & 133.33(8) \\ & N(1) - Th(1) - Cl(1) & 166.08(6) \\ & N(1) \# 1 - Th(1) - Cl(1) & 90.04(8) \\ & N(4) \# 1 - Th(1) - Cl(1) & 81.76(8) \\ & N(4) - Th(1) - Cl(1) & 81.76(8) \\ & N(4) - Th(1) - Cl(1) & 81.990(5) \\ & N(3) \# 1 - Th(1) - Cl(2) \# 1 & 27.91(10) \\ & N(3) \# 1 - Th(1) - C(12) \# 1 & 27.91(10) \\ & N(3) \# 1 - Th(1) - C(12) \# 1 & 77.05(9) \\ & N(1) \# 1 - Th(1) - C(12) \# 1 & 73.54(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) - Th(1) - C(12) \# 1 & 152.82(10) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 27.91(10) \\ & N(3) \# 1 - Th(1) - C(12) & 27.91(10) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & N(4) - Th(1) - Si(1) \# 1 & 122.9(8) \\ & N(4) - Th(1) - Si(1) \# 1 & 122.9(8) \\ & N(4) - Th(1) - Si(1) \# 1 & 122.9(8) \\ & N(4) - Th(1) - Si(1) \# 1 & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ &$	N(3)-Th(1)-Cl(1)#1	82.99(8)
$\begin{split} & N(1) \# 1 - Th(1) - Cl(1) \# 1 & 166.08(6) \\ & N(4) \# 1 - Th(1) - Cl(1) \# 1 & 81.10(8) \\ & N(3) \# 1 - Th(1) - Cl(1) & 133.33(8) \\ & N(3) - Th(1) - Cl(1) & 133.33(8) \\ & N(1) - Th(1) - Cl(1) & 166.08(6) \\ & N(1) \# 1 - Th(1) - Cl(1) & 90.04(8) \\ & N(4) \# 1 - Th(1) - Cl(1) & 81.76(8) \\ & N(4) - Th(1) - Cl(1) & 81.76(8) \\ & N(4) - Th(1) - Cl(1) & 81.76(8) \\ & N(4) - Th(1) - Cl(2) \# 1 & 27.91(10) \\ & N(3) \# 1 - Th(1) - C(12) \# 1 & 27.91(10) \\ & N(3) - Th(1) - C(12) \# 1 & 27.91(10) \\ & N(3) - Th(1) - C(12) \# 1 & 27.91(10) \\ & N(3) - Th(1) - C(12) \# 1 & 77.05(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 26.76(9) \\ & N(4) - Th(1) - C(12) \# 1 & 26.76(9) \\ & N(4) - Th(1) - C(12) \# 1 & 26.76(9) \\ & N(4) - Th(1) - C(12) \# 1 & 122.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) & 11 & 122.82(10) \\ & N(3) \# 1 - Th(1) - C(12) & 11 & 26.76(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) \# 1 - Th(1) - C(12) & 27.91(10) \\ & N(4) \# 1 - Th(1) - C(12) & 26.76(9) \\ & N(4) \# 1 - Th(1) - C(12) & 73.14(7) \\ & Cl(1) - Th(1) - C(12) & 73.14(7) \\ & Cl(1) - Th(1) - C(12) & 73.14(7) \\ & Cl(1) - Th(1) - C(12) & 73.14(7) \\ & Cl(1) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 112.29(8) \\ & N(4) - Th(1) - Si(1) \# 1 & 122.9(8) \\ & N(4) - Th(1) - Si(1) \# 1 & 122.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & N(4) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 29.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 29.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 29.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 22.9(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8)$	N(1)-Th(1)-Cl(1)#1	90.04(8)
$\begin{split} & N(4) \# 1 - Th(1) - Cl(1) \# 1 \\ & N(4) - Th(1) - Cl(1) \# 1 \\ & N(3) \# 1 - Th(1) - Cl(1) \\ & N(3) - Th(1) - Cl(1) \\ & N(3) - Th(1) - Cl(1) \\ & N(3) - Th(1) - Cl(1) \\ & N(4) \# 1 - Th(1) - Cl(1) \\ & N(4) \# 1 - Th(1) - Cl(1) \\ & N(4) \# 1 - Th(1) - Cl(1) \\ & N(4) - Th(1) - Cl(1) \\ & N(4) - Th(1) - Cl(1) \\ & N(4) - Th(1) - Cl(2) \# 1 \\ & N(4) - Th(1) - C(12) \# 1 \\ & N(3) - Th(1) - C(12) \# 1 \\ & N(3) - Th(1) - C(12) \# 1 \\ & N(3) - Th(1) - C(12) \# 1 \\ & N(3) - Th(1) - C(12) \# 1 \\ & N(3) - Th(1) - C(12) \# 1 \\ & N(4) - Th(1) - C(12) \# 1 \\ & N(4) - Th(1) - C(12) \# 1 \\ & N(4) - Th(1) - C(12) \# 1 \\ & N(4) - Th(1) - C(12) \# 1 \\ & N(3) \# 1 - Th(1) - C(12) \# 1 \\ & N(3) \# 1 - Th(1) - C(12) \# 1 \\ & N(3) \# 1 - Th(1) - C(12) \\ & N(3) - Th(1) - C(12) \\ & N(4) - Th(1) - C(12) \\ & N(3) - Th(1) - C(12) \\ & N(4) \# 1 - Th(1) - C(12) \\ & N(4) \# 1 - Th(1) - C(12) \\ & N(4) \# 1 - Th(1) - C(12) \\ & N(4) \# 1 - Th(1) - C(12) \\ & N(4) - Th(1) - C(12) \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(4) - Th(1) - Si(1) \# 1 \\ & N(4) - Th(1) - Si(1) \# 1 \\ & N(4) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(3) - Th(1) - Si(1) \# 1 \\ & N(4) - Th(1) - Si(1) \# 1 \\ & N(4) - Th(1) - Si(1) \# 1 \\ & N(4) - Th(1) - Si(1) \\ & N(4) - Th(1) - $	N(1)#1-Th(1)-Cl(1)#1	166.08(6)
$\begin{split} & N(4) - Th(1) - Cl(1) \# 1 & 81.76(8) \\ & N(3) \# 1 - Th(1) - Cl(1) & 82.99(8) \\ & N(3) - Th(1) - Cl(1) & 133.33(8) \\ & N(1) - Th(1) - Cl(1) & 90.04(8) \\ & N(4) \# 1 - Th(1) - Cl(1) & 81.76(8) \\ & N(4) \# 1 - Th(1) - Cl(1) & 81.76(8) \\ & N(4) - Th(1) - Cl(1) & 81.90(5) \\ & N(3) \# 1 - Th(1) - Cl(2) \# 1 & 27.91(10) \\ & N(3) - Th(1) - C(12) \# 1 & 152.82(10) \\ & N(1) - Th(1) - C(12) \# 1 & 152.82(10) \\ & N(1) - Th(1) - C(12) \# 1 & 152.84(9) \\ & N(4) - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 73.14(7) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(4) - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(4) \# 1 - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 116.32(3) \\ & Cl(1) \# 1 - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1$	N(4)#1-Th(1)-Cl(1)#1	81.10(8)
$\begin{split} &N(3) \# 1 - Th(1) - Cl(1) &82.99(8) \\ &N(3) - Th(1) - Cl(1) &133.33(8) \\ &N(1) - Th(1) - Cl(1) &166.08(6) \\ &N(1) \# 1 - Th(1) - Cl(1) &90.04(8) \\ &N(4) \# 1 - Th(1) - Cl(1) &81.76(8) \\ &N(4) - Th(1) - Cl(1) &81.10(8) \\ &Cl(1) \# 1 - Th(1) - Cl(1) &89.90(5) \\ &N(3) \# 1 - Th(1) - C(12) \# 1 &27.91(10) \\ &N(3) - Th(1) - C(12) \# 1 &152.82(10) \\ &N(1) - Th(1) - C(12) \# 1 &87.05(9) \\ &N(1) \# 1 - Th(1) - C(12) \# 1 &87.05(9) \\ &N(4) - Th(1) - C(12) \# 1 &162.84(9) \\ &Cl(1) \# 1 - Th(1) - C(12) \# 1 &162.84(9) \\ &Cl(1) \# 1 - Th(1) - C(12) \# 1 &162.84(9) \\ &Cl(1) \# 1 - Th(1) - C(12) \# 1 &162.82(10) \\ &N(3) \# 1 - Th(1) - C(12) \# 1 &73.14(7) \\ &N(3) \# 1 - Th(1) - C(12) &152.82(10) \\ &N(3) - Th(1) - C(12) &87.05(9) \\ &N(4) \# 1 - Th(1) - C(12) &87.05(9) \\ &N(4) \# 1 - Th(1) - C(12) &152.84(9) \\ &N(4) \# 1 - Th(1) - C(12) &152.84(9) \\ &N(4) \# 1 - Th(1) - C(12) &152.84(9) \\ &N(4) - Th(1) - C(12) &152.84(9) \\ &N(4) \# 1 - Th(1) - C(12) &152.84(9) \\ &N(4) \# 1 - Th(1) - C(12) &179.15(14) \\ &N(3) \# 1 - Th(1) - C(12) &179.15(14) \\ &N(3) \# 1 - Th(1) - Si(1) \# 1 &29.57(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(4) - Th(1) - Si(1) \# 1 &122.9(8) \\ &Cl(1) \# 1 - Th(1) - Si(1) \# 1 &122.9(8) \\ &Cl(1) \# 1 - Th(1) - Si(1) \# 1 &125.57(7) \\ &N(3) \# 1 - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(3) - Th(1) - Si(1) \# 1 &16.38(8) \\ &N(4) - Th(1) - Si(1) &116.38(8) \\ &N(4) - Th(1) - Si(1) &116.29(8) \\ &N(4$	N(4)-Th(1)-Cl(1)#1	81.76(8)
$\begin{split} & N(3) - Th(1) - Cl(1) & 133.33(8) \\ & N(1) - Th(1) - Cl(1) & 166.08(6) \\ & N(1) \# 1 - Th(1) - Cl(1) & 90.04(8) \\ & N(4) \# 1 - Th(1) - Cl(1) & 81.76(8) \\ & N(4) - Th(1) - Cl(1) & 81.0(8) \\ & Cl(1) \# 1 - Th(1) - Cl(1) & 89.90(5) \\ & N(3) \# 1 - Th(1) - C(12) \# 1 & 27.91(10) \\ & N(3) - Th(1) - C(12) \# 1 & 152.82(10) \\ & N(1) - Th(1) - C(12) \# 1 & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 106.24(7) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 106.24(7) \\ & Cl(1) - Th(1) - C(12) \# 1 & 73.14(7) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 179.15(14) \\ & N(3) - Th(1) - C(12) & 179.15(14) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 116.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 116.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 112.29(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & N(4) - Th(1) - Si(1) \# 1 & 122.9(8) \\ & N(4) - Th(1) - Si(1) \# 1 & 122.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1$	N(3)#1-Th(1)-Cl(1)	82.99(8)
$\begin{split} & N(1) - Th(1) - Cl(1) & 166.08(6) \\ & N(1) \# 1 - Th(1) - Cl(1) & 90.04(8) \\ & N(4) \# 1 - Th(1) - Cl(1) & 81.76(8) \\ & N(4) - Th(1) - Cl(1) & 81.10(8) \\ & Cl(1) \# 1 - Th(1) - Cl(2) \# 1 & 27.91(10) \\ & N(3) - Th(1) - C(12) \# 1 & 152.82(10) \\ & N(1) - Th(1) - C(12) \# 1 & 93.54(9) \\ & N(1) \# 1 - Th(1) - C(12) \# 1 & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) \# 1 - Th(1) - C(12) & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 26.76(9) \\ & Cl(1) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 166.23(7) \\ & Cl(1) \# 1 - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 116.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 112.29(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(7) \\ & N(4) \# 1 - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 11$	N(3)-Th(1)-Cl(1)	133.33(8)
$\begin{split} & N(1) \# 1 - Th(1) - Cl(1) & 90.04(8) \\ & N(4) \# 1 - Th(1) - Cl(1) & 81.76(8) \\ & N(4) - Th(1) - Cl(1) & 89.90(5) \\ & N(3) \# 1 - Th(1) - C(12) \# 1 & 27.91(10) \\ & N(3) - Th(1) - C(12) \# 1 & 152.82(10) \\ & N(1) \# 1 - Th(1) - C(12) \# 1 & 93.54(9) \\ & N(1) \# 1 - Th(1) - C(12) \# 1 & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 73.14(7) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 87.05(9) \\ & N(1) \# 1 - Th(1) - C(12) & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 166.32(3) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(3) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.2$	N(1)-Th(1)-Cl(1)	166.08(6)
$\begin{split} & N(4) \# 1 - Th(1) - Cl(1) & \$ 1.76(\$) \\ & N(4) - Th(1) - Cl(1) & \$ 1.10(\$) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & ?7.91(10) \\ & N(3) - Th(1) - C(12) \# 1 & 152.82(10) \\ & N(1) - Th(1) - C(12) \# 1 & 93.54(9) \\ & N(1) \# 1 - Th(1) - C(12) \# 1 & \$7.05(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 162.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) - Th(1) - C(12) \# 1 & 106.24(7) \\ & Cl(1) - Th(1) - C(12) \# 1 & 73.14(7) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & \$7.05(9) \\ & N(1) \# 1 - Th(1) - C(12) & \$7.05(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 166.23(7) \\ & Cl(1) \# 1 - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 166.32(3) \\ & N(4) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29($	N(1)#1-Th(1)-Cl(1)	90.04(8)
$\begin{array}{llllllllllllllllllllllllllllllllllll$	N(4)#1-Th(1)-Cl(1)	81.76(8)
$\begin{array}{llllllllllllllllllllllllllllllllllll$	N(4)-Th(1)-Cl(1)	81.10(8)
$\begin{split} & N(3) \# 1 - Th(1) - C(12) \# 1 & 27.91(10) \\ & N(3) - Th(1) - C(12) \# 1 & 152.82(10) \\ & N(1) \# 1 - Th(1) - C(12) \# 1 & 93.54(9) \\ & N(1) \# 1 - Th(1) - C(12) \# 1 & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 166.24(7) \\ & Cl(1) - Th(1) - C(12) \# 1 & 73.14(7) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 27.91(10) \\ & N(1) - Th(1) - C(12) & 27.91(10) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 166.23(7) \\ & C(12) \# 1 - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 166.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 166.32(3) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 12.29(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(4) \# 1 - Th(1) - Si(1) & 122.9(8) \\ & N(1) - Th(1) - Si(1) & 122.9(8) \\ & N(1) - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & $	Cl(1)#1-Th(1)-Cl(1)	89.90(5)
$\begin{split} & N(3) - Th(1) - C(12) \# 1 & 152.82(10) \\ & N(1) - Th(1) - C(12) \# 1 & 93.54(9) \\ & N(1) \# 1 - Th(1) - C(12) \# 1 & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 106.24(7) \\ & Cl(1) - Th(1) - C(12) \# 1 & 73.14(7) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 152.82(10) \\ & N(1) - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 166.23(7) \\ & Cl(1) \# 1 - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 160.32(3) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(4) \# 1 - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - $	N(3)#1-Th(1)-C(12)#1	27.91(10)
$\begin{split} & N(1) - Th(1) - C(12) \# 1 & 93.54(9) \\ & N(1) \# 1 - Th(1) - C(12) \# 1 & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 26.76(9) \\ & N(4) - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 106.24(7) \\ & Cl(1) - Th(1) - C(12) \# 1 & 73.14(7) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 87.05(9) \\ & N(1) \# 1 - Th(1) - C(12) & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 26.76(9) \\ & Cl(1) \# 1 - Th(1) - C(12) & 106.23(7) \\ & Cl(1) \# 1 - Th(1) - C(12) & 106.23(7) \\ & Cl(1) \# 1 - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 116.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 12.29(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) & 116.38(8) \\ & N(3) - Th(1) - Si(1) & 122.9(5) \\ & N(4) - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1$	N(3)-Th(1)-C(12)#1	152.82(10)
$\begin{split} & N(1) \# 1 - Th(1) - C(12) \# 1 & 87.05(9) \\ & N(4) \# 1 - Th(1) - C(12) \# 1 & 26.76(9) \\ & N(4) - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 73.14(7) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 27.91(10) \\ & N(1) - Th(1) - C(12) & 87.05(9) \\ & N(1) \# 1 - Th(1) - C(12) & 87.05(9) \\ & N(1) \# 1 - Th(1) - C(12) & 93.54(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) \# 1 - Th(1) - C(12) & 26.76(9) \\ & Cl(1) \# 1 - Th(1) - C(12) & 26.76(9) \\ & Cl(1) \# 1 - Th(1) - C(12) & 106.23(7) \\ & Cl(1) \# 1 - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 160.32(3) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 12.29(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) & 116.38(8) \\ & N(3) - Th(1) - Si(1) & 116.38(8) \\ & N(3) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) $	N(1)-Th(1)-C(12)#1	93.54(9)
$\begin{split} & N(4) \# 1 - Th(1) - C(12) \# 1 & 26.76(9) \\ & N(4) - Th(1) - C(12) \# 1 & 152.84(9) \\ & Cl(1) \# 1 - Th(1) - C(12) \# 1 & 73.14(7) \\ & N(3) \# 1 - Th(1) - C(12) & 152.82(10) \\ & N(3) - Th(1) - C(12) & 27.91(10) \\ & N(1) - Th(1) - C(12) & 87.05(9) \\ & N(1) \# 1 - Th(1) - C(12) & 93.54(9) \\ & N(4) \# 1 - Th(1) - C(12) & 26.76(9) \\ & Cl(1) \# 1 - Th(1) - C(12) & 26.76(9) \\ & Cl(1) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 26.76(9) \\ & Cl(1) \# 1 - Th(1) - C(12) & 106.23(7) \\ & Cl(1) - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 166.32(3) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 12.29(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & Cl(1) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 16.38(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) & 116.38(8) \\ & N(3) - Th(1) - Si(1) & 116.38(8) \\ & N(3) - Th(1) - Si(1) & 116.38(8) \\ & N(4) - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - T$	N(1)#1-Th(1)-C(12)#1	87.05(9)
$\begin{split} N(4) -Th(1) -C(12) \# 1 & 152.84(9) \\ Cl(1) \# 1 -Th(1) -C(12) \# 1 & 106.24(7) \\ Cl(1) -Th(1) -C(12) \# 1 & 73.14(7) \\ N(3) \# 1 -Th(1) -C(12) & 152.82(10) \\ N(3) -Th(1) -C(12) & 27.91(10) \\ N(1) -Th(1) -C(12) & 87.05(9) \\ N(1) \# 1 -Th(1) -C(12) & 93.54(9) \\ N(4) \# 1 -Th(1) -C(12) & 152.84(9) \\ N(4) -Th(1) -C(12) & 152.84(9) \\ N(4) \# 1 -Th(1) -C(12) & 152.84(9) \\ N(4) \# 1 -Th(1) -C(12) & 152.84(9) \\ N(4) \# 1 -Th(1) -C(12) & 152.84(9) \\ N(3) \# 1 -Th(1) -C(12) & 106.23(7) \\ C(12) \# 1 -Th(1) -C(12) & 106.23(7) \\ C(12) \# 1 -Th(1) -Si(1) \# 1 & 16.38(8) \\ N(4) \# 1 -Th(1) -Si(1) \# 1 & 122.9(8) \\ Cl(1) \# 1 -Th(1) -Si(1) \# 1 & 122.9(8) \\ Cl(1) \# 1 -Th(1) -Si(1) \# 1 & 125.57(7) \\ N(3) \# 1 -Th(1) -Si(1) \# 1 & 125.57(7) \\ N(3) \# 1 -Th(1) -Si(1) \# 1 & 125.57(7) \\ N(3) \# 1 -Th(1) -Si(1) \# 1 & 125.57(7) \\ N(3) \# 1 -Th(1) -Si(1) & 116.38(8) \\ N(3) -Th(1) -Si(1) & 122.9(8) \\ N(1) -Th(1) -Si(1) & 122.9(8) \\ N(1) -Th(1) -Si(1) & 122.9(8) \\ N(4) -Th(1) -Si(1) & 112.29(8) \\ N(4) -Th(1) -Si(1) & 112.29$	N(4)#1-Th(1)-C(12)#1	26.76(9)
Cl (1) #1-Th (1) -C (12) #1 Cl (1) -Th (1) -C (12) #1 N (3) #1-Th (1) -C (12) N (3) -Th (1) -C (12) N (1) -Th (1) -C (12) N (1) -Th (1) -C (12) N (1) #1-Th (1) -C (12) N (1) #1-Th (1) -C (12) N (4) #1-Th (1) -C (12) Cl (1) #1-Th (1) -C (12) Cl (1) -Th (1) -C (12) Cl (1) -Th (1) -C (12) Cl (1) -Th (1) -C (12) N (3) #1-Th (1) -C (12) N (3) #1-Th (1) -Si (1) #1 N (3) #1-Th (1) -Si (1) #1 N (3) -Th (1) -Si (1) #1 N (4) -Th (1) -Si (1) #1 N (3) #1-Th (1) -Si (1) #1 N (3) #1-Th (1) -Si (1) #1 N (3) -Th (1) -Si (1) N (3) +1-Th (1) -Si (1) N (4) +1 -Th (1) -Si (1) N (4) +1 -Th (1	N(4)-Th(1)-C(12)#1	152.84(9)
Cl(1) - Th(1) - C(12) #1 $73.14(7)$ $N(3) #1 - Th(1) - C(12)$ $152.82(10)$ $N(3) - Th(1) - C(12)$ $27.91(10)$ $N(1) - Th(1) - C(12)$ $87.05(9)$ $N(1) #1 - Th(1) - C(12)$ $93.54(9)$ $N(4) #1 - Th(1) - C(12)$ $152.84(9)$ $N(4) - Th(1) - C(12)$ $26.76(9)$ $Cl(1) #1 - Th(1) - C(12)$ $73.14(7)$ $Cl(1) - Th(1) - C(12)$ $73.14(7)$ $N(3) #1 - Th(1) - C(12)$ $106.23(7)$ $N(3) #1 - Th(1) - Si(1) #1$ $96.57(7)$ $N(1) - Th(1) - Si(1) #1$ $96.57(7)$ $N(1) + Th(1) - Si(1) #1$ $96.57(7)$ $N(4) - Th(1) - Si(1) #1$ $160.32(3)$ $Cl(1) + Th(1) - Si(1) #1$ $16.38(8)$ $N(3) - Th(1) - Si(1) #1$ $29.57(8)$ $N(1) - Th(1) - Si(1)$ $116.38(8)$ $N(3) - Th(1) - Si(1)$ $29.57(8)$ $N(1) - Th(1) - Si(1)$ $12.29(8)$ $N(1) - Th(1) - Si(1)$ $112.29(8)$ $N(4) + Th(1) - Si(1)$ $112.29(8)$ $N(4) - Th(1) - Si(1)$ $112.29(8)$ $N(4) - Th(1) - Si(1)$ $112.29(8)$	Cl(1)#1-Th(1)-C(12)#1	106.24(7)
$\begin{split} & N(3) \#1-Th(1)-C(12) & 152.82(10) \\ & N(3)-Th(1)-C(12) & 27.91(10) \\ & N(1)-Th(1)-C(12) & 93.54(9) \\ & N(4)\#1-Th(1)-C(12) & 152.84(9) \\ & N(4)-Th(1)-C(12) & 152.84(9) \\ & N(4)-Th(1)-C(12) & 152.84(9) \\ & N(4)-Th(1)-C(12) & 26.76(9) \\ & Cl(1)\#1-Th(1)-C(12) & 73.14(7) \\ & Cl(1)-Th(1)-C(12) & 106.23(7) \\ & C(12)\#1-Th(1)-C(12) & 179.15(14) \\ & N(3)\#1-Th(1)-Si(1)\#1 & 29.57(8) \\ & N(3)-Th(1)-Si(1)\#1 & 116.38(8) \\ & N(1)-Th(1)-Si(1)\#1 & 122.13(6) \\ & N(4)\#1-Th(1)-Si(1)\#1 & 122.9(8) \\ & Cl(1)\#1-Th(1)-Si(1)\#1 & 122.9(8) \\ & Cl(1)\#1-Th(1)-Si(1)\#1 & 125.57(7) \\ & N(3)\#1-Th(1)-Si(1)\#1 & 125.57(7) \\ & N(3)\#1-Th(1)-Si(1) \#1 & 125.57(7) \\ & N(3)\#1-Th(1)-Si(1) \#1 & 125.57(7) \\ & N(3)\#1-Th(1)-Si(1) & 116.38(8) \\ & N(3)-Th(1)-Si(1) & 116.38(8) \\ & N(3)-Th(1)-Si(1) & 116.38(8) \\ & N(1)-Th(1)-Si(1) & 29.57(8) \\ & N(1)-Th(1)-Si(1) & 32.13(6) \\ & N(1)\#1-Th(1)-Si(1) & 122.9(8) \\ & N(4)-Th(1)-Si(1) & 112.29(8) \\ & N(4)-Th(1)-Si(1$	Cl(1)-Th(1)-C(12)#1	73.14(7)
$\begin{array}{llllllllllllllllllllllllllllllllllll$	N(3)#1-Th(1)-C(12)	152.82(10)
$\begin{array}{llllllllllllllllllllllllllllllllllll$	N(3) - Th(1) - C(12)	27.91(10)
$\begin{split} & N(1) \# 1 - Th(1) - C(12) & 93.54(9) \\ & N(4) \# 1 - Th(1) - C(12) & 152.84(9) \\ & N(4) - Th(1) - C(12) & 26.76(9) \\ & C1(1) \# 1 - Th(1) - C(12) & 73.14(7) \\ & C1(1) - Th(1) - C(12) & 106.23(7) \\ & C(12) \# 1 - Th(1) - C(12) & 179.15(14) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 29.57(8) \\ & N(3) - Th(1) - Si(1) \# 1 & 116.38(8) \\ & N(1) - Th(1) - Si(1) \# 1 & 96.57(7) \\ & N(1) \# 1 - Th(1) - Si(1) \# 1 & 32.13(6) \\ & N(4) \# 1 - Th(1) - Si(1) \# 1 & 112.29(8) \\ & C1(1) \# 1 - Th(1) - Si(1) \# 1 & 122.9(8) \\ & C1(1) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) \# 1 & 125.57(7) \\ & N(3) \# 1 - Th(1) - Si(1) & 116.38(8) \\ & N(3) - Th(1) - Si(1) & 116.38(8) \\ & N(3) - Th(1) - Si(1) & 116.38(8) \\ & N(1) - Th(1) - Si(1) & 122.13(6) \\ & N(1) \# 1 - Th(1) - Si(1) & 122.9(8) \\ & N(4) - Th(1) - Si(1) & 112.29(8) \\ & N(4) - Th(1) - S(1) & 112.29(8) \\ & N(4) - Th(1) - S(1) & 112.29(8) \\ & N(4) - Th(1) - S(1) & 11$	N(1) - Th(1) - C(12)	87.05(9)
N (4) #1-Th (1) -C (12)152.84 (9)N (4) -Th (1) -C (12)26.76 (9)Cl (1) #1-Th (1) -C (12)73.14 (7)Cl (1) -Th (1) -C (12)106.23 (7)C (12) #1-Th (1) -C (12)179.15 (14)N (3) #1-Th (1) -Si (1) #129.57 (8)N (3) -Th (1) -Si (1) #1116.38 (8)N (1) -Th (1) -Si (1) #196.57 (7)N (1) #1-Th (1) -Si (1) #132.13 (6)N (4) #1-Th (1) -Si (1) #1112.29 (8)Cl (1) #1-Th (1) -Si (1) #11160.32 (3)Cl (1) #1-Th (1) -Si (1) #179.27 (3)C (12) #1-Th (1) -Si (1) #1125.57 (7)N (3) #1-Th (1) -Si (1)116.38 (8)N (3) -Th (1) -Si (1)116.38 (8)N (1) -Th (1) -Si (1)116.38 (8)N (1) -Th (1) -Si (1)112.29 (8)N (1) #1-Th (1) -Si (1)96.57 (7)N (4) #1-Th (1) -Si (1)112.29 (8)N (4) #1-Th (1) -Si (1)112.29 (8)N (4) -Th (1) -Si (1)112.29 (8)N (4) -Th (1) -Si (1)112.29 (8)	N(1) #1-Th(1) -C(12)	93.54(9)
N (4) -Th (1) -C (12)26.76 (9)Cl (1) $\#1$ -Th (1) -C (12)73.14 (7)Cl (1) -Th (1) -C (12)106.23 (7)C (12) $\#1$ -Th (1) -C (12)179.15 (14)N (3) $\#1$ -Th (1) -Si (1) $\#1$ 29.57 (8)N (3) -Th (1) -Si (1) $\#1$ 116.38 (8)N (1) -Th (1) -Si (1) $\#1$ 96.57 (7)N (1) $\#1$ -Th (1) -Si (1) $\#1$ 32.13 (6)N (4) $\#1$ -Th (1) -Si (1) $\#1$ 81.11 (8)N (4) -Th (1) -Si (1) $\#1$ 112.29 (8)Cl (1) $\#1$ -Th (1) -Si (1) $\#1$ 160.32 (3)Cl (1) -Th (1) -Si (1) $\#1$ 79.27 (3)C (12) $\#1$ -Th (1) -Si (1) $\#1$ 125.57 (7)N (3) $\#1$ -Th (1) -Si (1)116.38 (8)N (3) -Th (1) -Si (1)116.38 (8)N (1) -Th (1) -Si (1)32.13 (6)N (1) $\#1$ -Th (1) -Si (1)32.13 (6)N (1) $\#1$ -Th (1) -Si (1)112.29 (8)N (4) $\#1$ -Th (1) -Si (1)112.29 (8)N (4) $\#1$ -Th (1) -Si (1)112.29 (8)N (4) $\#1$ -Th (1) -Si (1)112.29 (8)	N(4) #1-Th(1) -C(12)	152.84(9)
C1 (1) #1-Th (1) -C (12) $73.14(7)$ C1 (1) -Th (1) -C (12) $106.23(7)$ C (12) #1-Th (1) -Si (1) #1 $179.15(14)$ N (3) #1-Th (1) -Si (1) #1 $29.57(8)$ N (3) -Th (1) -Si (1) #1 $116.38(8)$ N (1) -Th (1) -Si (1) #1 $96.57(7)$ N (1) #1-Th (1) -Si (1) #1 $32.13(6)$ N (4) #1-Th (1) -Si (1) #1 $112.29(8)$ C1 (1) #1-Th (1) -Si (1) #1 $160.32(3)$ C1 (1) -Th (1) -Si (1) #1 $79.27(3)$ C (12) #1-Th (1) -Si (1) #1 $79.27(3)$ C (12) -Th (1) -Si (1) #1 $125.57(7)$ N (3) #1-Th (1) -Si (1) $116.38(8)$ N (3) -Th (1) -Si (1) $116.38(8)$ N (1) -Th (1) -Si (1) $96.57(7)$ N (1) #1-Th (1) -Si (1) $96.57(7)$ N (4) #1-Th (1) -Si (1) $112.29(8)$ N (4) #1-Th (1) -Si (1) $112.29(8)$ N (4) -Th (1) -Si (1) $112.29(8)$	N(4) - Th(1) - C(12)	26.76(9)
C1(1) -Tn(1) -C(12) $106.23(7)$ $C(12) #1 -Th(1) -C(12)$ $179.15(14)$ $N(3) #1 -Th(1) -Si(1) #1$ $29.57(8)$ $N(3) -Th(1) -Si(1) #1$ $116.38(8)$ $N(1) -Th(1) -Si(1) #1$ $96.57(7)$ $N(1) #1 -Th(1) -Si(1) #1$ $32.13(6)$ $N(4) #1 -Th(1) -Si(1) #1$ $81.11(8)$ $N(4) -Th(1) -Si(1) #1$ $112.29(8)$ $C1(1) #1 -Th(1) -Si(1) #1$ $160.32(3)$ $C1(1) -Th(1) -Si(1) #1$ $79.27(3)$ $C(12) #1 - Th(1) -Si(1) #1$ $79.27(3)$ $C(12) -Th(1) -Si(1) #1$ $125.57(7)$ $N(3) #1 - Th(1) - Si(1)$ $116.38(8)$ $N(3) - Th(1) - Si(1)$ $32.13(6)$ $N(1) -Th(1) - Si(1)$ $96.57(7)$ $N(4) #1 - Th(1) - Si(1)$ $112.29(8)$ $N(4) -Th(1) - Si(1)$ $112.29(8)$ $N(4) -Th(1) - Si(1)$ $81.11(7)$	CI(1) #I - Th(1) - C(12)	/3.14(/)
C(12) #1-Th(1)-C(12) $179.15(14)$ $N(3) #1-Th(1)-Si(1) #1$ $29.57(8)$ $N(3) -Th(1)-Si(1) #1$ $116.38(8)$ $N(1) -Th(1)-Si(1) #1$ $96.57(7)$ $N(1) #1-Th(1)-Si(1) #1$ $32.13(6)$ $N(4) #1-Th(1)-Si(1) #1$ $81.11(8)$ $N(4) -Th(1)-Si(1) #1$ $112.29(8)$ $Cl(1) #1-Th(1)-Si(1) #1$ $160.32(3)$ $Cl(1) -Th(1)-Si(1) #1$ $79.27(3)$ $C(12) #1-Th(1)-Si(1) #1$ $79.27(3)$ $C(12) -Th(1)-Si(1) #1$ $125.57(7)$ $N(3) #1-Th(1)-Si(1)$ $116.38(8)$ $N(3) -Th(1)-Si(1)$ $116.38(8)$ $N(1) -Th(1)-Si(1)$ $32.13(6)$ $N(1) #1-Th(1)-Si(1)$ $96.57(7)$ $N(4) #1-Th(1)-Si(1)$ $112.29(8)$ $N(4) -Th(1)-Si(1)$ $81.11(7)$	CI(I) = Tn(I) = C(I2)	106.23(7)
N (3) #1-Th (1) -S1 (1) #129.57 (8)N (3) -Th (1) -Si (1) #1116.38 (8)N (1) -Th (1) -Si (1) #196.57 (7)N (1) #1-Th (1) -Si (1) #132.13 (6)N (4) #1-Th (1) -Si (1) #181.11 (8)N (4) -Th (1) -Si (1) #1112.29 (8)C1 (1) #1-Th (1) -Si (1) #1160.32 (3)C1 (1) -Th (1) -Si (1) #179.27 (3)C (12) #1-Th (1) -Si (1) #154.99 (7)C (12) -Th (1) -Si (1) #1125.57 (7)N (3) #1-Th (1) -Si (1)116.38 (8)N (3) -Th (1) -Si (1)116.38 (8)N (1) -Th (1) -Si (1)96.57 (7)N (1) #1-Th (1) -Si (1)96.57 (7)N (4) #1-Th (1) -Si (1)112.29 (8)N (4) -Th (1) -Si (1)81.11 (7)	C(12) #1 - Tn(1) - C(12)	1/9.15(14)
N(3) - III(1) - SI(1) #1II6.38(8)N(1) - Th(1) - SI(1) #1 $96.57(7)$ N(1) #1 - Th(1) - SI(1) #1 $32.13(6)$ N(4) #1 - Th(1) - SI(1) #1 $81.11(8)$ N(4) - Th(1) - SI(1) #1 $112.29(8)$ Cl(1) #1 - Th(1) - SI(1) #1 $160.32(3)$ Cl(1) - Th(1) - SI(1) #1 $79.27(3)$ C(12) #1 - Th(1) - SI(1) #1 $54.99(7)$ C(12) - Th(1) - SI(1) #1 $125.57(7)$ N(3) #1 - Th(1) - SI(1) $116.38(8)$ N(3) - Th(1) - SI(1) $29.57(8)$ N(1) - Th(1) - SI(1) $32.13(6)$ N(1) #1 - Th(1) - SI(1) $96.57(7)$ N(4) #1 - Th(1) - SI(1) $112.29(8)$ N(4) - Th(1) - SI(1) $81.11(7)$	N(3) # I = III(I) = SI(I) # I N(3) = mb(1) = Si(1) # I	29.57(0)
N(1) = III(1) = SI(1) #1 96.37(7) N(1) #1 = Th(1) = SI(1) #1 32.13(6) N(4) #1 = Th(1) = SI(1) #1 81.11(8) N(4) = Th(1) = SI(1) #1 112.29(8) C1(1) #1 = Th(1) = SI(1) #1 160.32(3) C1(1) = Th(1) = SI(1) #1 79.27(3) C(12) #1 = Th(1) = SI(1) #1 54.99(7) C(12) = Th(1) = SI(1) #1 125.57(7) N(3) #1 = Th(1) = SI(1) 116.38(8) N(3) = Th(1) = SI(1) 116.38(8) N(1) = Th(1) = SI(1) 32.13(6) N(1) #1 = Th(1) = SI(1) 96.57(7) N(4) #1 = Th(1) = SI(1) 112.29(8) N(4) = Th(1) = SI(1) 81.11(7)	N(3) = III(1) = SI(1) # I N(1) = mb(1) = Si(1) # I	110.30(0)
N(1)#1-In(1)-S1(1)#1S2.13(6)N(4)#1-Th(1)-Si(1)#181.11(8)N(4)-Th(1)-Si(1)#1112.29(8)C1(1)#1-Th(1)-Si(1)#1160.32(3)C1(1)-Th(1)-Si(1)#179.27(3)C(12)#1-Th(1)-Si(1)#154.99(7)C(12)-Th(1)-Si(1)#1125.57(7)N(3)#1-Th(1)-Si(1)116.38(8)N(3)-Th(1)-Si(1)116.38(8)N(1)-Th(1)-Si(1)32.13(6)N(1)#1-Th(1)-Si(1)96.57(7)N(4)#1-Th(1)-Si(1)112.29(8)N(4)-Th(1)-Si(1)81.11(7)	$N(\perp) = \prod (\perp) = S \perp (\perp) \# \perp$ $N(\perp) \# 1 = m S(\perp) = S \downarrow (\perp) \# 1$	90.07(7)
N(4) #1-Th(1) -S1(1) #1 S1.11(8) N(4) -Th(1) -Si(1) #1 112.29(8) C1(1) #1-Th(1) -Si(1) #1 160.32(3) C1(1) -Th(1) -Si(1) #1 79.27(3) C(12) #1-Th(1) -Si(1) #1 54.99(7) C(12) -Th(1) -Si(1) #1 125.57(7) N(3) #1-Th(1) -Si(1) 116.38(8) N(3) -Th(1) -Si(1) 116.38(8) N(1) -Th(1) -Si(1) 29.57(8) N(1) #1-Th(1) -Si(1) 32.13(6) N(1) #1-Th(1) -Si(1) 112.29(8) N(4) #1-Th(1) -Si(1) 81.11(7)	N(1) #1 - III(1) - SI(1) #1 N(4) #1 - Tb(1) - Si(1) #1	32.13(0) 91 11(9)
N(4) = 1n(1) = Si(1) # 1 $112.29(6)$ $Cl(1) # 1 = Th(1) = Si(1) # 1$ $160.32(3)$ $Cl(1) = Th(1) = Si(1) # 1$ $79.27(3)$ $C(12) # 1 = Th(1) = Si(1) # 1$ $54.99(7)$ $C(12) = Th(1) = Si(1) # 1$ $125.57(7)$ $N(3) # 1 = Th(1) = Si(1)$ $116.38(8)$ $N(3) = Th(1) = Si(1)$ $116.38(8)$ $N(1) = Th(1) = Si(1)$ $29.57(8)$ $N(1) = Th(1) = Si(1)$ $96.57(7)$ $N(4) # 1 = Th(1) = Si(1)$ $112.29(8)$ $N(4) = Th(1) = Si(1)$ $81.11(7)$	N(4) # I = III(I) = SI(I) # I N(A) = Tb(1) = Si(1) # I	112 29(8)
C1(1)#1 Th(1) S1(1)#1100.32(3)C1(1) -Th(1) -Si(1)#179.27(3)C(12)#1-Th(1)-Si(1)#154.99(7)C(12) -Th(1) -Si(1)#1125.57(7)N(3)#1-Th(1)-Si(1)116.38(8)N(3) -Th(1) -Si(1)29.57(8)N(1) -Th(1) -Si(1)32.13(6)N(1)#1-Th(1)-Si(1)96.57(7)N(4)#1-Th(1)-Si(1)112.29(8)N(4) -Th(1)-Si(1)81.11(7)	(4) (1) (1) (1) (1) (1) (1) (1)	160 32(3)
C(12) #1-Th(1) -Si(1) #154.99(7)C(12) -Th(1) -Si(1) #1125.57(7)N(3) #1-Th(1) -Si(1)116.38(8)N(3) -Th(1) -Si(1)29.57(8)N(1) -Th(1) -Si(1)32.13(6)N(1) #1-Th(1) -Si(1)96.57(7)N(4) #1-Th(1) -Si(1)112.29(8)N(4) -Th(1) -Si(1)81.11(7)	$C_{1}(1) = T_{1}(1) = S_{1}(1) = H_{1}(1)$	100.52(3)
C (12) -Th (1) -Si (1) #1125.57 (7)N (3) #1-Th (1) -Si (1)116.38 (8)N (3) -Th (1) -Si (1)29.57 (8)N (1) -Th (1) -Si (1)32.13 (6)N (1) #1-Th (1) -Si (1)96.57 (7)N (4) #1-Th (1) -Si (1)112.29 (8)N (4) -Th (1) -Si (1)81.11 (7)	C(12) #1 - Th(1) - Si(1) #1	54 99(7)
N(3) #1-Th(1) -Si(1)116.38(8)N(3) -Th(1) -Si(1)116.38(8)N(1) -Th(1) -Si(1)29.57(8)N(1) #1-Th(1) -Si(1)32.13(6)N(4) #1-Th(1) -Si(1)112.29(8)N(4) -Th(1) -Si(1)81.11(7)	C(12) = Th(1) = Si(1) #1	125 57(7)
N(3) -Th(1) -Si(1)29.57(8)N(1) -Th(1) -Si(1)32.13(6)N(1) #1-Th(1) -Si(1)96.57(7)N(4) #1-Th(1) -Si(1)112.29(8)N(4) -Th(1) -Si(1)81.11(7)	N(3) #1-Th(1)-Si(1)	116.38(8)
N(1) -Th(1) -Si(1)32.13(6)N(1) #1-Th(1) -Si(1)96.57(7)N(4) #1-Th(1) -Si(1)112.29(8)N(4) -Th(1) -Si(1)81.11(7)	N(3) - Th(1) - Si(1)	29.57(8)
N(1)#1-Th(1)-Si(1)96.57(7)N(4)#1-Th(1)-Si(1)112.29(8)N(4)-Th(1)-Si(1)81.11(7)	N(1) - Th(1) - Si(1)	32.13(6)
N(4) #1-Th(1)-Si(1) N(4)-Th(1)-Si(1) 112.29(8) 81.11(7)	N(1) #1-Th(1) -Si(1)	96.57(7)
N(4) - Th(1) - Si(1) 81.11(7)	N(4) #1-Th(1)-Si(1)	112.29(8)
	N(4) - Th(1) - Si(1)	81.11(7)

Cl(1)#1-Th(1)-Si(1)	79.27(3)
Cl(1)-Th(1)-Si(1)	160.31(3)
C(12)#1-Th(1)-Si(1)	125.57(7)
C(12)-Th(1)-Si(1)	54.99(7)
Si(1)#1-Th(1)-Si(1)	115.49(4)
C(1) - N(1) - Si(1)	126.8(3)
C(1) - N(1) - Th(1)	136 4(3)
$S_{1}(1) = N(1) = Th(1)$	96 27(13)
C(1) = N(2) = C(2)	131 8(4)
C(1) N(2) C(2) C(12) - N(2) - C(1)	120 5(2)
C(12) = N(3) = S1(1) C(12) = N(2) = mb(1)	139.3(3)
C(12) = N(3) = III(1)	97.4(2) 107.00(15)
SI(1) = N(3) = III(1)	107.22(15)
C(12) = N(4) = C(19)	120.7(3)
C(12) = N(4) = Tn(1)	88.0(2)
C(19) = N(4) = Th(1)	139.7(3)
$N(3) - S_1(1) - N(1)$	92.50(16)
N(3)-Si(1)-C(23)	114.68(19)
N(1)-Si(1)-C(23)	113.9(2)
N(3)-Si(1)-C(24)	109.88(19)
N(1)-Si(1)-C(24)	113.99(19)
C(23)-Si(1)-C(24)	110.8(2)
N(3)-Si(1)-Th(1)	43.21(11)
N(1)-Si(1)-Th(1)	51.60(11)
C(23)-Si(1)-Th(1)	114.67(15)
C(24)-Si(1)-Th(1)	134.04(17)
N(1) - C(1) - N(2)	119.6(4)
N(1) - C(1) - C(6)	119.8(4)
N(2) - C(1) - C(6)	120.6(4)
C(3)-C(2)-N(2)	111.1(4)
C(3) - C(2) - C(4)	112.0(5)
N(2) - C(2) - C(4)	111.0(4)
C(3) - C(2) - C(5)	109.2(5)
N(2) - C(2) - C(5)	104.6(4)
C(4) - C(2) - C(5)	108.7(5)
C(11) - C(6) - C(7)	119.2(5)
C(11) - C(6) - C(1)	119.5(4)
C(7) - C(6) - C(1)	121.2(5)
C(6) - C(7) - C(8)	1194(6)
C(9) - C(8) - C(7)	120 7(6)
C(8) - C(9) - C(10)	120.7(0) 120.5(5)
C(11) = C(10) = C(9)	120.3(5) 119.4(6)
C(11) = C(11) = C(6)	120.8(5)
N(4) = C(12) = N(3)	120.0(3)
N(4) = C(12) = N(3)	112.2(4) 120.2(2)
N(4) = C(12) = C(13)	129.2(3)
N(3) = C(12) = C(13)	110.3(3)
N(4) = C(12) = Th(1)	63.2(2)
N(3) - C(12) - Tn(1)	54.7(2)
C(13) - C(12) - Th(1)	14/.3(3)
C(14) - C(13) - C(18)	101.8(4)
C(14) - C(13) - C(12)	$\perp \angle \perp \cdot \perp (4)$
C(18) - C(13) - C(12)	120.0(4)
C(13) - C(14) - C(15)	120.2(4)
C(16) - C(15) - C(14)	120.8(5)
C(15)-C(16)-C(17)	119.1(4)
C(18)-C(17)-C(16)	121.0(5)
C(17)-C(18)-C(13)	119.9(5)

N(4)-C(19)-C(20)	111.4(4)
N(4)-C(19)-C(21)	104.4(4)
C(20)-C(19)-C(21)	110.7(4)
N(4)-C(19)-C(22)	114.0(4)
C(20)-C(19)-C(22)	108.7(4)
C(21)-C(19)-C(22)	107.6(4)
C(27)-C(26)-C(25)	113(2)
C(27)#2-C(27)-C(26)	130.7(19)

U11	U22	U33	U23	U13	U12	
Th(1)	29(1)	22(1)	25(1)	0	0	3(1)
N(1)	29(2)	27(2)	31(2)	1(1)	2(1)	2(1)
N(2)	40(2)	36(2)	68(3)	-10(2)	17(2)	6(2)
N(3)	29(2)	29(2)	36(2)	-3(1)	3(1)	2(2)
N(4)	34(2)	30(2)	43(2)	-3(2)	8(2)	5(2)
Si(1)	36(1)	30(1)	34(1)	-2(1)	4(1)	2(1)
Cl(1)	65(1)	39(1)	49(1)	5(1)	23(1)	5(1)
C(1)	35(2)	35(2)	35(2)	-2(2)	3(2)	8(2)
C(2)	60(3)	34(2)	63(3)	-11(2)	19(3)	9(2)
C(3)	76(4)	56(3)	104(5)	-13(3)	11(4)	23(3)
C(4)	98(5)	66(4)	69(4)	-29(3)	9(3)	4(3)
C(5)	112(5)	42(3)	103(5)	-14(3)	48(4)	1(3)
C(6)	39(3)	45(2)	41(2)	-2(2)	8(2)	10(2)
C(7)	44(3)	50(3)	37(2)	3(2)	8(2)	8(2)
C(8)	77(4)	67(3)	52(3)	8(3)	31(3)	12(3)
C(9)	65(4)	78(5)	85(5)	3(3)	39(3)	5(4)
C(10)	40(3)	77(4)	92(5)	-11(4)	15(3)	7(3)
C(11)	36(2)	60(3)	53(3)	-3(2)	1(2)	7(2)
C(12)	35(2)	20(2)	28(2)	-3(1)	-5(2)	9(2)
C(13)	36(2)	32(2)	41(2)	-6(2)	7(2)	1(2)
C(14)	64(3)	38(2)	44(3)	-8(2)	4(2)	5(2)
C(15)	68(3)	52(3)	51(3)	-10(2)	-6(3)	14(3)
C(16)	71(3)	42(3)	66(3)	-10(2)	10(3)	21(3)
C(17)	70(4)	40(3)	67(4)	4(2)	15(3)	14(3)
C(18)	55(3)	40(2)	45(2)	1(2)	3(2)	3(2)
C(19)	53(3)	30(2)	59(3)	-8(2)	22(2)	1(2)
C(20)	74(4)	62(3)	56(3)	-18(3)	25(3)	6(3)
C(21)	46(3)	52(3)	93(4)	-4(3)	22(3)	6(2)
C(22)	72(4)	32(2)	124(5)	-15(3)	46(4)	12(3)
C(23)	39(3)	53(3)	58(3)	-6(2)	0(2)	6(2)
C(24)	60(3)	44(2)	44(3)	9(2)	12(2)	7(2)
C(25)	214(17)	240(30)	320(30)	-140(20)	-17(18)	37(18)
C(26)	114(10)	187(16)	430(30)	-167(18)	-3(15)	15(11)
C(27)	144(13)	210(20)	560(40)	-190(30)	11(18)	22(16)

Table 4: Anisotropic displacement parameters (A^2 x 10^3) for complex 2. The anisotropic displacement factor exponent takes the form: -2 pi^2 [h^2 a*^2 U11 + ... + 2 h k a* b* U12]

Table 5: Hydrogen coordinates (x 10^4) and isotropic displacement parameters (A^2 x 10^3) for complex 2.

Х	У	Z	U(eq)

H(2)	1694	3622	2144	58
H(3A)	-256	4728	2743	118
H(3B)	-370	3896	2655	118
H(3C)	-101	4371	2042	118
H(4A)	784	4589	3638	116
H(4B)	1611	4128	3523	116
H(4C)	723	3748	3609	116
H(5A)	1201	5255	2612	128
H(5B)	1306	4838	1935	128
H(5C)	1981	4736	2508	128
H(7)	857	2609	3608	53
H(8)	-267	2156	4234	79
Н(9)	-1536	1910	3747	91
H(10)	-1736	2115	2623	83
H(11)	-637	2579	1994	60
H(14)	1574	646	-77	58
H(15)	794	-362	-341	68
H(16)	785	-1335	359	71
H(17)	1510	-1280	1351	71
H(18)	2233	-261	1652	56
H(20A)	2893	854	-534	96
H(20B)	3856	869	-752	96
H(20C)	3408	1577	-509	96
H(21A)	4735	1122	863	96
H(21B)	4551	1741	351	96
H(21C)	4995	1031	110	96
H(22A)	3953	-22	794	114
H(22B)	4209	-93	38	114
H(22C)	3243	-133	248	114
H(23A)	-125	910	1720	75
H(23B)	404	913	1053	75
H(23C)	-93	1605	1276	75
H(24A)	704	832	2812	74
H(24B)	1309	1449	3060	74
H(24C)	1698	752	2740	74
H(25A)	6757	677	1242	387
H(25B)	7138	1288	1693	387
H(25C)	7732	870	1195	387
H(26A)	6988	1325	332	293
H(26B)	6417	1756	836	293
H(27A)	7943	2048	1123	366
Н(27В)	7910	2043	350	366

7. Crystallographic data for complex **3**



Figure 2: Molecular structure of complex 3. Color code: Th, blue, Cl, green, Si, yellow, N, purple, O, red, C, grey. Hydrogen atoms are omitted for clarity.

Complex	3
Empirical	$C_{56}H_{82}N_8Si_2Cl_2O_4Th_2$
Formula	
Formula	1522.45
weight/g·mol ⁻¹	
T/K	250(2)
λ/Å	0.71073
Crystal system	Triclinic
Space group	P-1
a/A	10.9649(6)
b/A	12.6366(7)
C/A	12.9693(7)
α/δ	97.368
β/°	97.368
γ/°	98.750
V/Å ³	1696.07(16)
Z	1
p/g·cm⁻³	1.563
μ (Mo-K $_{lpha}$) /mm $^{-1}$	4.542
F(000)	786
0 range for data	1.64 to 25.02
collection/°	
Limiting indices	-13≤h≤13
	-15≤k≤15
	-15≤1≤15
Reflections	62495/5981(0.0392)
collected/unique	
(R _{int})	
Completeness to	99.7%
θ	
GOF on F^2	1.060
R_1 , wR_2	0.354, 0.1074
[I>2 σ (I)]	
R_1 , wR_2 (all	0.0384, 0.1092
data)	
Largest diff.	3.228 and -0.960
peak and hole	
(eA ⁻³)	

Table 6: Crystallographic data and structure refinement for complex 3

	Х	У	Z	U(eq)
 Th(1)	4056(1)	10129(1)	1402(1)	30(1)
Cl(1)	5479(2)	8855(1)	347(1)	40(1)
Si(1)	2792(2)	8992(2)	3134(2)	37(1)
0(1)	5480(5)	10883(4)	2273(4)	44(1)
0(2)	2690 (5)	9350(4)	479(4)	37(1)
N(1)	2741(5)	11536(4)	1757 (5)	33(1)
N(2)	2945(6)	10213(5)	2717 (5)	36(1)
N(3)	4071(5)	8641(4)	2638(5)	33(1)
N(4)	5780(7)	7823(6)	2593(7)	59(2)
C(1)	2242(6)	10949(5)	2361 (5)	32(1)
C(2)	2306(7)	12499(6)	1348(6)	40(2)
C(3)	3512(8)	13236(6)	1284(7)	51(2)
C(4)	1365(9)	12143(8)	231(7)	60(2)
C(5)	1708(10)	13145(7)	2107(9)	65(3)
C(6)	996(7)	10937(6)	2647(6)	36(2)
C(7)	989(8)	11157(7)	3720(6)	51(2)
C (8)	-170(9)	11071(10)	3994(7)	67 (3)
C(9)	-1311(9)	10773(9)	3208(8)	63(2)
C(10)	-1305(7)	10522(8)	2152(7)	52(2)
C(11)	-164(7)	10607(6)	1868(6)	41(2)
C(12)	1249(9)	8063(8)	2412(10)	72 (3)
C(13)	2997(10)	9156(8)	4616(7)	62 (3)
C(14)	4766(6)	7936(6)	2955(6)	35(1)
C(15)	4481(7)	7289(5)	3788(6)	35(1)
C(16)	3538(8)	6363(7)	3505(7)	49(2)
C(17)	3283(11)	5802(8)	4314(9)	69(3)
C(18)	3942 (12)	6198(9)	5373(8)	71 (3)
C(19)	4852(10)	7124(8)	5656(7)	61(2)
C(20)	5138(8)	7670(6)	4866(6)	45(2)
C(21)	6571(8)	6947(7)	2595(7)	49(2)
C(22)	7027(16)	6626(14)	3676(11)	126(7)
C(23)	7711(14)	7417(13)	2276(18)	151(9)
C(24)	5829(15)	6004(13)	1815(17)	158(9)
C(25)	1753(13)	5975(12)	8931(14)	183(11)
C(26)	2318(11)	6751(8)	8436(18)	138(8)
C(27)	1937(16)	6667(12)	7319(19)	199(14)
C(28)	990(17)	5806(16)	6699(14)	208 (15)
C(29)	424(10)	5030(10)	7194(17)	197(15)
C(30)	806(12)	5114(8)	8311 (17)	155(11)
C(31)	2120(30)	6100(30)	10067(17)	234(17)

Table 7: Atomic coordinates ($x \ 10^{4}$) and equivalent isotropic displacement parameters (A² $x \ 10^{3}$) for complex **3.** U(eq) is defined as one third of the trace of the orthogonalized Uij tensor.

Th(1)-O(2)	1.737(5)
Th(1) - O(1)	1.741(5)
Th(1)-N(2)	2.327(5)
Th(1)-N(1)	2.520(5)
Th(1)-N(3)	2.623(5)
Th(1)-C(1)	2.844(6)
Th(1)-Cl(1)	2.8536(16)
Th(1)-Cl(1)#1	2.8572(16)
Th(1)-Si(1)	3.2831(18)
Cl(1)-Th(1)#1	2.8572(16)
Si(1)-N(2)	1.697(6)
Si(1)-N(3)	1.771(5)
Si(1)-C(12)	1.858(10)
Si(1)-C(13)	1.860(8)
N(1)-C(1)	1.304(9)
N(1)-C(2)	1.486(8)
N(2)-C(1)	1.351(8)
N(3)-C(14)	1.300(9)
N(4)-C(14)	1.328(9)
N(4)-C(21)	1.506(9)
C(1)-C(6)	1.498(9)
C(2)-C(3)	1.523(11)
C(2)-C(4)	1.524(11)
C(2)-C(5)	1.530(11)
C(6)-C(7)	1.385(10)
C(6)-C(11)	1.384(10)
C(7)-C(8)	1.394(12)
C(8) - C(9)	1.371(13)
C(9) - C(10)	1.368(13)
C(10) - C(11)	1.381(11)
C(14) - C(15)	1.500(9)
C(15) - C(16)	1.381(11)
C(15) - C(20)	1.390(10)
C(16) - C(17)	1.399(12)
C(17) - C(18)	1.373(16)
C(18) - C(19)	1.362(15)
C(19) - C(20)	1.377(12)
C(21) - C(24)	1.449(17)
C(21) - C(23)	1.476(14)
C(21) - C(22)	1.497(15)
C(25) - C(26)	1.3900
C(25) - C(30)	1.3900
C(25) - C(31)	1,410(16)
C(26) - C(27)	1.3900
C(27) - C(28)	1.3900
C(28) - C(29)	1.3900
C(29) - C(30)	1.3900
	1.0000
O(2)-Th(1)-O(1)	176.4(2)
O(2)-Th(1)-N(2)	89.7(2)
O(1)-Th(1)-N(2)	93.7(2)
O(2)-Th(1)-N(1)	88.4(2)

O(1)-Th(1)-N(1)	94.5(2)
N(2)-Th(1)-N(1)	54.22(19)
O(2)-Th(1)-N(3)	90.2(2)
O(1)-Th(1)-N(3)	90.6(2)
N(2)-Th(1)-N(3)	60.26(18)
N(1)-Th(1)-N(3)	114.46(17)
O(2) - Th(1) - C(1)	83.0(2)
O(1) - Th(1) - C(1)	100.5(2)
N(2) - Th(1) - C(1)	28.08(19)
N(1) - Th(1) - C(1)	27.29(18)
N(3) - Th(1) - C(1)	87.65(17)
O(2) - Th(1) - Cl(1)	86,68(15)
O(1) - Th(1) - Cl(1)	89,94(16)
N(2) - Th(1) - Cl(1)	144.68(14)
N(2) = Th(1) = Cl(1)	$160 \ 31 \ (13)$
N(1) = Th(1) = Cl(1)	84 60(12)
C(1) - Th(1) - Cl(1)	$167 \ 10(15)$
O(2) - Th(1) - Cl(1) + 1	86 70(17)
O(1) - Th(1) - Cl(1) + 1	91 23(19)
N(2) - Th(1) - Cl(1) + 1	$142 \ 33(14)$
$N(2) = TR(1) = C1(1) \pm 1$	88 18(13)
N(1) = Th(1) = C1(1) # 1	$157 \ 06(12)$
C(1) - Tb(1) - Cl(1) + 1	111 11(12)
C(1) = Th(1) = C(1) =	72 53(5)
O(2) = Tb(1) = Si(1)	72.55(5) 82 $17(17)$
O(2) = III(1) = Si(1)	100 02(18)
N(2) = Th(1) = Si(1)	20.02(10)
$N(2) = III(1) = S_1(1)$ $N(1) = T_D(1) = S_1(1)$	82 63 (13)
N(1) = Th(1) = Si(1) N(3) = Th(1) = Si(1)	32.03(13)
C(1) - Tb(1) - Si(1)	52.52(12) 55 44(14)
C(1) = Th(1) = Si(1)	115 50(5)
$C_{1}(1) \pm 1 - T_{b}(1) - S_{i}(1)$	165 96(5)
$T_{T} = T_{T} = T_{T$	103.50(3) 107.47(5)
N(2) - Si(1) - N(3)	92 1 (3)
N(2) - Si(1) - C(12)	113 2(4)
N(2) - Si(1) - C(12)	113.2(4) 111.5(4)
N(2) - Si(1) - C(12)	111.5(4)
N(2) - Si(1) - C(13)	1179(4)
C(12) - Si(1) - C(13)	1097(5)
N(2) - Si(1) - Th(1)	$42 \ 30(19)$
N(2) - Si(1) - Th(1)	$52 \ 76(18)$
C(12) - Si(1) - Th(1)	110 1 (4)
C(12) - Si(1) - Th(1)	139 2 (4)
C(1) - N(1) - C(2)	126.9(6)
C(1) = N(1) = Th(1)	90 3(4)
C(2) = N(1) = Th(1)	141 2 (4)
$C(1) - N(2) - S_{1}(1)$	1/1 $1(5)$
C(1) = N(2) = Tb(1)	97 7 (4)
$S_{1}(1) = N(2) = Th(1)$	108 - 3(3)
C(14) - N(3) - Si(1)	126.5(5)
C(14) - N(3) - Tb(1)	$138 \ 4(4)$
$S_1(1) = N(3) = Th(1)$	94 7(2)
C(14) - N(4) - C(21)	132 9(7)
N(1) - C(1) - N(2)	113 1(6)
N(1) - C(1) - C(6)	129 4(6)
N(2) - C(1) - C(6)	117 4(6)
(-) $(-)$ $(-)$	±±/•±(0)

N(1)-C(1)-Th(1)	62.4(3)
N(2)-C(1)-Th(1)	54.2(3)
C(6)-C(1)-Th(1)	157.0(5)
N(1) - C(2) - C(3)	105.6(6)
N(1) - C(2) - C(4)	109.7(6)
C(3)-C(2)-C(4)	110.4(7)
N(1) - C(2) - C(5)	113.2(6)
C(3)-C(2)-C(5)	107.5(7)
C(4)-C(2)-C(5)	110.3(7)
C(7)-C(6)-C(11)	118.6(7)
C(7)-C(6)-C(1)	119.9(6)
C(11)-C(6)-C(1)	121.2(6)
C(6)-C(7)-C(8)	120.1(8)
C(9)-C(8)-C(7)	120.5(8)
C(8)-C(9)-C(10)	119.5(8)
C(9)-C(10)-C(11)	120.7(8)
C(10)-C(11)-C(6)	120.7(7)
N(3)-C(14)-N(4)	120.6(6)
N(3)-C(14)-C(15)	120.3(6)
N(4)-C(14)-C(15)	119.0(6)
C(16)-C(15)-C(20)	120.2(7)
C(16)-C(15)-C(14)	121.0(7)
C(20)-C(15)-C(14)	118.6(7)
C(15)-C(16)-C(17)	119.0(8)
C(18)-C(17)-C(16)	119.6(9)
C(19)-C(18)-C(17)	121.4(8)
C(18)-C(19)-C(20)	119.6(9)
C(19)-C(20)-C(15)	120.1(8)
C(24)-C(21)-C(23)	110.9(13)
C(24)-C(21)-C(22)	109.9(13)
C(23)-C(21)-C(22)	107.7(12)
C(24)-C(21)-N(4)	108.8(9)
C(23)-C(21)-N(4)	105.3(7)
C(22)-C(21)-N(4)	114.2(8)
C(26)-C(25)-C(30)	120.0
C(26)-C(25)-C(31)	119.1(19)
C(30)-C(25)-C(31)	120.8(19)
C(27)-C(26)-C(25)	120.0
C(26)-C(27)-C(28)	120.0
C(29)-C(28)-C(27)	120.0
C (28) – C (29) – C (30)	120.0
C(29)-C(30)-C(25)	120.0

	U11	. U22	U33	U23	U1	.3
U12	-	-			-	-
Th(1)	26(1)	33(1)	36(1)	10(1)	14(1)	10(1)
Cl(1)	46(1)	40(1)	48(1)	19(1)	28(1)	21(1)
Si(1)	32(1)	43(1)	46(1)	19(1)	21(1)	14(1)
0(1)	50(3)	44(3)	44(3)	5(2)	12(2)	28(2)
0(2)	34(3)	34(2)	46(3)	9(2)	14(2)	16(2)
N(1)	32(3)	35(3)	40(3)	11(2)	18(2)	13(2)
N(2)	38(3)	41(3)	37(3)	13(2)	19(2)	17(3)
N(3)	32(3)	37(3)	40(3)	16(2)	18(2)	15(2)
N(4)	60(4)	66(5)	87(5)	50(4)	49(4)	43(4)
C(1)	35(3)	37(3)	27(3)	6(3)	10(3)	18(3)
C(2)	49(4)	32(3)	49(4)	13(3)	19(3)	20(3)
C(3)	54(5)	37(4)	68(5)	\perp 7 (4)	21(4)	$\perp \perp (4)$
C(4)	60(5)	58(5)	60(5)	25(4)	3(4)	14(4)
C(5)	85(/)	49(5)	86(/)	21(5)	48(6) 17(2)	40(5) 15(2)
C(0)	33(4) 38(4)	40 (4) 76 (6)	43(4) A1(A)	10(3) 3(4)	1/(3)	13(3)
C(7)	50(4)	113(8)	41(4) 38(4)	12(5)	22(4)	25(4)
C(9)	47(5)	94(7)	61 (5)	24(5)	22(4) 26(4)	30(5)
C(10)	30(4)	71(6)	55(5)	16(4)	11(3)	7(4)
C(11)	33(4)	50(4)	43(4)	11(3)	15(3)	7(3)
C(12)	45(5)	58(6)	114(9)	22(6)	22 (5)	11(4)
C(13)	82(7)	83(6)	54(5)	34 (5)	45(5)	51(6)
C(14)	31(3)	40(4)	39(4)	11(3)	14(3)	10(3)
C(15)	39(4)	32(3)	41(4)	14(3)	16(3)	13(3)
C(16)	54(5)	46(4)	49(4)	9(3)	18(4)	3(4)
C(17)	85(7)	50(5)	82(7)	23(5)	44(6)	1(5)
C(18)	105(8)	70(6)	64(6)	40(5)	44 (6)	32(6)
C(19)	84(7)	67(6)	42(4)	20(4)	17(4)	33(5)
C(20)	49(4)	45(4)	42(4)	10(3)	8(3)	16(3)
C(21)	50(5)	49(4)	70(5)	29(4)	33(4)	32(4)
C(22)	154(14)	180(16)	101(10)	63(10)	55(10)	140(13)
C(23)	108(11)	136(13)	310(30)	152(16)	146(15)	96(10)
C(24)	88(IU) 150(20)	114(12)	230(20)	-/6(14)	14(12)	38(9)
C(25)	150(20)	160 (20) 75 (10)	280(30)	30 (∠0) 25 (12)	90(20)	111(19)
C(20)	200(30) TTZ(T2)	100(10)	250(30)	SD(13)	07(10) 180(30)	∠∪(୨) フフ(10)
C(27)	200(30) 123(18)	100(17)	420 (50)	20(20)	110(20)	//(⊥0) Д5(1२)
C(20)	123(10) 83(13)	92 (14)	410(50)	20(20)	70(20)	чэ (тэ) Зд (11)
C(20)	55(8)	51(7)	330(30)	-36(12)	43(13)	17(6)
C(31)	280(40)	290(40)	160(20)	20(20)	30(20)	210(30)
<u> </u>	200(10)	200(30)	100(20)	20(20)	50(20)	210(30)

Table 9: Anisotropic displacement parameters (A² x 10³) for complex **3.** The anisotropic displacement factor exponent takes the form: -2 pi^2 [h² a^{*} Ull + ... + 2 h k a^{*} b^{*} Ul2]

	х	У	Z	U(eq)
 	4000	10470		
H(3A)	4090	134/3 1206/	2002	/ / רר
H(3B)	3282 2021	10000	901	/ /
н (ЗС) ч (ЛЛ)	1751	11726	-239	, , 00
п (4А) ц (Др)	1155	12770	-239	90
п (4D) Ч (ЛС)	591	11696	289	90
H (5A)	880	12733	209	98
H (5B)	1599	13833	1874	98
H(5C)	2266	13281	2836	98
н(30) н(7)	1768	11364	4263	61
H(8)	-169	11219	4724	81
H(9)	-2091	10742	3394	75
H(10)	-2085	10288	1614	62
H(11)	-176	10438	11.38	50
H(12A)	546	8371	2575	107
H(12B)	1244	7363	2645	107
H(12C)	1153	7970	1641	107
H(13A)	3850	9562	4992	94
H(13B)	2887	8446	4826	94
H(13C)	2363	9546	4802	94
H(16)	3074	6114	2780	59
H(17)	2664	5158	4135	82
H(18)	3762	5821	5915	85
H(19)	5282	7390	6386	74
H(20)	5778	8301	5055	54
H(22A)	6389	6049	3765	189
H(22B)	7159	7249	4240	189
H(22C)	7828	6373	3723	189
H(23A)	8248	6879	2232	226
H(23B)	8191	8047	2808	226
H(23C)	7443	7634	1577	226
H(24A)	6381	5688	1433	237
H(24B)	5146	6220	1304	237
H(24C)	5463	5471	2186	237
H(26)	2959	7334	8855	165
H(27)	2319	7192	6984	238
H(28)	731	5749	5944	250
H(29)	-217	4447	6775	236
Н(30)	423	4589	8646	185
H(31A)	1641	5498	10290	351
H(31B)	1933	6778	10374	351
H(31C)	3028	6103	10318	351

Table 10: Hydrogen coordinates (x 10^4) and isotropic displacement parameters (A^2 x 10^3) for complex ${\bf 3}.$

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8. Crystallographic Data for complex 4.



Figure 3: Molecular structure of complex 4. Color code: U, blue, Cl, green, Si, yellow, N, purple, C, grey. Hydrogen atoms are omitted for clarity.

Table 11: Crystallographic data for complexes 4

Complex	4
Empirical	$C_{37}H_{55}Cl_3N_6Si_2U$
Formula	
Formula	984.43
weight/g·mol ⁻¹	
T/K	240(2)
λ/Α	0.71073
Crystal system	Monoclinic
Space group	PZI/C
d/A b/Å	19.5150(4) 10.5640(2)
D/A	10.3040(2)
C/A	90
α/ β/°	109 1960 (9)
h/ ۲/۵	90
V/Å ³	4371,66(14)
Z	4
$p/q \cdot cm^{-3}$	1.496
$11 (MO-K_{r}) / mm^{-1}$	3.983
F (000)	1960
θ range for data	1.10 to
collection/°	25.05
Limiting indices	0≤h≤23
	0 <k<12< td=""></k<12<>
	-26<1<25
Reflections	7747/7747
collected/unique	(0.0000)
(R _{int})	(• • • • • • • • ,
Completeness to	99.98
θ	
GOF on F^2	1.028
R ₁ , wR ₂	0.0317,
[I>2 σ (I)]	0.0692
R_1 , wR_2 (all	0.0538,
data)	0.0759
Largest diff.	0.604, -
peak and hole	0.788
(eA ⁻³)	

	х	У	Z	U(eq)
U(1)	2648(1)	2430(1)	3546(1)	28(1)
Si(1)	1977(1)	5171(1)	4095(1)	31(1)
Si(2)	3258(1)	4729(1)	2834(1)	36(1)
Cl(1)	1469(1)	2102(1)	2573(1)	56(1)
Cl(2)	3111(1)	389(1)	3097(1)	67(1)
Cl(3)	3681(1)	2137(2)	4642(1)	61(1)
N(1)	1956(2)	1477(3)	4186(2)	33(1)
N(2)	2061(2)	3576(3)	4133(2)	34(1)
N(3)	1496(2)	5519(3)	3275(2)	31(1)
N(4)	2477(2)	4621(3)	3061(2)	30(1)
N(5)	3696(2)	3469(3)	3313(2)	34(1)
N(6)	4606(2)	1995(4)	3662(2)	41(1)
C(1)	1844(3)	218(4)	4426(2)	42(1)
C(2)	2060(4)	-705(5)	4008(3)	78(2)
C(3)	2337(3)	53(5)	5107(3)	70(2)
C(4)	1061(3)	-33(5)	4380(3)	54(1)
C(5)	1863(2)	2577(4)	4396(2)	28(1)
C(6)	1521(3)	2826(4)	4915(2)	36(1)
C(7)	1981(3)	3101(5)	5516(2)	53(2)
C(8)	1693(5)	3384(6)	5985(3)	76(2)
C(9)	962(5)	3408(6)	5861(3)	84(2)
C(10)	504(4)	3166(6)	5267(3)	76(2)
C(11)	775(3)	2862(5)	4790(3)	50(1)
C(12)	1541(3)	5883(4)	4646(2)	42(1)
C(13)	2888(3)	5920(5)	4334(2)	45(1)
C(14)	682(2)	5750(4)	3022(2)	36(1)
C(15)	511(3)	7071(5)	3210(2)	49(1)
C(16)	332(3)	4715(5)	3304(2)	46(1)
C(17)	338(3)	5617(5)	2307(2)	52(1)
C(18)	1922(2)	5379(4)	2900(2)	30(1)
C(19)	1775(3)	6212(5)	2329(2)	38(1)
C(20)	1598(3)	5719(6)	1727(2)	55(2)
C(21)	1461(4)	6542(8)	1217(3)	79(2)
C(22)	1514(4)	7823(8)	1316(3)	87(2)
C(23)	1708(4)	8315(6)	1906(3)	70(2)
C(24)	1824(3)	7519(4)	2417(2)	46(1)
C(25)	3667(3)	6327(5)	2993(3)	59(2)
C(26)	3130(3)	4240(5)	2011(2)	54(2)
C(27)	4392(3)	3170(5)	3479(2)	34(1)
C(28)	4949(3)	4124(5)	3451(2)	45(1)
C(29)	5179(3)	4152(6)	2936(3)	63(2)
C(30)	5672(4)	5068(9)	2899(4)	101(3)
C(31)	5921(5)	5915(10)	3369(5)	125(4)
C(32)	5696(5)	5908(8)	3884(4)	106(3)
C(33)	5196(3)	4998(6)	3927(3)	67(2)
C(34)	5336(3)	1443(5)	4020(2)	51(1)

Table 12: Atomic coordinates ($x \ 10^{4}$) and equivalent isotropic displacement parameters (A² $x \ 10^{3}$) for shelxl. U(eq) is defined as one third of the trace of the orthogonalized Uij tensor.

C(35)	5893(4)	1657(8)	3697(3)	95(3)	
C(36)	5184(4)	43(6)	4042(3)	87(2)	
C(37)	5596(3)	1971(7)	4682(3)	79(2)	
					7

U(1)-N(2)	2.349(4)
U(1)-N(1)	2.486(4)
U(1)-N(5)	2.523(4)
U(1)-N(4)	2.533(3)
U(1)-Cl(1)	2.6233(12)
U(1)-Cl(3)	2.6372(12)
U(1)-Cl(2)	2.6608(13)
U(1)-C(5)	2.817(4)
U(1)-Si(2)	3.3345(13)
Si(1)-N(2)	1.691(4)
Si(1)-N(3)	1.808(4)
Si(1)-C(13)	1.857(5)
Si(1)-C(12)	1.874(5)
Si(2)-N(5)	1.747(4)
Si(2)-N(4)	1.762(4)
Si(2)-C(25)	1.852(5)
Si(2)-C(26)	1.856(5)
N(1)-C(5)	1.289(5)
N(1)-C(1)	1.478(6)
N(2)-C(5)	1.327(5)
N(3)-C(18)	1.370(6)
N(3) - C(14)	1.520(6)
N(4) - C(18)	1.300(5)
N(5) - C(27)	1.322(6)
N(6) - C(27)	1.331(6)
N(6) - C(34)	1,505(6)
N(6) - H(6)	0.9599
C(1) - C(2)	1.507(7)
C(1) - C(4)	1.521(7)
C(1) - C(3)	1.524(7)
C(2) - H(2A)	0.9600
C(2) - H(2B)	0.9600
C(2) - H(2C)	0.9601
C(2) - H(20)	0 9601
C(3) - H(3B)	0 9601
C(3) - H(3C)	0 9600
$C(\Delta) - H(\Delta\Delta)$	0.9600
C(A) - H(AB)	0.9600
C(4) = H(AC)	0 9599
C(4) = H(4C) C(5) = C(6)	1 545(6)
C(5) = C(7)	1 391(7)
C(0) = C(1)	1.304(7)
C(0) = C(11)	1 200 (0)
C(7) - C(0)	1.300(8)
C(1) = H(1)	0.9399
$C(\delta) = C(\beta)$	1.300(10)
$U(\delta) = H(\delta)$	U.96UU
C(9) - C(10)	1.364(10)
C(9) - H(9)	U.9599
C(10) - C(11)	1.3/9(8)
C(10)-H(10)	0.9601
С(11)-Н(11)	0.9600

Table 13: Bond lengths [A] and angles [deg] for shelxl for complex
4.

C(12)-H(12A)	0.9602
С(12)-Н(12В)	0.9599
С(12)-Н(12С)	0.9601
С(13)-Н(13А)	0.9599
С(13)-Н(13В)	0.9600
С(13)-Н(13С)	0.9600
C(14)-C(15)	1.526(6)
C(14)-C(17)	1.528(6)
C(14)-C(16)	1.534(6)
С(15)-Н(15А)	0.9600
С(15)-Н(15В)	0.9601
C(15)-H(15C)	0.9600
C(16) - H(16A)	0.9600
C(16) - H(16B)	0.9599
C(16) - H(16C)	0.9600
C(17) = H(17R) C(17) = H(17R)	0.9500
C(17) = H(17B) C(17) = H(17C)	0.9599
C(17) = H(17C) C(18) = C(19)	1 503(6)
C(10) = C(20)	1 383(7)
C(19) - C(24)	1,394(6)
C(20) - C(21)	1.391(8)
C(20) - H(20)	0.9600
C (21) -C (22)	1.370(10)
С(21)-Н(21)	0.9600
C(22)-C(23)	1.356(9)
С(22)-Н(22)	0.9600
C(23)-C(24)	1.379(7)
С(23)-Н(23)	0.9600
С(24)-Н(24)	0.9600
С(25)-Н(25А)	0.9599
С(25)-Н(25В)	0.9601
С(25)-Н(25С)	0.9600
C(26)-H(26A)	0.9598
C(26) - H(26B)	0.9601
C(26) - H(26C)	0.9600
C(27) = C(28)	1,499(7)
C(28) = C(23)	1,373(7)
C(20) = C(30)	1 386(9)
C(29) - H(29)	0.9601
C(30) - C(31)	1.348(12)
С(30)-Н(30)	0.9599
C(31) - C(32)	1.365(12)
С(31)-Н(31)	0.9600
C(32)-C(33)	1.395(9)
С(32)-Н(32)	0.9600
С(33)-Н(33)	0.9599
C(34)-C(35)	1.508(8)
C(34)-C(37)	1.511(8)
C(34)-C(36)	1.513(8)
С(35)-Н(35А)	0.9600
С(35)-Н(35В)	0.9601
C(35) - H(35C)	0.9601
C(36) - H(36A)	0.9600
С(36)—Н(36В)	0.9601

С	(2	6)	-	S	i	(2)	-	U	(1)
С	(5)	_	N	(1)	_	С	(1)		
С	(5)	_	N	(1)	_	IJ	(1)		
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С	(1	8)	-	Ν	(4)	_	U	(1)	
S	i	(2)	_	N	(4)	_	U	(1)	
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S	l	(2)	-	Ν	(5)	-	U	(Τ)	
С	(2	7)	-	Ν	(6)	-	С	(3	4)
С	(2	7)	_	N	(6)	-	Η	(6)	
С	(3	4)	_	N	(6)	_	Н	(6)	
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С	(2)	-	С	(1)	-	С	(4)		
Ν	(1)	-	С	(1)	-	С	(3)		
С	(2)	_	С	(1)	_	С	(3)		
С	(4)	_	C	(1)	_	С	(3)		
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Η	(2	A	.)	-	С	(2)	-	H	(2	В)
С	(1)	-	С	(2)	-	Η	(2	С)	
Η	(2	A)	_	С	(2)	-	Η	(2	С)
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С	(1)	_	С	(3)	-	Η	(3	С)	
Η	(3	A)	_	С	(3)	-	Η	(3	С)
Н	(3	B)	_	С	(3)	_	Н	(3	С)
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C	(T)		C	(4)	<u> </u>	н	(4	В)	
Н	(4	A	.)	-	С	(4)	-	H	(4	В)
С	(1)	-	С	(4)	-	Η	(4	С)	
Η	(4	A)	_	С	(4)	-	Η	(4	С)
Н	(4	В)	_	С	(4)	_	Н	(4	С)
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Ν	(2)	-	C	(5)	-	С	(6)		
Ν	(1)	-	С	(5)	-	U	(1)		
Ν	(2)	_	С	(5)	_	U	(1)		
С	(6)	_	С	(5)	_	U	(1)		
C	1	7	í	_	C.C.	\tilde{i}	6	í	_	с С	\tilde{i}	1	, 1	١	
~	۱ /	′ ,	, 、		С С	`	0 C	, 、		C	`	т Г	т ,	,	
Ċ	(1)		C	(0)	-	Ċ	(С.)		
С	(1	1)	-	C	(6)	-	C	(5)	
С	(8)	_	С	(7)	-	С	(6)		
С	(8)	_	С	(7)	_	Η	(7)		
С	(6)	_	С	(7)	_	Н	(7)		
č	1	a	٬	_	C.C.	\hat{i}	ģ	٬	_	 C	\hat{i}	, 7	٬ ۱		
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100 0	2 (1 8)
128.5	(4)
90.8	(3)
138.5	(3)
141.1	(3)
96.1	(3) 9(19)
123.9	(3)
112.8	(3)
122.8	(3)
126.9	(3)
100.3	2(16)
127.3	(3)
131.6	(3)
132.3	(4)
119.2	
108.5	(1)
104.5	(4) (4)
108.9	(5)
110.5	(4)
109.7	(5)
110.3	(4)
110.1	
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109.5	(1)
125.2	(4)
117.4	(4)
61.9	(2)
56.0	(2)
119.5	(5)
118.0	(5)
122.4	(4)
119.5 122 2	(6)
118.2	
120.8	(6)

С	(9)	-	С	(8)	-	Η	(8)					
С	(7)	_	С	(8)	_	Η	(8)					
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Ċ	ì	1	, O)	_	Ċ	(ģ)	_	н	(ģ)				
C	\hat{i}	a	Ň	<u>_</u>	C	<i>(</i>	、 1	n	ì	_	с С	\tilde{i}	1	, 1	١			
C	$\frac{1}{1}$	a) \		C	$\frac{1}{2}$	⊥ 1	0	/ \	_	с u	(⊥ 1		/ \			
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S	1	(1)	-	C	(1	2)	-	H	(1	2	Α)	
S	i	(1)	-	С	(1	2)	-	H	(1	2	B)	
Η	(1	2	A	.)	-	С	(1	2)	-	H	(1	21	B)	
S	i	(1)	-	С	(1	2)	-	Η	(1	2	C)	
Η	(1	2	A	.)	-	С	(1	2)	-	H	(1	20	C)	
Η	(1	2	В)	-	С	(1	2)	-	Η	(1	20	C)	
S	i	(1)	-	С	(1	3)	-	Η	(1	3	A)	
S	i	(1)	_	С	(1	3)	_	Η	(1	3	В)	
Η	(1	3	А	.)	_	С	(1	3)	_	Η	(1	31	B)	
S	i	(1)	_	С	(1	3)	_	Η	(1	3	C)	
Н	(1	3	À)	_	Ċ	(1	3)	_	H	(1	3(C)	
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N	ì	3)	_	С	ì	1	4	ý	_	С	ì	1	7	ý			
C	\tilde{i}	1	, 5	١	_	` C	(1	, 4	١	_	` C	(1	, 7)		
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C	(1	4)	<u>,</u>	C	(~	1	С 1)	<u>,</u>	н) 	1	С 1	B.)	
H	(1	5	A	.)	_	Ç	(T	5)	-	H ,	(T	51	3)	
C	(T	4)	_	С	(Ţ	5)	_	Н	(Ţ	5	C.)	
Н	(T	5	A	.)	-	С	(T	5)	-	H	(T	50	C)	
Η	(1	5	B)	-	С	(1	5)	-	H	(1	50	C)	
С	(1	4)	-	С	(1	6)	-	Η	(1	6	A)	
С	(1	4)	-	С	(1	6)	-	Η	(1	6	В)	
Η	(1	6	A	.)	-	С	(1	6)	-	H	(1	61	B)	
С	(1	4)	-	С	(1	6)	-	Η	(1	6	C)	
Η	(1	6	A	.)	_	С	(1	6)	_	Η	(1	60	C)	
Η	(1	6	В)	_	С	(1	6)	_	Η	(1	60	C)	
С	(1	4)	_	С	(1	7)	-	Η	(1	7	A)	
С	(1	4)	_	С	(1	7)	_	Η	(1	7	В)	
Η	(1	7	A)	_	Ċ	(1	7)	_	H	(1	71	B)	
С	(1	4)	_	С	(1	7)	_	Н	(1	7	С)	
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н	ì	1	7	B)	_	Ċ	ì	1	7)	_	н	ì	1	70	2)	
N	ì	4)	_	ć	(1	, 8)	_	'n	(3	ì	_		<i>.</i> ,	
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τ.ν Ν	$\frac{1}{1}$	л ч	/ \	_	Č	(- 1	8	/)	_	C	(- 1	a	/)			
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118.4 120.8 120.1 120.3	(6)
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119.5 119.6 121.4 119.0	(6)
109.5 109.5	(4) (4) (4) (4) (4)
109.5 120.9 120.4 118.4 119.7 122.1 118.3 119.2	(4) (4) (4) (5) (5) (4) (6)
118.6 122.2	. ,

C(22)-C(21)-C(20)	120.0(6)
С(22)-С(21)-Н(21)	118.1
С(20)-С(21)-Н(21)	121.9
C(23)-C(22)-C(21)	121.2(6)
С(23)-С(22)-Н(22)	119.8
С(21)-С(22)-Н(22)	119.0
C(22)-C(23)-C(24)	119.8(6)
С(22)-С(23)-Н(23)	121.4
С(24)-С(23)-Н(23)	118.8
C(23)-C(24)-C(19)	120.0(5)
C(23) - C(24) - H(24)	120.8
C(19) - C(24) - H(24)	119.2
S1(2) - C(25) - H(25A)	108.8
S1(2) - C(25) - H(25B)	109.4
H(25A) = C(25) = H(25B)	109.5
$H(25\lambda) = C(25) = H(25C)$	1095
H(25R) = C(25) = H(25C)	109.5
n(23b) = C(25) = n(23c) si(2) = C(26) = H(26b)	109.5
Si(2) = C(26) = H(26B)	109.1
H(26A) - C(26) - H(26B)	109.5
Si(2)-C(26)-H(26C)	109.9
H(26A) - C(26) - H(26C)	109.5
Н (26В) -С (26) -Н (26С)	109.5
N(5)-C(27)-N(6)	119.9(4)
N(5)-C(27)-C(28)	121.2(4)
N(6)-C(27)-C(28)	118.8(4)
C(29)-C(28)-C(33)	120.8(6)
C(29)-C(28)-C(27)	119.6(5)
C(33)-C(28)-C(27)	119.6(5)
C(28) - C(29) - C(30)	119.5(7)
C(28) - C(29) - H(29)	119.2
C(30) = C(29) = H(29)	121.2
C(31) = C(30) = U(20)	120 0
C(31) = C(30) = H(30)	120.0
C(30) - C(31) - C(32)	120.5
C(30) - C(31) - H(31)	121.3
C(32) - C(31) - H(31)	117.0
C(31) - C(32) - C(33)	119.3(8)
С(31)-С(32)-Н(32)	121.4
С(33)-С(32)-Н(32)	119.2
C(28)-C(33)-C(32)	119.0(7)
С(28)-С(33)-Н(33)	119.8
С(32)-С(33)-Н(33)	121.3
N(6)-C(34)-C(35)	113.0(4)
N(6) - C(34) - C(37)	109.5(4)
C(35) - C(34) - C(37)	110.9(6)
N(6) - C(34) - C(36)	103.6(5)
C(33) = C(34) = C(36) C(37) = C(34) = C(36)	100 C(E)
C(34) = C(34) = C(36) C(34) = C(35) = H(353)	110 0
C(34) - C(35) - H(35R)	109 3
H(35A) - C(35) - H(35B)	109.5
C(34)-C(35)-H(35C)	109.1
н (35А) – С (35) – Н (35С)	109.5

H(35B)-C(35)-H(35C)	109.5	
С(34)-С(36)-Н(36А)	110.5	
С(34)-С(36)-Н(36В)	108.5	
Н(З6А)-C(З6)-Н(З6В)	109.5	
С(34)-С(36)-Н(36С)	109.4	
Н(З6А)-С(З6)-Н(З6С)	109.5	
Н(36B)-C(36)-Н(36C)	109.5	
С(34)-С(37)-Н(37А)	110.0	
C(34)-C(37)-H(37B)	110.6	
Н(37A)-C(37)-Н(37B)	109.5	
С(34)-С(37)-Н(37С)	107.8	
Н(37A)-C(37)-Н(37C)	109.5	
H(37B)-C(37)-H(37C)	109.5	

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$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		U11	U22	U33	U23	U13	U12
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	U(1)	27(1)	30(1)	29(1)	0(1)	13(1)	1(1)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Si(1)	34(1)	29(1)	30(1)	-2(1)	12(1)	1(1)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Si(2)	31(1)	37(1)	43(1)	7(1)	16(1)	2(1)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Cl(1)	43(1)	71(1)	43(1)	-5(1)	-1(1)	12(1)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Cl(2)	54(1)	49(1)	110(1)	-33(1)	45(1)	7(1)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Cl(3)	37(1)	106(1)	37(1)	15(1)	6(1)	(1)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	N(1)	40(2)	29(2)	33(2)	3(2)	17(2)	3(2)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	N(2)	41(2)	31(2)	35(2)	2(2)	22(2)	5(2)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	N(3)	28(2)	30(2)	34(2)	1(2)	11(2)	5(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	N(4)	26(2)	29(2)	34(2)	2(2)	11(2)	1(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	N(5)	24(2)	35(2)	45(2)	2(2)	15(2)	2(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	N(6)	25(2)	45(2)	54(3)	2(2)	14(2)	6(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(1)	49(3)	29(2)	53(3)	10(2)	25(3)	1(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(2)	123(6)	35(3)	107(5)	3(3)	80(5)	5(4)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(3)	67(4)	53(4)	77(4)	33(3)	5(3)	5(3)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(4)	53(4)	40(3)	67(4)	3(3)	20(3)	9(3)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(5)	35(3)	30(2)	15(2)	1(2)	3(2)	3(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(6)	50(3)	26(2)	37(3)	6(2)	24(2)	9(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(7)	66(4)	59(3)	39(3)	9(3)	24(3)	16(3)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(8)	124(7)	68(4)	45(3)	1(3)	42(4)	27(4)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(9)	134(8)	79(5)	76(5)	13(4)	83(5)	38(5)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(10)	78(5)	81(5)	99(5)	17(4)	71(5)	22(4)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(11)	50(4)	49(3)	62(3)	9(3)	33(3)	8(3)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(12)	54(3)	34(3)	41(3)	-3(2)	21(2)	7(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(13)	47(3)	40(3)	44(3)	-6(2)	11(2)	1(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(14)	26(3)	40(3)	41(3)	1(2)	13(2)	4(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(15)	40(3)	48(3)	56(3)	2(2)	10(3)	16(2)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(16)	31(3)	50(3)	59(3)	-3(3)	20(3)	5(2)
C (18) $29(3)$ $27(2)$ $33(2)$ $-3(2)$ $10(2)$ $5(2)$ C (19) $31(3)$ $51(3)$ $35(3)$ $5(2)$ $15(2)$ $12(2)$ C (20) $50(4)$ $75(4)$ $40(3)$ $6(3)$ $16(3)$ $23(3)$ C (21) $88(5)$ $116(6)$ $38(3)$ $7(4)$ $30(3)$ $33(5)$ C (22) $96(6)$ $108(6)$ $62(4)$ $44(4)$ $34(4)$ $35(5)$ C (23) $75(5)$ $60(4)$ $82(5)$ $30(3)$ $35(4)$ $10(3)$ C (24) $48(3)$ $43(3)$ $52(3)$ $18(2)$ $22(3)$ $12(3)$ C (25) $50(4)$ $39(3)$ $94(4)$ $8(3)$ $34(3)$ $3(3)$ C (25) $50(4)$ $39(3)$ $94(4)$ $8(3)$ $34(3)$ $3(3)$ C (26) $45(3)$ $77(4)$ $47(3)$ $12(3)$ $26(3)$ $10(3)$ C (27) $29(3)$ $47(3)$ $29(2)$ $-5(2)$ $12(2)$ $2(2)$ C (28) $26(3)$ $59(3)$ $47(3)$ $5(3)$ $9(2)$ $1(2)$ C (29) $36(3)$ $95(5)$ $62(4)$ $16(3)$ $22(3)$ $5(3)$ C (30) $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ C (31) $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ C (32) $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$	C(1/)	29(3)	/1(4)	49(3)	-3(3)	1 (2)	1 (3)
C (19) $31(3)$ $51(3)$ $35(3)$ $5(2)$ $15(2)$ $12(2)$ C (20) $50(4)$ $75(4)$ $40(3)$ $6(3)$ $16(3)$ $23(3)$ C (21) $88(5)$ $116(6)$ $38(3)$ $7(4)$ $30(3)$ $33(5)$ C (22) $96(6)$ $108(6)$ $62(4)$ $44(4)$ $34(4)$ $35(5)$ C (23) $75(5)$ $60(4)$ $82(5)$ $30(3)$ $35(4)$ $10(3)$ C (24) $48(3)$ $43(3)$ $52(3)$ $18(2)$ $22(3)$ $12(3)$ C (25) $50(4)$ $39(3)$ $94(4)$ $8(3)$ $34(3)$ $3(3)$ C (26) $45(3)$ $77(4)$ $47(3)$ $12(3)$ $26(3)$ $10(3)$ C (27) $29(3)$ $47(3)$ $29(2)$ $-5(2)$ $12(2)$ $2(2)$ C (28) $26(3)$ $59(3)$ $47(3)$ $5(3)$ $9(2)$ $1(2)$ C (29) $36(3)$ $95(5)$ $62(4)$ $16(3)$ $22(3)$ $5(3)$ C (30) $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ C (31) $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ C (32) $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$	C(18)	29(3)	27(2)	33(2)	-3(2)	10(2)	5(2)
C (20) $50(4)$ $75(4)$ $40(3)$ $6(3)$ $16(3)$ $23(3)$ C (21) $88(5)$ $116(6)$ $38(3)$ $7(4)$ $30(3)$ $33(5)$ C (22) $96(6)$ $108(6)$ $62(4)$ $44(4)$ $34(4)$ $35(5)$ C (23) $75(5)$ $60(4)$ $82(5)$ $30(3)$ $35(4)$ $10(3)$ C (24) $48(3)$ $43(3)$ $52(3)$ $18(2)$ $22(3)$ $12(3)$ C (25) $50(4)$ $39(3)$ $94(4)$ $8(3)$ $34(3)$ $3(3)$ C (26) $45(3)$ $77(4)$ $47(3)$ $12(3)$ $26(3)$ $10(3)$ C (27) $29(3)$ $47(3)$ $29(2)$ $-5(2)$ $12(2)$ $2(2)$ C (28) $26(3)$ $59(3)$ $47(3)$ $5(3)$ $9(2)$ $1(2)$ C (29) $36(3)$ $95(5)$ $62(4)$ $16(3)$ $22(3)$ $5(3)$ C (30) $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ C (31) $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ C (32) $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$	C(19)	31(3)	$\operatorname{SL}(3)$	35(3)	5(2)	15(2)	12(2)
C (21) $88(5)$ $116(6)$ $38(3)$ $7(4)$ $30(3)$ $33(5)$ C (22) $96(6)$ $108(6)$ $62(4)$ $44(4)$ $34(4)$ $35(5)$ C (23) $75(5)$ $60(4)$ $82(5)$ $30(3)$ $35(4)$ $10(3)$ C (24) $48(3)$ $43(3)$ $52(3)$ $18(2)$ $22(3)$ $12(3)$ C (25) $50(4)$ $39(3)$ $94(4)$ $8(3)$ $34(3)$ $3(3)$ C (26) $45(3)$ $77(4)$ $47(3)$ $12(3)$ $26(3)$ $10(3)$ C (27) $29(3)$ $47(3)$ $29(2)$ $-5(2)$ $12(2)$ $2(2)$ C (28) $26(3)$ $59(3)$ $47(3)$ $5(3)$ $9(2)$ $1(2)$ C (29) $36(3)$ $95(5)$ $62(4)$ $16(3)$ $22(3)$ $5(3)$ C (30) $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ C (31) $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ C (32) $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$	C(20)	50(4) 80(E)	/5(4)	40(3)	6(3)	16(3)	23(3)
C (22) $96(6)$ $108(6)$ $62(4)$ $44(4)$ $34(4)$ $35(5)$ C (23) $75(5)$ $60(4)$ $82(5)$ $30(3)$ $35(4)$ $10(3)$ C (24) $48(3)$ $43(3)$ $52(3)$ $18(2)$ $22(3)$ $12(3)$ C (25) $50(4)$ $39(3)$ $94(4)$ $8(3)$ $34(3)$ $3(3)$ C (26) $45(3)$ $77(4)$ $47(3)$ $12(3)$ $26(3)$ $10(3)$ C (27) $29(3)$ $47(3)$ $29(2)$ $-5(2)$ $12(2)$ $2(2)$ C (28) $26(3)$ $59(3)$ $47(3)$ $5(3)$ $9(2)$ $1(2)$ C (29) $36(3)$ $95(5)$ $62(4)$ $16(3)$ $22(3)$ $5(3)$ C (30) $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ C (31) $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ C (32) $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$	C(21)	88(5)	100(6)	38(3)	/(4)	30(3)	33 (S) 25 (E)
C(23) $75(3)$ $60(4)$ $82(3)$ $50(3)$ $53(4)$ $10(3)$ $C(24)$ $48(3)$ $43(3)$ $52(3)$ $18(2)$ $22(3)$ $12(3)$ $C(25)$ $50(4)$ $39(3)$ $94(4)$ $8(3)$ $34(3)$ $3(3)$ $C(26)$ $45(3)$ $77(4)$ $47(3)$ $12(3)$ $26(3)$ $10(3)$ $C(27)$ $29(3)$ $47(3)$ $29(2)$ $-5(2)$ $12(2)$ $2(2)$ $C(28)$ $26(3)$ $59(3)$ $47(3)$ $5(3)$ $9(2)$ $1(2)$ $C(29)$ $36(3)$ $95(5)$ $62(4)$ $16(3)$ $22(3)$ $5(3)$ $C(30)$ $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ $C(31)$ $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ $C(32)$ $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$ $C(33)$ $61(4)$ $69(4)$ $61(4)$ $-4(3)$ $6(3)$ $20(3)$	C(22)	96(6) 75(5)	108(6)	62(4) 82(5)	44(4)	34 (4) 25 (4)	35(5)
C(24) $48(3)$ $43(3)$ $52(3)$ $18(2)$ $22(3)$ $12(3)$ $C(25)$ $50(4)$ $39(3)$ $94(4)$ $8(3)$ $34(3)$ $3(3)$ $C(26)$ $45(3)$ $77(4)$ $47(3)$ $12(3)$ $26(3)$ $10(3)$ $C(27)$ $29(3)$ $47(3)$ $29(2)$ $-5(2)$ $12(2)$ $2(2)$ $C(28)$ $26(3)$ $59(3)$ $47(3)$ $5(3)$ $9(2)$ $1(2)$ $C(29)$ $36(3)$ $95(5)$ $62(4)$ $16(3)$ $22(3)$ $5(3)$ $C(30)$ $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ $C(31)$ $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ $C(32)$ $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$ $C(33)$ $61(4)$ $69(4)$ $61(4)$ $-4(3)$ $6(3)$ $20(3)$	C(23)	75(5)	00(4)	02(3)	30(3)	33(4)	10(3)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(24)	40(J) 50(4)	43(3)	52(3)	10(2)	$\angle \angle (\Im)$	$\perp \angle (3)$
C(20) $43(3)$ $77(4)$ $47(3)$ $12(3)$ $20(3)$ $10(3)$ $C(27)$ $29(3)$ $47(3)$ $29(2)$ $-5(2)$ $12(2)$ $2(2)$ $C(28)$ $26(3)$ $59(3)$ $47(3)$ $5(3)$ $9(2)$ $1(2)$ $C(29)$ $36(3)$ $95(5)$ $62(4)$ $16(3)$ $22(3)$ $5(3)$ $C(30)$ $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ $C(31)$ $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ $C(32)$ $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$ $C(33)$ $61(4)$ $69(4)$ $61(4)$ $-4(3)$ $6(3)$ $20(3)$	C(25)	50(4)	39(3) 77(4)	94 (4) 17 (2)	0 (S) 1 2 (S)	34(3)	3(3)
C(27) $29(3)$ $47(3)$ $29(2)$ $-5(2)$ $12(2)$ $2(2)$ $C(28)$ $26(3)$ $59(3)$ $47(3)$ $5(3)$ $9(2)$ $1(2)$ $C(29)$ $36(3)$ $95(5)$ $62(4)$ $16(3)$ $22(3)$ $5(3)$ $C(30)$ $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ $C(31)$ $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ $C(32)$ $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$ $C(33)$ $61(4)$ $69(4)$ $61(4)$ $-4(3)$ $6(3)$ $20(3)$	C(20)	43(3)	//(4)	47(3)	12(3)	20(3)	10(3)
C(20) $20(3)$ $39(3)$ $47(3)$ $3(3)$ $9(2)$ $1(2)$ $C(29)$ $36(3)$ $95(5)$ $62(4)$ $16(3)$ $22(3)$ $5(3)$ $C(30)$ $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ $C(31)$ $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ $C(32)$ $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$ $C(33)$ $61(4)$ $69(4)$ $61(4)$ $-4(3)$ $6(3)$ $20(3)$	C(2)	29(3) 26(3)	4/(J) 5Q/3)	29(2) 17(3)	-J(Z) 5(3)	$\perp \angle (\angle)$	ム (乙) 1 (つ)
C(23) $SO(3)$ $SO(3)$ $O2(4)$ $IO(3)$ $Z2(3)$ $S(3)$ $C(30)$ $42(4)$ $161(8)$ $101(6)$ $53(6)$ $27(4)$ $11(5)$ $C(31)$ $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ $C(32)$ $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$ $C(33)$ $61(4)$ $69(4)$ $61(4)$ $-4(3)$ $6(3)$ $20(3)$	C(20)	20(3)	J J (J) Q5 (5)	4/(J) 62/1)	J (J) 16 (Z)	ジ (ム) つつ (マ)	エ (<i>二</i>) 5 <i>(</i> 2)
C(30) $12(4)$ $101(6)$ $101(6)$ $33(6)$ $27(4)$ $11(3)$ $C(31)$ $79(6)$ $146(9)$ $120(8)$ $51(7)$ $-9(6)$ $66(6)$ $C(32)$ $87(6)$ $88(6)$ $106(6)$ $-1(5)$ $-16(5)$ $38(5)$ $C(33)$ $61(4)$ $69(4)$ $61(4)$ $-4(3)$ $6(3)$ $20(3)$	C(29)	$\Delta 2 (\Lambda)$	161 (8)	101(6)	10(J) 53(G)	22(3)	11 (5)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	C(31)	79(6)	146(9)	120(8)	51(7)	2/(4) -9(6)	1 T (J) 66 (6)
C(32) $G(0)$	C(32)	87(6)	28(6)	106(6)	-1(5)	-16(5)	38 (5)
	C(33)	61(4)	69(4)	61(4)	-4(3)	6(3)	20(3)

Table 14: Anisotropic displacement parameters (A^2 x 10^3) forshelx1. The anisotropic displacement factor exponent takes the form:-2 pi^2 [h^2 a*^2 U11 + ... + 2 h k a* b* U12]

C(34)	35(3)	63(4)	52(3)	12(3)	10(3)	22(3)
C(35)	52(4)	150(7)	97(5)	47(5)	43(4)	51(5)
C(36)	75(5)	70(5)	97(5)	25(4)	3(4)	28(4)
C(37)	43(4)	101(5)	77(5)	4 (4)	-1(3)	15(4)

	Х	У	Z	U(eq)
н(б)	4255	1323	3558	49
H(2A)	2000	-1559	4129	93
H(2B)	2556	-570	4037	93
H(2C)	1751	-565	3582	93
H(3A)	2265	-766	5262	84
H(3B)	2228	697	5364	84
H(3C)	2832	135	5123	84
H(4A)	1019	-864	4538	64
H(4B)	751	29	3949	64
H(4C)	919	588	4629	64
H(7)	2495	3059	5594	64
H(8)	2003	3571	6405	91
H(9)	765	3595	6191	101
H(10)	-11	3211	5177	91
H(11)	459	2675	4372	60
H(12A)	1819	5669	5073	50
H(12B)	1057	5560	4549	50
H(12C)	1524	6787	4598	50
H(13A)	3152	5604	4072	53
H(13B)	3147	5721	4767	53
H(13C)	2835	6821	4285	53
H(15A)	-3	7212	3049	59
H(15B)	753	7697	3041	59
H(15C)	677	7131	3661	59
H(16A)	-186	4820	3157	55
H(16B)	512	4781	3755	55
H(16C)	451	3897	3179	55
H(17A)	-175	5773	2182	63
H(17B)	422	4777	2184	63
H(17C)	559	6220	2107	63
H(20)	1572	4816	1674	66
H(21)	1326	6241	791	95
H(22)	1407	8379	959	104
H(23)	1//9	9208	1979	84
H(24)	1932	/855	2835	55
H(25A)	3/50	6632	2620	/⊥ 71
H(25B)	4121	6278	333Z	/ L 7 1
H(25C)	3348	0890	3108	71
H(26A)	3304	4897	1202	64
H(26B)	2023	4101 2472	1/94 2010	64 64
H(20C)	2292	24/2	2010	04 75
н(29)	4993 5837	5008	2507	101
п(ЗО) п(ЗО)	5051	JU 90 6551	2041 2257	150
н(Зс)	5867	6525	2017 2017	107
н (ЗС)	5024	1971	7213 1921	/ ۲۲ ۵
н (ЗСЛ)	6351	1301	3015	111
H(35R)	5947	2550	3646	11 <i>1</i>
	0011	2000	0010	

Table 15: Hydrogen coordinates (x 10^4) and isotropic displacement parameters (A^2 x 10^3) for shelx1for complex ${\bf 4.}$

_

H(35C)	5731	1257	3290	114
H(36A)	5621	-407	4265	104
Н(З6В)	4996	-268	3617	104
H(36C)	4831	-84	4249	104
H(37A)	6065	1631	4912	94
Н(37В)	5260	1768	4899	94
H(37C)	5630	2874	4652	94

9. Crystallographic data for complex **5**.



Figure 4: Molecular structure of complex 5. Color code: U, blue, Cl, green, Si, yellow, N, purple, C, grey. Hydrogen atoms are omitted for clarity.

Table	16:	Crystallog	raphic	data	for	complexes	5.
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Complex	5		
Empirical	$C_{29}H_{41}N_5SiCl_4U$		
Formula			
Formula	867.60		
weight/g·mol ⁻¹			
Т/К	250(2)		
λ/Å	0.71073		
Crystal system	Monoclinic		
Space group	C 2/C		
a/Å	12.2835(4)		
b/Å	14.8751(5)		
c/Å	23.0777(8)		
$\alpha/^{\circ}$	90		
β/°	93.3560(10)		
$\gamma/^{\circ}$	90		
V/Å ³	4209.5(2)		
Z	4		
$\rho/q \cdot cm^{-3}$	1.479		
$11 (MO-K_{\pi}) / mm^{-1}$	4.166		
F(000)	1832		
θ range for data	1.77 to		
collection/°	26.42		
Limiting indices	-15 <b<15< td=""></b<15<>		
	10/1-/10		
	-1858518		
	-2851528		
Reflections	2/898/4304		
collected/unique	(0.0339)		
(R _{int})	00 70		
Completeness to	99.78		
Θ	1 1 6 0		
GOF on F'	1.163		
R_1 , WR_2	0.0427,		
[I>2σ(I)]	0.1112		
R_1 , wR_2 (all	0.0466,		
data)	0.1128		
Largest diff.	1.482, -		
peak and hole	0.895		
(eA ⁻³)			

Table 16: Atomic coordinates	(x 10^4) and equivalent isotropic
displacement parameters (A^2 :	x 10^3) for complex 5. U(eq) is defined
as one third of the trace of t	the orthogonalized Uij tensor.

	х	У	Z	U(eq)
	0	4610(1)	2500	21 (1)
$O(\perp)$	0	4010(1)	2500	$J \perp (\perp)$
CI(1)	2149(1)	4829(1)	2010(1)	49(1) 22(1)
SI(1)		2385(2)	2500	32(1)
CL(2)	93(2)	5064(2)	3602(1)	61(1) 61(0)
N(3)	5000	1444(5)	2500	61(2)
C(1)	1208(4)	3022(4)	1628(2)	32(1)
N(1)	620(4)	3186(3)	2074(2)	31(1)
N(2)	1946(5)	3622(4)	1477(2)	45(1)
C(2)	1080(4)	2174(4)	1292(2)	29(1)
C(3)	1819(5)	1475(4)	1374(3)	41(1)
C(7)	194(5)	2066(4)	906(3)	38(1)
C(6)	45(6)	1270(5)	591(3)	48(2)
C(9)	3029(11)	4674(7)	995(5)	109(5)
C(5)	785(7)	582(5)	678(3)	51(2)
C(4)	1663(6)	686(5)	1069(3)	50(2)
C(8)	2551(7)	3730(5)	936(3)	64(2)
C(10)	1792(10)	3692(8)	398(4)	98(4)
C(11)	3454 (9)	3043(8)	907(5)	102(4)
C(12)	-1060(8)	1688(6)	2110(4)	77(3)
C(13)	4172(7)	1874(5)	2709(4)	64(2)
C(14)	4136(10)	2801(6)	2703 (5)	88(3)
C(15)	5000	3254(10)	2500	114(6)
C(161)	7855	3311(10)	280	217(6)
C(162)	7101	2758(10)	532	217(6)
C(163)	6746	1975(10)	251	217(6)
C(164)	7145	1745(10)	-280	217(6)
C(165)	7899	2297(10)	-532	217(6)
C(166)	8254	3080(10)	-251	217(6)

U (1	L) -N(1)#1	2.474(5) 2.475(5)
U (1 11/11	L = - C L (2)	2.6277(17)
U(1	L) - Cl(2) #1	2.6277(17)
U (1	L) -Cl(1) #1	2.6575(16)
U (1	L) -Cl(1)	2.6576(16)
U (1	L) –N (3) #2	2.727(7)
U (1	L)-Si(1)	3.311(2)
Si	(1)-N(1)#1	1.747(5)
Si	(1) - N(1)	1.747(5)
Si	(1) - C(12)	1.855(8)
Si	(1) - C(12) # 1	1.855(8)
N (J	3) = C(13) = 3	1.317(8)
N (C	$\frac{1}{2} = \frac{1}{2} \left(\frac{1}{2} \right)$	⊥.J⊥/(0) 2 727(7)
N (J C (1	-N(1)	1.315(7)
C (1	L) –N (2)	1.333(7)
C (1	L) –C (2)	1.484(7)
N (2	2) -C (8)	1.499(8)
C (2	2) -C (7)	1.374(8)
C (2	2)-C(3)	1.386(8)
C (3	3) -C (4)	1.376(9)
C (7	7) – C (6)	1.396(9)
C (6	(5) - C(5)	1.376(10)
C (9	(0) = C(0)	1.525(10)
	(4) = C(4)	1.3/3(11) 1.510(17)
	$a_{3} = C(10)$	1,510(14) 1,512(14)
C (1	(14)	1.380(12)
C (1	L4) -C (15)	1.363(13)
C (1	L5) -C (14) #3	1.363(13)
C (1	L61)-C(166)	1.3900
C (1	L61)-C(162)	1.3900
C (1	L62)-C(163)	1.3900
C (1	L63)-C(164)	1.3900
C (1	L64) -C (165)	1.3900
C (1	L65)-C(166)	1.3900
N (1	L)#1-U(1)-N(1)	62.2(2)
N (1	L) #1-U(1)-Cl(2)	80.35(12)
N (1	L - U (1) - C1 (2)	127.43(12)
N (1	L) # L = U(1) = CL(2) # L	127.42(12)
N (J	L = U (L) = U (Z) # L	δU.34(1∠) 150 22(10)
	(∠) [→] ∪(⊥) [→] ∪(⊥) [→] ∪(⊥) (∠) #⊥) #1 –īī(1) –Cl (1) #1	100.22(10) 79.57(11)
N (1) - U(1) - C](1) #1	113.00(11)
Cl	(2) - U(1) - Cl(1) #1	93.13(6)
Cl	(2) #1-U(1)-Cl(1) #1	83.25(6)
N (1	L)#1-U(1)-Cl(1)	113.00(11)
N (1	L)-U(1)-Cl(1)	79.57(11)
Cl	(2)-U(1)-Cl(1)	83.26(6)
Cl	(2)#1-U(1)-Cl(1)	93.13(6)

Cl(1)#1-U(1)-Cl(1)	165.93(8)
	140 00(10)
N(I) #I=O(I) = N(S) #Z	140.90(10)
N(1) - U(1) - N(3) #2	148.90(10)
(1) (1) (1) (1) (2) (2)	
CI(Z) = O(I) = N(S) #Z	/5.11(5)
Cl(2)#1-U(1)-N(3)#2	75.11(5)
(-) $(-)$ $(-)$ $(-)$ $(-)$ $(-)$ $(-)$	
$C \perp (\perp) \# \perp - \cup (\perp) - \mathbb{N} (3) \# \mathbb{Z}$	82.97(4)
Cl(1)-U(1)-N(3)#2	82.97(4)
NI(1) # 1 II(1) C + (1)	21 10(10)
N(1) # 1 = O(1) = S 1(1)	51.10(10)
N(1)-U(1)-Si(1)	31.10(10)
C1(2) - U(1) - Si(1)	104 89(5)
	104.05(5)
CL(2) #1-U(1) - Si(1)	104.89(5)
Cl(1)#1-U(1)-Si(1)	97.03(4)
$C_{1}(1)$ $T_{1}(1)$ $C_{1}(1)$	
CI(I) = O(I) = SI(I)	97.03(4)
N(3)#2-U(1)-Si(1)	180.0
$N(1) \# 1 - C \stackrel{!}{\downarrow} (1) - N(1)$	91 0 (3)
N(1) # 1 = S 1(1) = N(1)	94.0(3)
N(1)#1-Si(1)-C(12)	109.7(3)
N(1) - Si(1) - C(12)	115 1 (3)
	115.1(0)
N(1)#1-Si(1)-C(12)#1	115.1(3)
N(1) - Si(1) - C(12) # 1	109.7(3)
C(12) = C(1) = C(12) + 1	1101(7)
C(12) - SI(1) - C(12) #I	$\perp \perp \angle \cdot \perp (/)$
N(1)#1-Si(1)-U(1)	47.00(16)
N(1) - Si(1) - II(1)	47 01 (16)
R(1) = C(1) = C(1)	100 0(4)
C(12) - S1(1) - U(1)	124.0(4)
C(12)#1-Si(1)-U(1)	124.0(4)
C(13) # 3 - N(3) - C(13)	121 9(10)
C(10) 0 0 0 0 0 0 0	110 1 (5)
C(13)#3-N(3)-U(1)#4	119.1(5)
C(13)-N(3)-U(1)#4	119.1(5)
N(1) - C(1) - N(2)	1196(5)
N(1) = O(1) = O(2)	101 4(E)
N(1) = C(1) = C(2)	121.4(5)
N(2) - C(1) - C(2)	119.1(5)
C(1) = N(1) = Si(1)	126 3(4)
C(1) $N(1)$ $U(1)$	120.0(1)
$C(\perp) = N(\perp) = U(\perp)$	131.8(4)
Si(1)-N(1)-U(1)	101.9(2)
C(1) - N(2) - C(8)	131 8(5)
C(1) $N(2)$ $C(0)$	101.0(0)
C(7) - C(2) - C(3)	119.2(5)
C(7) - C(2) - C(1)	119.6(5)
C(3) = C(2) = C(1)	121 2(5)
	121.2(3)
C(4) - C(3) - C(2)	120.0(6)
C(2) - C(7) - C(6)	120.8(6)
C(5) - C(6) - C(7)	110 2(6)
C(3) - C(0) - C(7)	119.3(0)
C(4) - C(5) - C(6)	120.0(6)
C(5) - C(4) - C(3)	120.8(6)
V(2) = C(2)	111 C(C)
N(2) = C(8) = C(10)	111.0(0)
N(2)-C(8)-C(11)	111.4(7)
C(10) - C(8) - C(11)	111 0(8)
$\mathcal{O}(10) \mathcal{O}(0) \mathcal{O}(11)$	102 2(0)
N(2) = C(8) = C(9)	103.3(6)
C(10) - C(8) - C(9)	108.9(9)
C(11) - C(8) - C(9)	1103(9)
C(11) = C(0) = C(0)	100.0()
N(3) - C(13) - C(14)	120.4(9)
C(15)-C(14)-C(13)	118.2(11)
C(14) # 3 - C(15) - C(14)	120 7(13)
$\bigcirc (1 \land (1 $	100 0
C(100) - C(101) - C(102)	120.0
C(163)-C(162)-C(161)	120.0
C(162)-C(163)-C(164)	120.0
C(165) = C(164) = C(162)	120 0
C(103) = C(104) = C(103)	120.0
C(164)-C(165)-C(166)	120.0

Symmetry transformations used to generate equivalent atoms: #1 -x,y,-z+1/2 #2 x-1/2,y+1/2,z #3 -x+1,y,-z+1/2 #4 x+1/2,y-1/2,z

	U11	U22	U33	U23	U13	U12
	27(1)	27(1)	21 (1)	0	7 (1)	
O(1)	37(1)	27(1)	51(1) 59(1)	-10(1)	7 (⊥) 5 (1)	U 7 (1)
$C_{\perp}(1)$	40(1)	30(1)	JO(1) 25(1)	-19(1)	$J(\perp)$	/ (_)
SI(I)	37(1)	27(1)	33(1)	0	10(1)	
CL(Z)	/9(1)	66(I)	39(1)	-13(1)	9(1)	5(1)
N(3)	86(6)	15(3)	81(6)	0	8(5)	0
C(1)	34(3)	32(3)	29(3)	-2(2)	5(2)	7(2)
N(1)	32(2)	28(2)	33(2)	-2(2)	13(2)	6(2)
N(2)	54(3)	41(3)	44(3)	-14(2)	27(2)	21(2)
C(2)	32(3)	30(3)	25(2)	-3(2)	10(2)	6(2)
C(3)	46(3)	45(3)	31(3)	-2(3)	1(2)	6(3)
C(7)	40(3)	36(3)	39(3)	-1(2)	4(2)	3(2)
C(6)	54(4)	53(4)	37(3)	-6(3)	0(3)	18(3)
C(9)	149(11)	90(7)	96(8)	-26(6)	76(8)	84(7)
C(5)	83(5)	36(3)	37(3)	-10(3)	9(3)	7(3)
C(4)	71(5)	35(3)	45(4)	-3(3)	6(3)	14(3)
C(8)	79(5)	61(5)	57(4)	-19(4)	47 (4)	36(4)
C(10)	125(9)	126(9)	47 (5)	0(5)	43(5)	48(7)
C(11)	102(8)	109(8)	103(8)	-20(7)	73(7)	13(7)
C(12)	98(6)	77(6)	61 (5)	-22(4)	44(5)	58(5)
C(13)	73(5)	40(4)	79(5)	-9(4)	14(4)	21(4)
C(14)	123(9)	49(5)	91 (7)	-5(5)	-4(6)	32(6)
C(15)	190(20)	35(7)	119(14)	0	-1 (14)	0

Table 18: Anisotropic displacement parameters (A² x 10³) for complex **5.** The anisotropic displacement factor exponent takes the form: -2 pi^2 [h² a^{*2} Ull + ... + 2 h k a^{*} b^{*} Ul2]

	Х	У	Z	U (eq)
Н(3)	2415	1537	1638	49
H(7)	-312	2528	855	46
Н(б)	-549	1205	325	58
H(9A)	3439	4802	663	131
Н(9В)	3497	4721	1342	131
H(9C)	2441	5097	1012	131
Н(5)	693	46	474	62
H(4)	2163	220	1128	60
H(10A)	2203	3742	58	118
H(10B)	1267	4169	401	118
H(10C)	1422	3123	394	118
H(11A)	3811	3130	553	122
H(11B)	3169	2442	918	122
H(11C)	3969	3132	1232	122
H(12A)	-897	1062	2169	92
H(12B)	-1079	1823	1703	92
H(12C)	-1757	1821	2258	92
H(13)	3605	1522	2866	77
H(14)	3512	3110	2837	106
H(15)	5000	3900	2500	136

Table 19: Hydrogen coordinates (x 10^4) and isotropic displacement parameters (A^2 x 10^3) for complex ${\bf 5}.$