Supporting Information for

Polyferrocenylsilane Homopolymers and Diblock Copolymers with Pendant Ruthenocenyl Groups by Photocontrolled Ring-Opening Polymerisation

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Contents

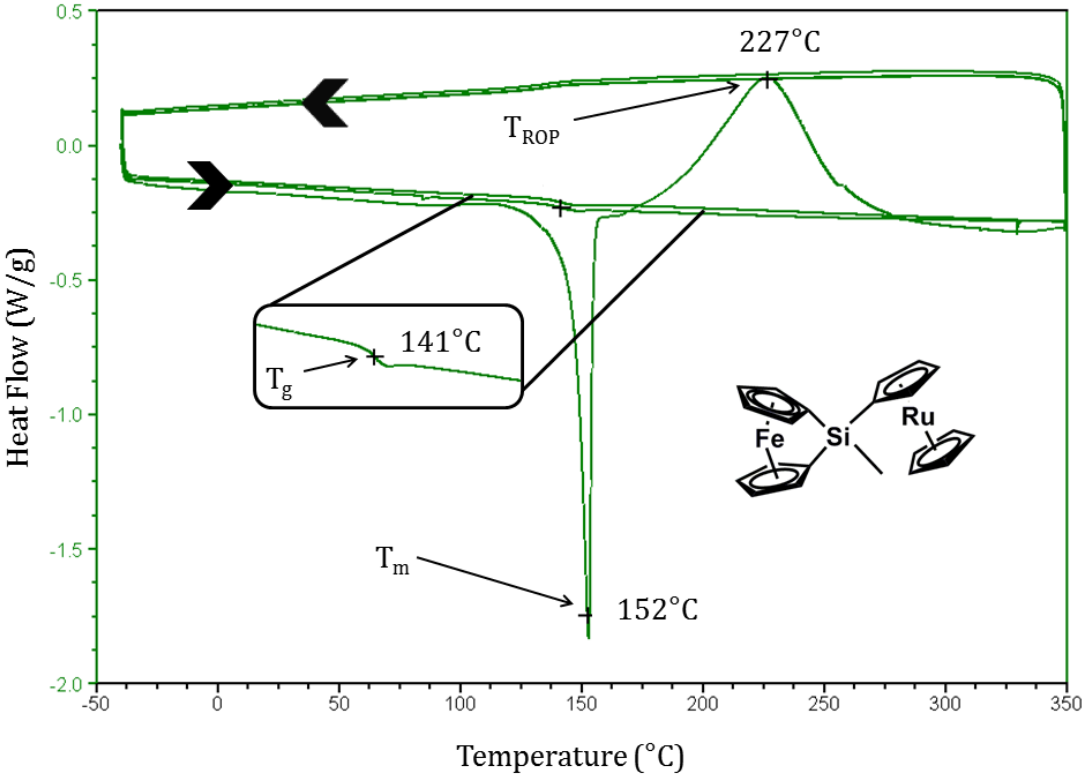

Figure S1. DSC thermogram for[{Fe(η-C_5H_4)$_2$}SiMe(η-C_5H_4)Ru(η-C_5H_5)] (**4**)

Table S1. Crystallographic data and tables for [{Fe(η-C_5H_4)$_2$}SiMe(η-C_5H_4)Ru(η-C_5H_5)] (**4**, CCDC 956489)

Identification code	FcSiMeRC
Empirical formula	$C_{21}H_{20}FeRuSi$
Formula weight	457.38
Temperature/K	100(2)
Crystal system	monoclinic
Space group	$P2_1/c$
a/Å	12.4947(4)
b/Å	8.9461(3)
c/Å	31.2176(9)
α/°	90.00
β/°	100.039(2)
γ/°	90.00
Volume/Å^3	3436.04(19)
Z	8
ρ_{calc}mg/mm^3	1.768
m/mm^{-1}	1.791
F(000)	1840.0
Crystal size/mm^3	0.16 × 0.16 × 0.04
2Θ range for data collection	3.32 to 56.02°
Index ranges	$-16 \le h \le 16$, $0 \le k \le 11$, $0 \le l \le 41$
Reflections collected	7380
Independent reflections	7380[R(int) = 0.0000]
Data/restraints/parameters	7380/332/437
Goodness-of-fit on F^2	1.207
Final R indexes [I>=2σ (I)]	R_1 = 0.0402, wR_2 = 0.1067
Final R indexes [all data]	R_1 = 0.0515, wR_2 = 0.1110
Largest diff. peak/hole / e Å^{-3}	1.10/-1.18

Table S1.2 Fractional Atomic Coordinates (×10^4) and Equivalent Isotropic Displacement Parameters (Å^2×10^3) for [{Fe(η-C_5H_4)$_2$}SiMe(η-C_5H_4)Ru(η-C_5H_5)] (4). U_{eq} is defined as 1/3 of of the trace of the orthogonalised U_{IJ} tensor.

Atom	*x*	*y*	*z*	U(eq)
Ru1	9648.9(3)	7293.9(5)	9378.74(14)	12.79(12)
Fe1	9283.6(6)	12255.3(9)	8355.6(3)	13.47(18)
Si1	9289.3(11)	9212.5(16)	8374.5(5)	13.9(3)
C1	10058(4)	10618(6)	8091.8(17)	13.7(11)
C2	10843(4)	11602(6)	8351(2)	19.6(13)
C3	10693(4)	13081(6)	8176(2)	23.7(14)
C4	9850(4)	13053(6)	7811.9(19)	22.6(13)
C5	9460(4)	11543(6)	7754.9(18)	17.4(12)
C6	8498(4)	10655(6)	8631.0(18)	15.0(12)
C7	9073(4)	11628(6)	8963.3(18)	15.5(12)
C8	8690(4)	13116(6)	8888.8(18)	18.0(12)
C9	7859(4)	13129(6)	8514(2)	19.1(13)
C10	7731(4)	11617(6)	8361.7(19)	14.9(12)

C11	8405(4)	7979(6)	7985.8(18)	21.7(13)
C12	10193(4)	8080(6)	8785.6(18)	13.5(11)
C13	10195(4)	6458(6)	8796.4(19)	17.2(12)
C14	10933(4)	5956(6)	9174.3(19)	17.8(12)
C15	11401(4)	7236(7)	9395.9(19)	20.3(13)
C16	10950(4)	8543(6)	9157.8(19)	17.1(12)
C17	8094(4)	8274(6)	9445(2)	16.8(13)
C18	7962(4)	6681(6)	9400(2)	17.8(13)
C19	8660(4)	5995(6)	9757.2(19)	16.7(12)
C20	9209(4)	7141(6)	10019.1(18)	19.3(12)
C21	8849(4)	8558(6)	9832(2)	22.0(13)
Ru2	5202.6(3)	7310.5(5)	5612.59(14)	12.94(12)
Fe2	5766.6(6)	12247.9(9)	6657.0(3)	14.07(18)
Si2	5769.8(11)	9195.4(16)	6623.6(5)	13.5(3)
C22	6796(4)	10601(6)	6899.0(17)	13.7(11)
C23	6511(4)	11520(6)	7245.2(19)	17.6(12)
C24	6850(4)	13019(6)	7193.7(19)	20.7(13)
C25	7343(4)	13067(6)	6816.5(19)	19.3(13)
C26	7326(4)	11615(6)	6633.8(19)	16.1(12)
C27	4722(4)	10646(6)	6394.3(18)	14.2(11)
C28	4225(4)	11599(6)	6687(2)	18.9(12)
C29	4194(4)	13107(6)	6526(2)	21.5(13)
C30	4651(4)	13119(6)	6138.6(19)	21.6(13)
C31	4965(4)	11625(6)	6061.3(18)	16.8(12)
C32	5298(4)	7937(6)	7025.8(19)	22.3(13)
C33	6279(4)	8104(6)	6201.4(18)	15.3(12)
C34	6684(4)	8586(6)	5813.1(19)	16.6(12)
C35	6941(4)	7298(7)	5583(2)	22.9(13)
C36	6683(4)	6001(7)	5812(2)	23.5(14)
C37	6277(4)	6481(6)	6183.7(19)	18.7(13)
C38	3570(4)	8294(6)	5546(2)	18.1(13)
C39	3994(4)	8554(7)	5163(2)	24.1(14)
C40	4189(4)	7139(6)	4975.3(19)	22.0(13)
C41	3875(4)	6013(6)	5243.0(19)	18.1(12)
C42	3507(4)	6695(6)	5604.6(19)	16.1(13)

Table S1.3 Anisotropic Displacement Parameters ($Å^2 \times 10^3$) for [{Fe(η-C_5H_4)$_2$}SiMe(η-C_5H_4)Ru(η-C_5H_5)] (4). The Anisotropic displacement factor exponent takes the form: $-2\pi^2[h^2a^{*2}U_{11}+...+2hka\times b\times U_{12}]$

Atom	U_{11}	U_{22}	U_{33}	U_{23}	U_{13}	U_{12}
Ru1	10.7(2)	12.1(3)	16.1(2)	1.37(19)	3.83(17)	0.6(2)
Fe1	13.0(3)	11.7(4)	16.6(4)	1.5(4)	5.0(3)	0.5(4)
Si1	13.8(7)	12.9(8)	15.7(8)	-0.8(7)	4.2(6)	-0.7(6)
C1	14(2)	15(2)	13(3)	-1(2)	4(2)	0.1(19)
C2	17(2)	19(3)	24(3)	0(2)	7(2)	2(2)
C3	20(2)	20(3)	34(3)	-1(2)	14(2)	-2(2)
C4	24(3)	22(3)	25(3)	5(2)	12(2)	4(2)
C5	18(2)	23(3)	14(3)	-2(2)	9(2)	2(2)

C6	12(2)	16(2)	18(3)	2(2)	6(2)	-0.7(19)
C7	15(2)	19(3)	14(2)	1(2)	4(2)	4(2)
C8	18(2)	16(3)	22(3)	-3(2)	9(2)	-3(2)
C9	17(2)	17(3)	24(3)	4(2)	6(2)	6(2)
C10	11(2)	20(3)	16(3)	-1(2)	7(2)	-1(2)
C11	20(2)	21(3)	26(3)	-7(2)	6(2)	-3(2)
C12	13(2)	13(3)	16(2)	4(2)	8(2)	2.2(19)
C13	19(2)	14(3)	20(3)	1(2)	8(2)	1(2)
C14	16(2)	16(2)	25(3)	9(2)	12(2)	6(2)
C15	8(2)	32(3)	22(3)	10(2)	4.9(19)	1(2)
C16	14(2)	15(2)	22(3)	2(2)	5(2)	-2.3(19)
C17	15(2)	16(3)	20(3)	4(2)	6(2)	2(2)
C18	6(2)	21(3)	28(3)	5(2)	7(2)	-3(2)
C19	16(2)	16(2)	21(3)	1(2)	12(2)	-1(2)
C20	16(2)	25(3)	18(3)	2(2)	7.3(19)	-3(2)
C21	20(3)	20(3)	28(3)	-5(2)	10(2)	1(2)
Ru2	10.4(2)	13.0(3)	15.5(2)	-1.48(19)	2.49(17)	-0.2(2)
Fe2	11.6(3)	13.2(4)	17.2(4)	-1.7(4)	1.8(3)	0.3(4)
Si2	13.8(7)	13.3(8)	13.5(8)	0.9(7)	3.2(6)	-0.1(6)
C22	12(2)	17(3)	12(3)	-1(2)	2.4(19)	0.5(19)
C23	15(2)	20(3)	18(3)	-1(2)	3(2)	-1(2)
C24	18(2)	20(3)	22(3)	-5(2)	-1(2)	1(2)
C25	15(2)	17(3)	25(3)	-2(2)	0(2)	-4(2)
C26	11(2)	19(3)	19(3)	0(2)	4(2)	2(2)
C27	12(2)	14(2)	16(3)	-1(2)	0(2)	-1.8(19)
C28	16(2)	20(3)	21(3)	-4(2)	5(2)	-2(2)
C29	15(2)	20(3)	28(3)	-4(2)	1(2)	3(2)
C30	16(2)	17(3)	29(3)	1(2)	-2(2)	-2(2)
C31	14(2)	19(3)	17(3)	0(2)	1(2)	1(2)
C32	25(3)	22(3)	21(3)	7(2)	6(2)	-2(2)
C33	10(2)	19(3)	16(3)	-2(2)	-1(2)	0.5(19)
C34	10(2)	19(3)	20(3)	-1(2)	2(2)	-3(2)
C35	9(2)	32(3)	28(3)	-9(2)	7(2)	0(2)
C36	15(2)	22(3)	32(3)	-7(2)	0(2)	4(2)
C37	16(2)	16(3)	22(3)	1(2)	-1(2)	1(2)
C38	11(2)	16(3)	27(3)	-6(2)	1(2)	4(2)
C39	19(3)	19(3)	33(3)	2(2)	-2(2)	-1(2)
C40	17(2)	27(3)	22(3)	-6(2)	1(2)	0(2)
C41	13(2)	19(3)	22(3)	-2(2)	1(2)	-1(2)
C42	9(2)	18(3)	21(3)	-2(2)	2(2)	-4(2)

Table S1.4 Bond Lengths for [{Fe(η-C_5H_4)$_2$}SiMe(η-C_5H_4)Ru(η-C_5H_5)] (4).

Atom	Atom	Length/Å	Atom	Atom	Length/Å
Ru1	C12	2.196(5)	Ru2	C33	2.198(5)
Ru1	C13	2.182(6)	Ru2	C34	2.172(5)
Ru1	C14	2.184(5)	Ru2	C35	2.190(5)
Ru1	C15	2.181(5)	Ru2	C36	2.186(5)
Ru1	C16	2.181(5)	Ru2	C37	2.168(5)

Ru1	C17	2.174(5)	Ru2	C38	2.198(5)
Ru1	C18	2.191(5)	Ru2	C39	2.179(6)
Ru1	C19	2.187(5)	Ru2	C40	2.170(5)
Ru1	C20	2.168(5)	Ru2	C41	2.182(5)
Ru1	C21	2.185(6)	Ru2	C42	2.185(5)
Fe1	Si1	2.7228(16)	Fe2	Si2	2.7328(16)
Fe1	C1	2.010(5)	Fe2	C22	2.014(5)
Fe1	C2	2.036(5)	Fe2	C23	2.016(5)
Fe1	C3	2.075(5)	Fe2	C24	2.080(5)
Fe1	C4	2.076(6)	Fe2	C25	2.080(5)
Fe1	C5	2.028(5)	Fe2	C26	2.042(5)
Fe1	C6	2.012(5)	Fe2	C27	2.014(5)
Fe1	C7	2.039(5)	Fe2	C28	2.030(5)
Fe1	C8	2.084(5)	Fe2	C29	2.084(5)
Fe1	C9	2.081(5)	Fe2	C30	2.094(5)
Fe1	C10	2.026(5)	Fe2	C31	2.030(5)
Si1	C1	1.891(5)	Si2	C22	1.892(5)
Si1	C6	1.886(5)	Si2	C27	1.893(5)
Si1	C11	1.855(5)	Si2	C32	1.858(5)
Si1	C12	1.855(5)	Si2	C33	1.841(6)
C1	C2	1.453(7)	C22	C23	1.450(7)
C1	C5	1.441(7)	C22	C26	1.462(7)
C2	C3	1.431(8)	C23	C24	1.425(7)
C3	C4	1.408(8)	C24	C25	1.422(7)
C4	C5	1.437(7)	C25	C26	1.417(7)
C6	C7	1.446(7)	C27	C28	1.464(7)
C6	C10	1.445(7)	C27	C31	1.431(7)
C7	C8	1.420(7)	C28	C29	1.439(7)
C8	C9	1.422(7)	C29	C30	1.424(8)
C9	C10	1.434(7)	C30	C31	1.426(7)
C12	C13	1.451(7)	C33	C34	1.458(7)
C12	C16	1.427(7)	C33	C37	1.453(7)
C13	C14	1.437(7)	C34	C35	1.424(7)
C14	C15	1.411(7)	C35	C36	1.429(8)
C15	C16	1.446(7)	C36	C37	1.411(8)
C17	C18	1.439(7)	C38	C39	1.407(8)
C17	C21	1.420(8)	C38	C42	1.446(7)
C18	C19	1.428(7)	C39	C40	1.434(7)
C19	C20	1.412(7)	C40	C41	1.407(7)
C20	C21	1.435(7)	C41	C42	1.428(7)

Table S1.5 Bond Angles for [{Fe(η-C_5H_4)$_2$}SiMe(η-C_5H_4)Ru(η-C_5H_5)] (4).

Atom	Atom	Atom	Angle/°	Atom	Atom	Atom	Angle/°
C12	Ru1	C18	123.1(2)	C33	Ru2	C38	111.9(2)
C13	Ru1	C12	38.70(18)	C34	Ru2	C33	38.97(19)
C13	Ru1	C16	63.5(2)	C34	Ru2	C35	38.12(19)
C13	Ru1	C18	112.5(2)	C34	Ru2	C36	64.1(2)
C13	Ru1	C19	123.8(2)	C34	Ru2	C38	123.2(2)

C13	Ru1	C21	164.1(2)	C34	Ru2	C39	112.2(2)
C14	Ru1	C12	65.0(2)	C34	Ru2	C41	164.4(2)
C14	Ru1	C13	38.43(19)	C35	Ru2	C33	64.5(2)
C14	Ru1	C16	64.05(19)	C35	Ru2	C38	155.4(2)
C14	Ru1	C18	129.2(2)	C36	Ru2	C33	64.6(2)
C14	Ru1	C19	112.3(2)	C36	Ru2	C35	38.1(2)
C14	Ru1	C21	156.2(2)	C36	Ru2	C38	165.2(2)
C15	Ru1	C12	64.6(2)	C37	Ru2	C33	38.89(19)
C15	Ru1	C13	63.5(2)	C37	Ru2	C34	64.4(2)
C15	Ru1	C14	37.7(2)	C37	Ru2	C35	63.6(2)
C15	Ru1	C16	38.71(19)	C37	Ru2	C36	37.8(2)
C15	Ru1	C18	163.8(2)	C37	Ru2	C38	130.3(2)
C15	Ru1	C19	129.3(2)	C37	Ru2	C39	164.8(2)
C15	Ru1	C21	124.5(2)	C37	Ru2	C40	155.4(2)
C16	Ru1	C12	38.03(19)	C37	Ru2	C41	123.9(2)
C16	Ru1	C18	155.8(2)	C37	Ru2	C42	112.6(2)
C17	Ru1	C12	111.4(2)	C39	Ru2	C33	128.9(2)
C17	Ru1	C13	129.2(2)	C39	Ru2	C35	123.8(2)
C17	Ru1	C14	164.4(2)	C39	Ru2	C36	156.1(2)
C17	Ru1	C15	156.5(2)	C39	Ru2	C38	37.5(2)
C17	Ru1	C16	123.5(2)	C39	Ru2	C41	63.5(2)
C17	Ru1	C18	38.48(19)	C40	Ru2	C33	164.6(2)
C17	Ru1	C19	64.1(2)	C40	Ru2	C34	129.3(2)
C17	Ru1	C20	64.1(2)	C40	Ru2	C35	112.7(2)
C17	Ru1	C21	38.0(2)	C40	Ru2	C36	123.6(2)
C19	Ru1	C12	155.9(2)	C40	Ru2	C38	63.7(2)
C19	Ru1	C16	164.9(2)	C40	Ru2	C39	38.5(2)
C19	Ru1	C18	38.08(19)	C40	Ru2	C41	37.7(2)
C20	Ru1	C12	164.4(2)	C40	Ru2	C42	64.0(2)
C20	Ru1	C13	155.9(2)	C41	Ru2	C33	155.8(2)
C20	Ru1	C14	123.5(2)	C41	Ru2	C35	130.0(2)
C20	Ru1	C15	113.0(2)	C41	Ru2	C36	113.1(2)
C20	Ru1	C16	130.3(2)	C41	Ru2	C38	63.6(2)
C20	Ru1	C18	63.6(2)	C42	Ru2	C33	122.8(2)
C20	Ru1	C19	37.84(19)	C42	Ru2	C34	155.8(2)
C20	Ru1	C21	38.5(2)	C42	Ru2	C35	164.8(2)
C21	Ru1	C12	128.6(2)	C42	Ru2	C36	129.7(2)
C21	Ru1	C16	112.9(2)	C42	Ru2	C38	38.53(19)
C21	Ru1	C18	63.8(2)	C42	Ru2	C39	63.9(2)
C21	Ru1	C19	63.9(2)	C42	Ru2	C41	38.17(19)
C1	Fe1	Si1	43.98(15)	C22	Fe2	Si2	43.81(15)
C1	Fe1	C2	42.1(2)	C22	Fe2	C23	42.2(2)
C1	Fe1	C3	69.9(2)	C22	Fe2	C24	69.9(2)
C1	Fe1	C4	70.0(2)	C22	Fe2	C25	69.6(2)
C1	Fe1	C5	41.8(2)	C22	Fe2	C26	42.2(2)
C1	Fe1	C7	109.3(2)	C22	Fe2	C27	87.6(2)
C1	Fe1	C8	149.3(2)	C22	Fe2	C28	108.8(2)
C1	Fe1	C9	149.8(2)	C22	Fe2	C29	149.6(2)

C1	Fe1	C10	109.2(2)	C22	Fe2	C30	149.1(2)
C2	Fe1	Si1	73.39(16)	C22	Fe2	C31	108.9(2)
C2	Fe1	C3	40.7(2)	C23	Fe2	Si2	73.04(15)
C2	Fe1	C4	68.3(2)	C23	Fe2	C24	40.7(2)
C2	Fe1	C7	101.9(2)	C23	Fe2	C25	68.2(2)
C2	Fe1	C8	125.9(2)	C23	Fe2	C26	69.6(2)
C2	Fe1	C9	165.6(2)	C23	Fe2	C28	99.0(2)
C3	Fe1	Si1	111.26(16)	C23	Fe2	C29	124.6(2)
C4	Fe1	Si1	111.20(16)	C23	Fe2	C30	164.4(2)
C4	Fe1	C3	39.7(2)	C23	Fe2	C31	145.2(2)
C4	Fe1	C8	138.2(2)	C24	Fe2	Si2	110.94(16)
C4	Fe1	C9	119.5(2)	C24	Fe2	C25	40.0(2)
C5	Fe1	Si1	72.90(16)	C24	Fe2	C29	119.7(2)
C5	Fe1	C2	69.2(2)	C24	Fe2	C30	138.7(2)
C5	Fe1	C3	68.1(2)	C25	Fe2	Si2	110.71(15)
C5	Fe1	C4	41.0(2)	C25	Fe2	C29	137.6(2)
C5	Fe1	C7	145.7(2)	C25	Fe2	C30	122.0(2)
C5	Fe1	C8	164.9(2)	C26	Fe2	Si2	73.38(15)
C5	Fe1	C9	125.0(2)	C26	Fe2	C24	68.3(2)
C6	Fe1	Si1	43.84(15)	C26	Fe2	C25	40.2(2)
C6	Fe1	C1	87.8(2)	C26	Fe2	C29	165.6(2)
C6	Fe1	C2	109.7(2)	C26	Fe2	C30	125.9(2)
C6	Fe1	C3	150.4(2)	C27	Fe2	Si2	43.82(14)
C6	Fe1	C4	148.8(2)	C27	Fe2	C23	107.7(2)
C6	Fe1	C5	108.1(2)	C27	Fe2	C24	148.1(2)
C6	Fe1	C7	41.8(2)	C27	Fe2	C25	150.2(2)
C6	Fe1	C8	69.7(2)	C27	Fe2	C26	110.0(2)
C6	Fe1	C9	70.4(2)	C27	Fe2	C28	42.5(2)
C6	Fe1	C10	41.92(19)	C27	Fe2	C29	70.2(2)
C7	Fe1	Si1	72.83(15)	C27	Fe2	C30	69.7(2)
C7	Fe1	C3	127.1(2)	C27	Fe2	C31	41.5(2)
C7	Fe1	C4	166.7(2)	C28	Fe2	Si2	73.94(15)
C7	Fe1	C8	40.3(2)	C28	Fe2	C24	123.2(2)
C7	Fe1	C9	68.1(2)	C28	Fe2	C25	163.1(2)
C8	Fe1	Si1	110.60(16)	C28	Fe2	C26	147.3(2)
C8	Fe1	C3	121.4(2)	C28	Fe2	C29	40.9(2)
C9	Fe1	Si1	111.69(15)	C28	Fe2	C30	68.4(2)
C9	Fe1	C3	137.0(2)	C28	Fe2	C31	69.1(2)
C9	Fe1	C8	39.9(2)	C29	Fe2	Si2	111.65(16)
C10	Fe1	Si1	73.55(15)	C29	Fe2	C30	39.9(2)
C10	Fe1	C2	146.9(2)	C30	Fe2	Si2	110.35(16)
C10	Fe1	C3	164.2(2)	C31	Fe2	Si2	72.21(15)
C10	Fe1	C4	124.6(2)	C31	Fe2	C24	167.7(2)
C10	Fe1	C5	100.3(2)	C31	Fe2	C25	127.7(2)
C10	Fe1	C7	68.6(2)	C31	Fe2	C26	102.3(2)
C10	Fe1	C8	67.8(2)	C31	Fe2	C29	67.9(2)
C10	Fe1	C9	40.84(19)	C31	Fe2	C30	40.4(2)
C1	Si1	Fe1	47.55(16)	C22	Si2	Fe2	47.46(15)

C6	Si1	Fe1	47.62(16)	C22	Si2	C27	94.9(2)
C6	Si1	C1	95.2(2)	C27	Si2	Fe2	47.46(15)
C11	Si1	Fe1	125.54(19)	C32	Si2	Fe2	125.26(19)
C11	Si1	C1	112.5(3)	C32	Si2	C22	111.4(3)
C11	Si1	C6	112.8(2)	C32	Si2	C27	113.0(2)
C12	Si1	Fe1	124.06(18)	C33	Si2	Fe2	124.07(19)
C12	Si1	C1	112.9(2)	C33	Si2	C22	112.7(2)
C12	Si1	C6	112.4(2)	C33	Si2	C27	113.3(2)
C12	Si1	C11	110.4(3)	C33	Si2	C32	110.7(3)
Si1	C1	Fe1	88.5(2)	Si2	C22	Fe2	88.7(2)
C2	C1	Fe1	69.9(3)	C23	C22	Fe2	69.0(3)
C2	C1	Si1	119.4(4)	C23	C22	Si2	118.7(4)
C5	C1	Fe1	69.8(3)	C23	C22	C26	105.4(4)
C5	C1	Si1	118.8(4)	C26	C22	Fe2	69.9(3)
C5	C1	C2	105.7(5)	C26	C22	Si2	119.5(4)
C1	C2	Fe1	68.0(3)	C22	C23	Fe2	68.8(3)
C3	C2	Fe1	71.1(3)	C24	C23	Fe2	72.1(3)
C3	C2	C1	108.5(5)	C24	C23	C22	109.4(5)
C2	C3	Fe1	68.2(3)	C23	C24	Fe2	67.3(3)
C4	C3	Fe1	70.2(3)	C25	C24	Fe2	70.0(3)
C4	C3	C2	108.7(5)	C25	C24	C23	107.6(5)
C3	C4	Fe1	70.1(3)	C24	C25	Fe2	70.0(3)
C3	C4	C5	107.8(5)	C24	C25	C26	109.1(5)
C5	C4	Fe1	67.7(3)	C26	C25	Fe2	68.5(3)
C1	C5	Fe1	68.4(3)	C22	C26	Fe2	67.8(3)
C4	C5	Fe1	71.3(3)	C25	C26	Fe2	71.3(3)
C4	C5	C1	109.2(5)	C25	C26	C22	108.5(5)
Si1	C6	Fe1	88.5(2)	Si2	C27	Fe2	88.7(2)
C7	C6	Fe1	70.1(3)	C28	C27	Fe2	69.3(3)
C7	C6	Si1	119.0(4)	C28	C27	Si2	120.2(4)
C10	C6	Fe1	69.6(3)	C31	C27	Fe2	69.9(3)
C10	C6	Si1	120.3(4)	C31	C27	Si2	118.3(4)
C10	C6	C7	104.8(5)	C31	C27	C28	105.3(5)
C6	C7	Fe1	68.1(3)	C27	C28	Fe2	68.2(3)
C8	C7	Fe1	71.6(3)	C29	C28	Fe2	71.6(3)
C8	C7	C6	109.7(5)	C29	C28	C27	108.5(5)
C7	C8	Fe1	68.2(3)	C28	C29	Fe2	67.5(3)
C7	C8	C9	108.6(5)	C30	C29	Fe2	70.5(3)
C9	C8	Fe1	69.9(3)	C30	C29	C28	108.2(5)
C8	C9	Fe1	70.1(3)	C29	C30	Fe2	69.7(3)
C8	C9	C10	106.8(5)	C29	C30	C31	107.4(5)
C10	C9	Fe1	67.5(3)	C31	C30	Fe2	67.4(3)
C6	C10	Fe1	68.5(3)	C27	C31	Fe2	68.7(3)
C9	C10	Fe1	71.7(3)	C27	C31	C30	110.6(5)
C9	C10	C6	110.2(5)	C30	C31	Fe2	72.2(3)
Si1	C12	Ru1	121.2(2)	Si2	C33	Ru2	122.2(2)
C13	C12	Ru1	70.1(3)	C34	C33	Ru2	69.6(3)
C13	C12	Si1	124.1(4)	C34	C33	Si2	130.7(4)

C16	C12	Ru1	70.4(3)	C37	C33	Ru2	69.4(3)
C16	C12	Si1	129.9(4)	C37	C33	Si2	124.0(4)
C16	C12	C13	105.9(5)	C37	C33	C34	105.2(5)
C12	C13	Ru1	71.2(3)	C33	C34	Ru2	71.5(3)
C12	C13	C14	109.3(5)	C35	C34	Ru2	71.6(3)
C14	C13	Ru1	70.8(3)	C35	C34	C33	108.7(5)
C13	C14	Ru1	70.7(3)	C34	C35	Ru2	70.3(3)
C15	C14	Ru1	71.0(3)	C34	C35	C36	108.3(5)
C15	C14	C13	107.5(5)	C36	C35	Ru2	70.8(3)
C14	C15	Ru1	71.2(3)	C35	C36	Ru2	71.1(3)
C14	C15	C16	108.2(5)	C37	C36	Ru2	70.4(3)
C16	C15	Ru1	70.7(3)	C37	C36	C35	108.0(5)
C12	C16	Ru1	71.5(3)	C33	C37	Ru2	71.7(3)
C12	C16	C15	109.1(5)	C36	C37	Ru2	71.8(3)
C15	C16	Ru1	70.6(3)	C36	C37	C33	109.7(5)
C18	C17	Ru1	71.4(3)	C39	C38	Ru2	70.5(3)
C21	C17	Ru1	71.4(3)	C39	C38	C42	108.0(5)
C21	C17	C18	108.0(5)	C42	C38	Ru2	70.2(3)
C17	C18	Ru1	70.1(3)	C38	C39	Ru2	72.0(3)
C19	C18	Ru1	70.8(3)	C38	C39	C40	108.5(5)
C19	C18	C17	107.8(5)	C40	C39	Ru2	70.4(3)
C18	C19	Ru1	71.1(3)	C39	C40	Ru2	71.1(3)
C20	C19	Ru1	70.4(3)	C41	C40	Ru2	71.6(3)
C20	C19	C18	108.0(5)	C41	C40	C39	107.7(5)
C19	C20	Ru1	71.8(3)	C40	C41	Ru2	70.7(3)
C19	C20	C21	108.7(5)	C40	C41	C42	109.0(5)
C21	C20	Ru1	71.4(3)	C42	C41	Ru2	71.0(3)
C17	C21	Ru1	70.6(3)	C38	C42	Ru2	71.2(3)
C17	C21	C20	107.6(5)	C41	C42	Ru2	70.8(3)
C20	C21	Ru1	70.1(3)	C41	C42	C38	106.8(5)

Table S1.6 Torsion Angles for [{Fe(η-C_5H_4)$_2$}SiMe(η-C_5H_4)Ru(η-C_5H_5)] (4).

A	B	C	D	Angle/°	A	B	C	D	Angle/°
Ru1	C12	C13	C14	-60.9(4)	Ru2	C33	C34	C35	-62.3(4)
Ru1	C12	C16	C15	60.9(4)	Ru2	C33	C37	C36	62.1(4)
Ru1	C13	C14	C15	-61.9(4)	Ru2	C34	C35	C36	-60.9(3)
Ru1	C14	C15	C16	-61.3(3)	Ru2	C35	C36	C37	-61.0(4)
Ru1	C15	C16	C12	-61.5(4)	Ru2	C36	C37	C33	-62.0(4)
Ru1	C17	C18	C19	61.1(4)	Ru2	C38	C39	C40	61.3(4)
Ru1	C17	C21	C20	-60.7(4)	Ru2	C38	C42	C41	-62.3(4)
Ru1	C18	C19	C20	61.0(4)	Ru2	C39	C40	C41	62.7(4)
Ru1	C19	C20	C21	62.3(4)	Ru2	C40	C41	C42	61.0(4)
Ru1	C20	C21	C17	61.0(4)	Ru2	C41	C42	C38	62.5(4)
Fe1	Si1	C1	C2	65.9(4)	Fe2	Si2	C22	C23	65.1(4)
Fe1	Si1	C1	C5	-65.8(4)	Fe2	Si2	C22	C26	-66.0(4)
Fe1	Si1	C6	C7	-66.2(4)	Fe2	Si2	C27	C28	-65.1(4)
Fe1	Si1	C6	C10	65.2(4)	Fe2	Si2	C27	C31	66.3(4)
Fe1	Si1	C12	Ru1	93.9(3)	Fe2	Si2	C33	Ru2	-94.2(3)

Fe1	Si1	C12	C13	179.9(4)	Fe2	Si2	C33	C34	-4.4(6)
Fe1	Si1	C12	C16	4.1(6)	Fe2	Si2	C33	C37	-179.8(4)
Fe1	C1	C2	C3	-59.7(4)	Fe2	C22	C23	C24	-60.8(4)
Fe1	C1	C5	C4	59.8(4)	Fe2	C22	C26	C25	59.9(4)
Fe1	C2	C3	C4	-58.6(4)	Fe2	C23	C24	C25	-58.6(4)
Fe1	C3	C4	C5	-57.4(4)	Fe2	C24	C25	C26	-57.4(4)
Fe1	C4	C5	C1	-58.1(4)	Fe2	C25	C26	C22	-57.8(3)
Fe1	C6	C7	C8	59.6(4)	Fe2	C27	C28	C29	60.5(4)
Fe1	C6	C10	C9	-59.7(4)	Fe2	C27	C31	C30	-60.2(4)
Fe1	C7	C8	C9	58.3(4)	Fe2	C28	C29	C30	58.8(4)
Fe1	C8	C9	C10	57.8(4)	Fe2	C29	C30	C31	56.9(4)
Fe1	C9	C10	C6	57.8(4)	Fe2	C30	C31	C27	58.1(4)
Si1	Fe1	C1	C2	-122.2(4)	Si2	Fe2	C22	C23	-121.5(4)
Si1	Fe1	C1	C5	121.5(4)	Si2	Fe2	C22	C26	122.2(4)
Si1	Fe1	C2	C1	37.8(3)	Si2	Fe2	C23	C22	38.1(3)
Si1	Fe1	C2	C3	157.9(4)	Si2	Fe2	C23	C24	158.1(3)
Si1	Fe1	C3	C2	-22.8(4)	Si2	Fe2	C24	C23	-22.4(3)
Si1	Fe1	C3	C4	98.0(3)	Si2	Fe2	C24	C25	97.6(3)
Si1	Fe1	C4	C3	-98.1(3)	Si2	Fe2	C25	C24	-98.3(3)
Si1	Fe1	C4	C5	21.8(3)	Si2	Fe2	C25	C26	22.9(4)
Si1	Fe1	C5	C1	-38.3(3)	Si2	Fe2	C26	C22	-37.7(3)
Si1	Fe1	C5	C4	-158.7(3)	Si2	Fe2	C26	C25	-157.6(4)
Si1	Fe1	C6	C7	121.7(3)	Si2	Fe2	C27	C28	123.2(4)
Si1	Fe1	C6	C10	-123.2(4)	Si2	Fe2	C27	C31	-120.9(4)
Si1	Fe1	C7	C6	-38.1(3)	Si2	Fe2	C28	C27	-37.1(3)
Si1	Fe1	C7	C8	-159.2(3)	Si2	Fe2	C28	C29	-156.7(4)
Si1	Fe1	C8	C7	21.3(3)	Si2	Fe2	C29	C28	24.2(4)
Si1	Fe1	C8	C9	-99.5(3)	Si2	Fe2	C29	C30	-96.2(3)
Si1	Fe1	C9	C8	96.6(3)	Si2	Fe2	C30	C29	99.8(3)
Si1	Fe1	C9	C10	-22.2(4)	Si2	Fe2	C30	C31	-20.2(3)
Si1	Fe1	C10	C6	37.2(3)	Si2	Fe2	C31	C27	38.6(3)
Si1	Fe1	C10	C9	158.5(3)	Si2	Fe2	C31	C30	160.1(3)
Si1	C1	C2	Fe1	-76.2(3)	Si2	C22	C23	Fe2	-76.3(3)
Si1	C1	C2	C3	-135.9(4)	Si2	C22	C23	C24	-137.1(4)
Si1	C1	C5	Fe1	76.4(3)	Si2	C22	C26	Fe2	76.4(3)
Si1	C1	C5	C4	136.3(4)	Si2	C22	C26	C25	136.4(4)
Si1	C6	C7	Fe1	76.6(3)	Si2	C27	C28	Fe2	75.7(3)
Si1	C6	C7	C8	136.2(4)	Si2	C27	C28	C29	136.1(4)
Si1	C6	C10	Fe1	-75.6(3)	Si2	C27	C31	Fe2	-77.0(3)
Si1	C6	C10	C9	-135.3(4)	Si2	C27	C31	C30	-137.2(4)
Si1	C12	C13	Ru1	-114.8(4)	Si2	C33	C34	Ru2	-115.4(4)
Si1	C12	C13	C14	-175.7(4)	Si2	C33	C34	C35	-177.7(4)
Si1	C12	C16	Ru1	114.8(4)	Si2	C33	C37	Ru2	115.7(4)
Si1	C12	C16	C15	175.7(4)	Si2	C33	C37	C36	177.8(4)
C1	Fe1	Si1	C6	-178.7(3)	C22	Fe2	Si2	C27	177.7(3)
C1	Fe1	Si1	C11	-89.1(3)	C22	Fe2	Si2	C32	87.7(3)
C1	Fe1	Si1	C12	91.0(3)	C22	Fe2	Si2	C33	-90.7(3)
C1	Fe1	C2	C3	120.0(5)	C22	Fe2	C23	C24	120.0(4)

C1	Fe1	C3	C2	-38.2(3)	C22	Fe2	C24	C23	-38.2(3)
C1	Fe1	C3	C4	82.6(3)	C22	Fe2	C24	C25	81.8(3)
C1	Fe1	C4	C3	-82.3(3)	C22	Fe2	C25	C24	-82.8(3)
C1	Fe1	C4	C5	37.7(3)	C22	Fe2	C25	C26	38.4(3)
C1	Fe1	C5	C4	-120.5(4)	C22	Fe2	C26	C25	-120.0(5)
C1	Fe1	C6	Si1	0.9(2)	C22	Fe2	C27	Si2	-1.6(2)
C1	Fe1	C6	C7	122.6(3)	C22	Fe2	C27	C28	121.6(3)
C1	Fe1	C6	C10	-122.3(3)	C22	Fe2	C27	C31	-122.4(3)
C1	Fe1	C7	C6	-63.2(3)	C22	Fe2	C28	C27	-64.1(4)
C1	Fe1	C7	C8	175.8(3)	C22	Fe2	C28	C29	176.4(3)
C1	Fe1	C8	C7	-7.9(5)	C22	Fe2	C29	C28	-6.8(6)
C1	Fe1	C8	C9	-128.7(4)	C22	Fe2	C29	C30	-127.2(5)
C1	Fe1	C9	C8	127.7(4)	C22	Fe2	C30	C29	128.3(4)
C1	Fe1	C9	C10	8.9(6)	C22	Fe2	C30	C31	8.3(6)
C1	Fe1	C10	C6	63.4(4)	C22	Fe2	C31	C27	63.0(3)
C1	Fe1	C10	C9	-175.3(3)	C22	Fe2	C31	C30	-175.5(3)
C1	Si1	C6	Fe1	-0.9(2)	C22	Si2	C27	Fe2	1.7(2)
C1	Si1	C6	C7	-67.2(5)	C22	Si2	C27	C28	-63.4(4)
C1	Si1	C6	C10	64.3(4)	C22	Si2	C27	C31	67.9(4)
C1	Si1	C12	Ru1	147.1(3)	C22	Si2	C33	Ru2	-147.2(3)
C1	Si1	C12	C13	-126.9(5)	C22	Si2	C33	C34	-57.4(5)
C1	Si1	C12	C16	57.3(6)	C22	Si2	C33	C37	127.1(4)
C1	C2	C3	Fe1	57.8(4)	C22	C23	C24	Fe2	58.9(4)
C1	C2	C3	C4	-0.8(6)	C22	C23	C24	C25	0.3(6)
C2	Fe1	Si1	C1	-36.3(3)	C23	Fe2	Si2	C22	-36.8(3)
C2	Fe1	Si1	C6	145.0(3)	C23	Fe2	Si2	C27	141.0(3)
C2	Fe1	Si1	C11	-125.4(3)	C23	Fe2	Si2	C32	50.9(3)
C2	Fe1	Si1	C12	54.7(3)	C23	Fe2	Si2	C33	-127.5(2)
C2	Fe1	C1	Si1	122.2(4)	C23	Fe2	C22	Si2	121.5(4)
C2	Fe1	C1	C5	-116.2(5)	C23	Fe2	C22	C26	-116.3(4)
C2	Fe1	C3	C4	120.8(5)	C23	Fe2	C24	C25	120.1(4)
C2	Fe1	C4	C3	-37.1(3)	C23	Fe2	C25	C24	-37.4(3)
C2	Fe1	C4	C5	82.9(3)	C23	Fe2	C25	C26	83.8(4)
C2	Fe1	C5	C1	40.0(3)	C23	Fe2	C26	C22	40.0(3)
C2	Fe1	C5	C4	-80.4(3)	C23	Fe2	C26	C25	-80.0(4)
C2	Fe1	C6	Si1	-35.8(3)	C23	Fe2	C27	Si2	-39.2(3)
C2	Fe1	C6	C7	85.9(3)	C23	Fe2	C27	C28	83.9(3)
C2	Fe1	C6	C10	-159.0(3)	C23	Fe2	C27	C31	-160.1(3)
C2	Fe1	C7	C6	-106.3(3)	C23	Fe2	C28	C27	-106.4(3)
C2	Fe1	C7	C8	132.6(3)	C23	Fe2	C28	C29	134.0(3)
C2	Fe1	C8	C7	-62.7(4)	C23	Fe2	C29	C28	-59.6(4)
C2	Fe1	C8	C9	176.5(3)	C23	Fe2	C29	C30	180.0(3)
C2	Fe1	C9	C8	-11.5(10)	C23	Fe2	C30	C29	-0.1(10)
C2	Fe1	C9	C10	-130.3(8)	C23	Fe2	C30	C31	-120.2(8)
C2	Fe1	C10	C6	38.2(6)	C23	Fe2	C31	C27	34.6(5)
C2	Fe1	C10	C9	159.6(4)	C23	Fe2	C31	C30	156.0(4)
C2	C1	C5	Fe1	-61.1(4)	C23	C22	C26	Fe2	-60.2(3)
C2	C1	C5	C4	-1.2(6)	C23	C22	C26	C25	-0.3(6)

C2	C3	C4	Fe1	57.4(4)	C23	C24	C25	Fe2	56.9(4)
C2	C3	C4	C5	0.0(6)	C23	C24	C25	C26	-0.5(6)
C3	Fe1	Si1	C1	-21.0(3)	C24	Fe2	Si2	C22	-21.7(3)
C3	Fe1	Si1	C6	160.3(3)	C24	Fe2	Si2	C27	156.0(3)
C3	Fe1	Si1	C11	-110.1(3)	C24	Fe2	Si2	C32	65.9(3)
C3	Fe1	Si1	C12	70.0(3)	C24	Fe2	Si2	C33	-112.4(3)
C3	Fe1	C1	Si1	159.2(3)	C24	Fe2	C22	Si2	158.4(3)
C3	Fe1	C1	C2	37.0(3)	C24	Fe2	C22	C23	36.9(3)
C3	Fe1	C1	C5	-79.3(3)	C24	Fe2	C22	C26	-79.4(3)
C3	Fe1	C2	C1	-120.0(5)	C24	Fe2	C23	C22	-120.0(4)
C3	Fe1	C4	C5	120.0(4)	C24	Fe2	C25	C26	121.2(5)
C3	Fe1	C5	C1	83.9(3)	C24	Fe2	C26	C22	83.7(3)
C3	Fe1	C5	C4	-36.6(3)	C24	Fe2	C26	C25	-36.3(3)
C3	Fe1	C6	Si1	-39.5(5)	C24	Fe2	C27	Si2	-45.9(5)
C3	Fe1	C6	C7	82.2(5)	C24	Fe2	C27	C28	77.3(5)
C3	Fe1	C6	C10	-162.7(4)	C24	Fe2	C27	C31	-166.7(4)
C3	Fe1	C7	C6	-142.1(3)	C24	Fe2	C28	C27	-141.9(3)
C3	Fe1	C7	C8	96.8(3)	C24	Fe2	C28	C29	98.5(4)
C3	Fe1	C8	C7	-111.8(3)	C24	Fe2	C29	C28	-107.8(4)
C3	Fe1	C8	C9	127.3(3)	C24	Fe2	C29	C30	131.8(3)
C3	Fe1	C9	C8	-84.8(4)	C24	Fe2	C30	C29	-78.8(4)
C3	Fe1	C9	C10	156.5(4)	C24	Fe2	C30	C31	161.1(3)
C3	Fe1	C10	C6	147.4(7)	C24	Fe2	C31	C27	145.4(9)
C3	Fe1	C10	C9	-91.3(9)	C24	Fe2	C31	C30	-93.1(10)
C3	C4	C5	Fe1	58.8(4)	C24	C25	C26	Fe2	58.3(4)
C3	C4	C5	C1	0.8(6)	C24	C25	C26	C22	0.5(6)
C4	Fe1	Si1	C1	21.7(3)	C25	Fe2	Si2	C22	21.2(3)
C4	Fe1	Si1	C6	-157.0(3)	C25	Fe2	Si2	C27	-161.1(3)
C4	Fe1	Si1	C11	-67.4(3)	C25	Fe2	Si2	C32	108.9(3)
C4	Fe1	Si1	C12	112.7(3)	C25	Fe2	Si2	C33	-69.5(3)
C4	Fe1	C1	Si1	-158.5(3)	C25	Fe2	C22	Si2	-158.8(3)
C4	Fe1	C1	C2	79.3(3)	C25	Fe2	C22	C23	79.7(3)
C4	Fe1	C1	C5	-36.9(3)	C25	Fe2	C22	C26	-36.6(3)
C4	Fe1	C2	C1	-83.9(3)	C25	Fe2	C23	C22	-83.2(3)
C4	Fe1	C2	C3	36.2(3)	C25	Fe2	C23	C24	36.8(3)
C4	Fe1	C3	C2	-120.8(5)	C25	Fe2	C24	C23	-120.1(4)
C4	Fe1	C5	C1	120.5(4)	C25	Fe2	C26	C22	120.0(5)
C4	Fe1	C6	Si1	44.6(5)	C25	Fe2	C27	Si2	37.6(5)
C4	Fe1	C6	C7	166.3(4)	C25	Fe2	C27	C28	160.8(4)
C4	Fe1	C6	C10	-78.6(5)	C25	Fe2	C27	C31	-83.2(5)
C4	Fe1	C7	C6	-147.8(9)	C25	Fe2	C28	C27	-145.7(7)
C4	Fe1	C7	C8	91.1(9)	C25	Fe2	C28	C29	94.7(8)
C4	Fe1	C8	C7	-159.8(3)	C25	Fe2	C29	C28	-154.6(4)
C4	Fe1	C8	C9	79.4(4)	C25	Fe2	C29	C30	85.0(5)
C4	Fe1	C9	C8	-131.1(3)	C25	Fe2	C30	C29	-127.7(3)
C4	Fe1	C9	C10	110.1(4)	C25	Fe2	C30	C31	112.3(3)
C4	Fe1	C10	C6	141.9(3)	C25	Fe2	C31	C27	141.4(3)
C4	Fe1	C10	C9	-96.7(4)	C25	Fe2	C31	C30	-97.1(4)

C5	Fe1	Si1	C1	36.5(2)	C26	Fe2	Si2	C22	36.4(3)
C5	Fe1	Si1	C6	-142.3(3)	C26	Fe2	Si2	C27	-145.9(3)
C5	Fe1	Si1	C11	-52.6(3)	C26	Fe2	Si2	C32	124.1(3)
C5	Fe1	Si1	C12	127.5(3)	C26	Fe2	Si2	C33	-54.3(3)
C5	Fe1	C1	Si1	-121.5(4)	C26	Fe2	C22	Si2	-122.2(4)
C5	Fe1	C1	C2	116.2(4)	C26	Fe2	C22	C23	116.3(4)
C5	Fe1	C2	C1	-39.8(3)	C26	Fe2	C23	C22	-40.0(3)
C5	Fe1	C2	C3	80.3(4)	C26	Fe2	C23	C24	80.0(3)
C5	Fe1	C3	C2	-83.1(4)	C26	Fe2	C24	C23	-83.6(3)
C5	Fe1	C3	C4	37.7(3)	C26	Fe2	C24	C25	36.5(3)
C5	Fe1	C4	C3	-120.0(4)	C26	Fe2	C25	C24	-121.2(5)
C5	Fe1	C6	Si1	38.0(2)	C26	Fe2	C27	Si2	34.9(3)
C5	Fe1	C6	C7	159.7(3)	C26	Fe2	C27	C28	158.1(3)
C5	Fe1	C6	C10	-85.2(3)	C26	Fe2	C27	C31	-85.9(3)
C5	Fe1	C7	C6	-35.9(5)	C26	Fe2	C28	C27	-40.4(6)
C5	Fe1	C7	C8	-156.9(3)	C26	Fe2	C28	C29	-160.0(4)
C5	Fe1	C8	C7	122.1(8)	C26	Fe2	C29	C28	132.1(8)
C5	Fe1	C8	C9	1.2(10)	C26	Fe2	C29	C30	11.7(10)
C5	Fe1	C9	C8	-179.6(3)	C26	Fe2	C30	C29	-176.4(3)
C5	Fe1	C9	C10	61.6(4)	C26	Fe2	C30	C31	63.6(4)
C5	Fe1	C10	C6	105.7(3)	C26	Fe2	C31	C27	106.4(3)
C5	Fe1	C10	C9	-132.9(3)	C26	Fe2	C31	C30	-132.1(3)
C5	C1	C2	Fe1	61.0(3)	C26	C22	C23	Fe2	60.8(3)
C5	C1	C2	C3	1.3(6)	C26	C22	C23	C24	0.0(6)
C6	Fe1	Si1	C1	178.7(3)	C27	Fe2	Si2	C22	-177.7(3)
C6	Fe1	Si1	C11	89.6(3)	C27	Fe2	Si2	C32	-90.1(3)
C6	Fe1	Si1	C12	-90.3(3)	C27	Fe2	Si2	C33	91.5(3)
C6	Fe1	C1	Si1	-0.9(2)	C27	Fe2	C22	Si2	1.6(2)
C6	Fe1	C1	C2	-123.1(3)	C27	Fe2	C22	C23	-119.9(3)
C6	Fe1	C1	C5	120.7(3)	C27	Fe2	C22	C26	123.8(3)
C6	Fe1	C2	C1	62.8(4)	C27	Fe2	C23	C22	65.4(3)
C6	Fe1	C2	C3	-177.2(3)	C27	Fe2	C23	C24	-174.6(3)
C6	Fe1	C3	C2	5.4(7)	C27	Fe2	C24	C23	9.7(5)
C6	Fe1	C3	C4	126.2(5)	C27	Fe2	C24	C25	129.8(4)
C6	Fe1	C4	C3	-129.6(4)	C27	Fe2	C25	C24	-125.1(5)
C6	Fe1	C4	C5	-9.6(5)	C27	Fe2	C25	C26	-3.9(6)
C6	Fe1	C5	C1	-64.8(3)	C27	Fe2	C26	C22	-62.1(4)
C6	Fe1	C5	C4	174.8(3)	C27	Fe2	C26	C25	177.9(3)
C6	Fe1	C7	C8	-121.1(4)	C27	Fe2	C28	C29	-119.6(5)
C6	Fe1	C8	C7	37.5(3)	C27	Fe2	C29	C28	38.6(3)
C6	Fe1	C8	C9	-83.3(3)	C27	Fe2	C29	C30	-81.8(4)
C6	Fe1	C9	C8	81.5(3)	C27	Fe2	C30	C29	83.0(3)
C6	Fe1	C9	C10	-37.3(3)	C27	Fe2	C30	C31	-37.0(3)
C6	Fe1	C10	C9	121.4(5)	C27	Fe2	C31	C30	121.5(4)
C6	Si1	C1	Fe1	0.9(2)	C27	Si2	C22	Fe2	-1.7(2)
C6	Si1	C1	C2	66.8(4)	C27	Si2	C22	C23	63.4(4)
C6	Si1	C1	C5	-64.9(5)	C27	Si2	C22	C26	-67.6(4)
C6	Si1	C12	Ru1	40.9(4)	C27	Si2	C33	Ru2	-40.9(4)

C6	Si1	C12	C13	126.9(5)	C27	Si2	C33	C34	48.9(5)
C6	Si1	C12	C16	-48.9(6)	C27	Si2	C33	C37	-126.5(4)
C6	C7	C8	Fe1	-57.5(4)	C27	C28	C29	Fe2	-58.4(3)
C6	C7	C8	C9	0.8(6)	C27	C28	C29	C30	0.5(6)
C7	Fe1	Si1	C1	-144.8(3)	C28	Fe2	Si2	C22	-141.7(3)
C7	Fe1	Si1	C6	36.4(3)	C28	Fe2	Si2	C27	36.0(3)
C7	Fe1	Si1	C11	126.1(3)	C28	Fe2	Si2	C32	-54.1(3)
C7	Fe1	Si1	C12	-53.9(3)	C28	Fe2	Si2	C33	127.6(3)
C7	Fe1	C1	Si1	35.7(2)	C28	Fe2	C22	Si2	39.0(3)
C7	Fe1	C1	C2	-86.6(3)	C28	Fe2	C22	C23	-82.5(3)
C7	Fe1	C1	C5	157.2(3)	C28	Fe2	C22	C26	161.2(3)
C7	Fe1	C2	C1	105.6(3)	C28	Fe2	C23	C22	108.2(3)
C7	Fe1	C2	C3	-134.3(4)	C28	Fe2	C23	C24	-131.8(3)
C7	Fe1	C3	C2	61.3(4)	C28	Fe2	C24	C23	61.6(4)
C7	Fe1	C3	C4	-177.9(3)	C28	Fe2	C24	C25	-178.3(3)
C7	Fe1	C4	C3	7.1(11)	C28	Fe2	C25	C24	4.9(9)
C7	Fe1	C4	C5	127.1(9)	C28	Fe2	C25	C26	126.1(7)
C7	Fe1	C5	C1	-40.5(5)	C28	Fe2	C26	C22	-34.3(6)
C7	Fe1	C5	C4	-160.9(3)	C28	Fe2	C26	C25	-154.3(4)
C7	Fe1	C6	Si1	-121.7(3)	C28	Fe2	C27	Si2	-123.2(4)
C7	Fe1	C6	C10	115.1(4)	C28	Fe2	C27	C31	116.0(4)
C7	Fe1	C8	C9	-120.8(4)	C28	Fe2	C29	C30	-120.4(5)
C7	Fe1	C9	C8	36.7(3)	C28	Fe2	C30	C29	37.4(3)
C7	Fe1	C9	C10	-82.1(3)	C28	Fe2	C30	C31	-82.6(3)
C7	Fe1	C10	C6	-40.4(3)	C28	Fe2	C31	C27	-40.5(3)
C7	Fe1	C10	C9	80.9(3)	C28	Fe2	C31	C30	80.9(3)
C7	C6	C10	Fe1	61.7(3)	C28	C27	C31	Fe2	60.7(3)
C7	C6	C10	C9	2.0(6)	C28	C27	C31	C30	0.5(6)
C7	C8	C9	Fe1	-57.3(4)	C28	C29	C30	Fe2	-57.0(4)
C7	C8	C9	C10	0.5(6)	C28	C29	C30	C31	-0.1(6)
C8	Fe1	Si1	C1	-159.1(3)	C29	Fe2	Si2	C22	-157.9(3)
C8	Fe1	Si1	C6	22.2(3)	C29	Fe2	Si2	C27	19.8(3)
C8	Fe1	Si1	C11	111.9(3)	C29	Fe2	Si2	C32	-70.3(3)
C8	Fe1	Si1	C12	-68.1(3)	C29	Fe2	Si2	C33	111.4(3)
C8	Fe1	C1	Si1	41.0(5)	C29	Fe2	C22	Si2	43.7(5)
C8	Fe1	C1	C2	-81.2(5)	C29	Fe2	C22	C23	-77.8(5)
C8	Fe1	C1	C5	162.6(4)	C29	Fe2	C22	C26	165.9(4)
C8	Fe1	C2	C1	141.6(3)	C29	Fe2	C23	C22	143.1(3)
C8	Fe1	C2	C3	-98.4(4)	C29	Fe2	C23	C24	-96.9(3)
C8	Fe1	C3	C2	110.1(4)	C29	Fe2	C24	C23	109.8(3)
C8	Fe1	C3	C4	-129.2(3)	C29	Fe2	C24	C25	-130.1(3)
C8	Fe1	C4	C3	82.9(4)	C29	Fe2	C25	C24	80.5(5)
C8	Fe1	C4	C5	-157.1(3)	C29	Fe2	C25	C26	-158.3(4)
C8	Fe1	C5	C1	-144.1(8)	C29	Fe2	C26	C22	-150.3(8)
C8	Fe1	C5	C4	95.4(9)	C29	Fe2	C26	C25	89.7(9)
C8	Fe1	C6	Si1	-157.8(3)	C29	Fe2	C27	Si2	-160.4(3)
C8	Fe1	C6	C7	-36.2(3)	C29	Fe2	C27	C28	-37.3(3)
C8	Fe1	C6	C10	78.9(3)	C29	Fe2	C27	C31	78.7(3)

C8	Fe1	C7	C6	121.1(4)	C29	Fe2	C28	C27	119.6(5)
C8	Fe1	C9	C10	-118.8(5)	C29	Fe2	C30	C31	-120.0(5)
C8	Fe1	C10	C6	-84.0(3)	C29	Fe2	C31	C27	-84.6(3)
C8	Fe1	C10	C9	37.4(3)	C29	Fe2	C31	C30	36.8(3)
C8	C9	C10	Fe1	-59.4(4)	C29	C30	C31	Fe2	-58.3(4)
C8	C9	C10	C6	-1.6(6)	C29	C30	C31	C27	-0.3(6)
C9	Fe1	Si1	C1	158.0(3)	C30	Fe2	Si2	C22	159.3(3)
C9	Fe1	Si1	C6	-20.7(3)	C30	Fe2	Si2	C27	-23.0(3)
C9	Fe1	Si1	C11	68.9(3)	C30	Fe2	Si2	C32	-113.1(3)
C9	Fe1	Si1	C12	-111.0(3)	C30	Fe2	Si2	C33	68.5(3)
C9	Fe1	C1	Si1	-43.8(5)	C30	Fe2	C22	Si2	-40.3(5)
C9	Fe1	C1	C2	-166.0(4)	C30	Fe2	C22	C23	-161.8(4)
C9	Fe1	C1	C5	77.8(5)	C30	Fe2	C22	C26	82.0(5)
C9	Fe1	C2	C1	150.7(8)	C30	Fe2	C23	C22	143.2(8)
C9	Fe1	C2	C3	-89.3(9)	C30	Fe2	C23	C24	-96.8(8)
C9	Fe1	C3	C2	158.6(4)	C30	Fe2	C24	C23	156.2(3)
C9	Fe1	C3	C4	-80.7(5)	C30	Fe2	C24	C25	-83.7(4)
C9	Fe1	C4	C3	129.4(3)	C30	Fe2	C25	C24	129.3(3)
C9	Fe1	C4	C5	-110.6(3)	C30	Fe2	C25	C26	-109.5(4)
C9	Fe1	C5	C1	-143.1(3)	C30	Fe2	C26	C22	-141.1(3)
C9	Fe1	C5	C4	96.4(3)	C30	Fe2	C26	C25	98.9(4)
C9	Fe1	C6	Si1	159.6(3)	C30	Fe2	C27	Si2	157.0(3)
C9	Fe1	C6	C7	-78.8(3)	C30	Fe2	C27	C28	-79.8(3)
C9	Fe1	C6	C10	36.3(3)	C30	Fe2	C27	C31	36.1(3)
C9	Fe1	C7	C6	84.6(3)	C30	Fe2	C28	C27	83.1(3)
C9	Fe1	C7	C8	-36.4(3)	C30	Fe2	C28	C29	-36.5(3)
C9	Fe1	C8	C7	120.8(4)	C30	Fe2	C29	C28	120.4(5)
C9	Fe1	C10	C6	-121.4(5)	C30	Fe2	C31	C27	-121.5(4)
C10	Fe1	Si1	C1	143.1(3)	C31	Fe2	Si2	C22	145.6(3)
C10	Fe1	Si1	C6	-35.6(3)	C31	Fe2	Si2	C27	-36.6(3)
C10	Fe1	Si1	C11	54.0(3)	C31	Fe2	Si2	C32	-126.7(3)
C10	Fe1	Si1	C12	-125.9(3)	C31	Fe2	Si2	C33	54.9(2)
C10	Fe1	C1	Si1	-37.6(3)	C31	Fe2	C22	Si2	-34.6(3)
C10	Fe1	C1	C2	-159.8(3)	C31	Fe2	C22	C23	-156.1(3)
C10	Fe1	C1	C5	84.0(3)	C31	Fe2	C22	C26	87.6(3)
C10	Fe1	C2	C1	36.7(6)	C31	Fe2	C23	C22	42.1(5)
C10	Fe1	C2	C3	156.8(4)	C31	Fe2	C23	C24	162.2(4)
C10	Fe1	C3	C2	-127.8(8)	C31	Fe2	C24	C23	-125.0(10)
C10	Fe1	C3	C4	-7.0(10)	C31	Fe2	C24	C25	-5.0(11)
C10	Fe1	C4	C3	177.7(3)	C31	Fe2	C25	C24	178.7(3)
C10	Fe1	C4	C5	-62.3(4)	C31	Fe2	C25	C26	-60.1(4)
C10	Fe1	C5	C1	-107.3(3)	C31	Fe2	C26	C22	-104.6(3)
C10	Fe1	C5	C4	132.2(3)	C31	Fe2	C26	C25	135.4(3)
C10	Fe1	C6	Si1	123.2(4)	C31	Fe2	C27	Si2	120.9(4)
C10	Fe1	C6	C7	-115.1(4)	C31	Fe2	C27	C28	-116.0(4)
C10	Fe1	C7	C6	40.5(3)	C31	Fe2	C28	C27	39.6(3)
C10	Fe1	C7	C8	-80.5(3)	C31	Fe2	C28	C29	-80.0(4)
C10	Fe1	C8	C7	82.6(3)	C31	Fe2	C29	C28	83.1(4)

C10	Fe1	C8	C9	-38.2(3)	C31	Fe2	C29	C30	-37.3(3)
C10	Fe1	C9	C8	118.8(5)	C31	Fe2	C30	C29	120.0(5)
C10	C6	C7	Fe1	-61.4(3)	C31	C27	C28	Fe2	-61.1(3)
C10	C6	C7	C8	-1.7(6)	C31	C27	C28	C29	-0.6(6)
C11	Si1	C1	Fe1	118.3(2)	C32	Si2	C22	Fe2	-118.8(2)
C11	Si1	C1	C2	-175.9(4)	C32	Si2	C22	C23	-53.7(5)
C11	Si1	C1	C5	52.4(5)	C32	Si2	C22	C26	175.3(4)
C11	Si1	C6	Fe1	-118.0(2)	C32	Si2	C27	Fe2	117.5(2)
C11	Si1	C6	C7	175.8(4)	C32	Si2	C27	C28	52.4(5)
C11	Si1	C6	C10	-52.8(5)	C32	Si2	C27	C31	-176.3(4)
C11	Si1	C12	Ru1	-86.0(3)	C32	Si2	C33	Ru2	87.2(3)
C11	Si1	C12	C13	-0.1(6)	C32	Si2	C33	C34	177.0(5)
C11	Si1	C12	C16	-175.8(5)	C32	Si2	C33	C37	1.6(5)
C12	Ru1	C13	C14	119.2(5)	C33	Ru2	C34	C35	117.9(5)
C12	Ru1	C14	C13	-37.0(3)	C33	Ru2	C35	C34	-38.0(3)
C12	Ru1	C14	C15	80.2(3)	C33	Ru2	C35	C36	80.6(4)
C12	Ru1	C15	C14	-81.4(3)	C33	Ru2	C36	C35	-80.5(4)
C12	Ru1	C15	C16	36.6(3)	C33	Ru2	C36	C37	37.5(3)
C12	Ru1	C16	C15	-118.9(5)	C33	Ru2	C37	C36	-118.9(5)
C12	Ru1	C17	C18	116.8(4)	C33	Ru2	C38	C39	126.0(4)
C12	Ru1	C17	C21	-126.0(3)	C33	Ru2	C38	C42	-115.6(4)
C12	Ru1	C18	C17	-83.0(4)	C33	Ru2	C39	C38	-74.7(4)
C12	Ru1	C18	C19	159.0(3)	C33	Ru2	C39	C40	167.3(3)
C12	Ru1	C19	C18	-47.1(6)	C33	Ru2	C40	C39	-40.1(8)
C12	Ru1	C19	C20	-165.1(4)	C33	Ru2	C40	C41	-157.0(6)
C12	Ru1	C20	C19	157.0(6)	C33	Ru2	C41	C40	165.3(4)
C12	Ru1	C20	C21	39.2(8)	C33	Ru2	C41	C42	46.3(6)
C12	Ru1	C21	C17	74.7(4)	C33	Ru2	C42	C38	84.4(4)
C12	Ru1	C21	C20	-167.4(3)	C33	Ru2	C42	C41	-159.4(3)
C12	Si1	C1	Fe1	-116.0(2)	C33	Si2	C22	Fe2	116.1(2)
C12	Si1	C1	C2	-50.1(5)	C33	Si2	C22	C23	-178.8(4)
C12	Si1	C1	C5	178.2(4)	C33	Si2	C22	C26	50.1(5)
C12	Si1	C6	Fe1	116.4(2)	C33	Si2	C27	Fe2	-115.7(2)
C12	Si1	C6	C7	50.2(5)	C33	Si2	C27	C28	179.3(4)
C12	Si1	C6	C10	-178.4(4)	C33	Si2	C27	C31	-49.4(5)
C12	C13	C14	Ru1	61.1(4)	C33	C34	C35	Ru2	62.2(4)
C12	C13	C14	C15	-0.8(6)	C33	C34	C35	C36	1.3(6)
C13	Ru1	C12	Si1	118.6(5)	C34	Ru2	C33	Si2	126.0(5)
C13	Ru1	C12	C16	-115.9(4)	C34	Ru2	C33	C37	-116.0(5)
C13	Ru1	C14	C15	117.2(5)	C34	Ru2	C35	C36	118.6(5)
C13	Ru1	C15	C14	-38.1(3)	C34	Ru2	C36	C35	-37.1(3)
C13	Ru1	C15	C16	79.9(4)	C34	Ru2	C36	C37	80.9(4)
C13	Ru1	C16	C12	38.9(3)	C34	Ru2	C37	C33	38.8(3)
C13	Ru1	C16	C15	-80.0(4)	C34	Ru2	C37	C36	-80.1(4)
C13	Ru1	C17	C18	76.5(4)	C34	Ru2	C38	C39	83.6(4)
C13	Ru1	C17	C21	-166.3(3)	C34	Ru2	C38	C42	-158.0(3)
C13	Ru1	C18	C17	-125.4(4)	C34	Ru2	C39	C38	-116.1(3)
C13	Ru1	C18	C19	116.6(3)	C34	Ru2	C39	C40	125.9(3)

C13 Ru1 C19 C18	-83.7(4)	C34 Ru2 C40 C39	-75.8(4)
C13 Ru1 C19 C20	158.3(3)	C34 Ru2 C40 C41	167.3(3)
C13 Ru1 C20 C19	-48.9(6)	C34 Ru2 C41 C40	-39.1(9)
C13 Ru1 C20 C21	-166.6(4)	C34 Ru2 C41 C42	-158.1(7)
C13 Ru1 C21 C17	42.0(9)	C34 Ru2 C42 C38	49.6(7)
C13 Ru1 C21 C20	159.9(7)	C34 Ru2 C42 C41	165.8(5)
C13 C12 C16 Ru1	-61.6(4)	C34 C33 C37 Ru2	-60.8(3)
C13 C12 C16 C15	-0.6(6)	C34 C33 C37 C36	1.3(6)
C13 C14 C15 Ru1	61.7(4)	C34 C35 C36 Ru2	60.5(3)
C13 C14 C15 C16	0.4(6)	C34 C35 C36 C37	-0.5(6)
C14 Ru1 C12 Si1	155.3(4)	C35 Ru2 C33 Si2	163.1(4)
C14 Ru1 C12 C13	36.8(3)	C35 Ru2 C33 C34	37.2(3)
C14 Ru1 C12 C16	-79.1(3)	C35 Ru2 C33 C37	-78.9(3)
C14 Ru1 C13 C12	-119.2(5)	C35 Ru2 C34 C33	-117.9(5)
C14 Ru1 C15 C16	118.0(5)	C35 Ru2 C36 C37	118.0(5)
C14 Ru1 C16 C12	82.0(3)	C35 Ru2 C37 C33	81.4(3)
C14 Ru1 C16 C15	-36.9(3)	C35 Ru2 C37 C36	-37.5(3)
C14 Ru1 C17 C18	43.2(9)	C35 Ru2 C38 C39	49.6(7)
C14 Ru1 C17 C21	160.4(7)	C35 Ru2 C38 C42	168.0(5)
C14 Ru1 C18 C17	-166.2(3)	C35 Ru2 C39 C38	-157.5(3)
C14 Ru1 C18 C19	75.8(4)	C35 Ru2 C39 C40	84.4(4)
C14 Ru1 C19 C18	-125.7(3)	C35 Ru2 C40 C39	-116.4(3)
C14 Ru1 C19 C20	116.4(3)	C35 Ru2 C40 C41	126.8(3)
C14 Ru1 C20 C19	-83.7(4)	C35 Ru2 C41 C40	-74.8(4)
C14 Ru1 C20 C21	158.5(3)	C35 Ru2 C41 C42	166.1(3)
C14 Ru1 C21 C17	-167.1(4)	C35 Ru2 C42 C38	-160.7(7)
C14 Ru1 C21 C20	-49.2(6)	C35 Ru2 C42 C41	-44.4(10)
C14 C15 C16 Ru1	61.7(3)	C35 C36 C37 Ru2	61.5(4)
C14 C15 C16 C12	0.2(6)	C35 C36 C37 C33	-0.6(6)
C15 Ru1 C12 Si1	-162.8(4)	C36 Ru2 C33 Si2	-154.5(4)
C15 Ru1 C12 C13	78.6(3)	C36 Ru2 C33 C34	79.6(3)
C15 Ru1 C12 C16	-37.3(3)	C36 Ru2 C33 C37	-36.5(3)
C15 Ru1 C13 C12	-81.7(3)	C36 Ru2 C34 C33	-80.9(4)
C15 Ru1 C13 C14	37.4(3)	C36 Ru2 C34 C35	37.1(3)
C15 Ru1 C14 C13	-117.2(5)	C36 Ru2 C35 C34	-118.6(5)
C15 Ru1 C16 C12	118.9(5)	C36 Ru2 C37 C33	118.9(5)
C15 Ru1 C17 C18	-167.9(5)	C36 Ru2 C38 C39	-160.8(8)
C15 Ru1 C17 C21	-50.7(7)	C36 Ru2 C38 C42	-42.5(10)
C15 Ru1 C18 C17	162.5(7)	C36 Ru2 C39 C38	168.0(5)
C15 Ru1 C18 C19	44.5(9)	C36 Ru2 C39 C40	50.0(6)
C15 Ru1 C19 C18	-165.4(3)	C36 Ru2 C40 C39	-158.1(3)
C15 Ru1 C19 C20	76.7(4)	C36 Ru2 C40 C41	85.0(4)
C15 Ru1 C20 C19	-125.1(3)	C36 Ru2 C41 C40	-115.5(3)
C15 Ru1 C20 C21	117.1(3)	C36 Ru2 C41 C42	125.4(4)
C15 Ru1 C21 C17	158.0(3)	C36 Ru2 C42 C38	167.0(4)
C15 Ru1 C21 C20	-84.1(4)	C36 Ru2 C42 C41	-76.8(4)
C16 Ru1 C12 Si1	-125.5(5)	C37 Ru2 C33 Si2	-118.0(5)
C16 Ru1 C12 C13	115.9(4)	C37 Ru2 C33 C34	116.0(5)

C16 Ru1 C13 C12	-38.3(3)	C37 Ru2 C34 C33	-38.7(3)
C16 Ru1 C13 C14	80.9(3)	C37 Ru2 C34 C35	79.2(4)
C16 Ru1 C14 C13	-79.3(4)	C37 Ru2 C35 C34	-81.4(4)
C16 Ru1 C14 C15	37.9(3)	C37 Ru2 C35 C36	37.2(3)
C16 Ru1 C15 C14	-118.0(5)	C37 Ru2 C36 C35	-118.0(5)
C16 Ru1 C17 C18	157.8(3)	C37 Ru2 C38 C39	166.6(3)
C16 Ru1 C17 C21	-85.0(4)	C37 Ru2 C38 C42	-75.0(4)
C16 Ru1 C18 C17	-50.4(7)	C37 Ru2 C39 C38	-42.2(9)
C16 Ru1 C18 C19	-168.3(5)	C37 Ru2 C39 C40	-160.3(7)
C16 Ru1 C19 C18	161.5(7)	C37 Ru2 C40 C39	167.7(5)
C16 Ru1 C19 C20	43.5(9)	C37 Ru2 C40 C41	50.8(6)
C16 Ru1 C20 C19	-166.4(3)	C37 Ru2 C41 C40	-157.1(3)
C16 Ru1 C20 C21	75.8(4)	C37 Ru2 C41 C42	83.9(4)
C16 Ru1 C21 C17	115.5(3)	C37 Ru2 C42 C38	127.1(4)
C16 Ru1 C21 C20	-126.6(3)	C37 Ru2 C42 C41	-116.7(3)
C16 C12 C13 Ru1	61.8(4)	C37 C33 C34 Ru2	60.7(3)
C16 C12 C13 C14	0.9(6)	C37 C33 C34 C35	-1.6(6)
C17 Ru1 C12 Si1	-8.1(4)	C38 Ru2 C33 Si2	9.8(4)
C17 Ru1 C12 C13	-126.7(3)	C38 Ru2 C33 C34	-116.2(3)
C17 Ru1 C12 C16	117.4(3)	C38 Ru2 C33 C37	127.8(3)
C17 Ru1 C13 C12	74.6(4)	C38 Ru2 C34 C33	84.3(4)
C17 Ru1 C13 C14	-166.2(3)	C38 Ru2 C34 C35	-157.8(3)
C17 Ru1 C14 C13	43.1(9)	C38 Ru2 C35 C34	49.3(7)
C17 Ru1 C14 C15	160.3(7)	C38 Ru2 C35 C36	167.9(5)
C17 Ru1 C15 C14	-166.8(5)	C38 Ru2 C36 C35	-160.0(7)
C17 Ru1 C15 C16	-48.8(7)	C38 Ru2 C36 C37	-42.0(10)
C17 Ru1 C16 C12	-82.2(4)	C38 Ru2 C37 C33	-74.1(4)
C17 Ru1 C16 C15	158.9(3)	C38 Ru2 C37 C36	167.0(3)
C17 Ru1 C18 C19	-118.0(5)	C38 Ru2 C39 C40	-118.0(5)
C17 Ru1 C19 C18	37.6(3)	C38 Ru2 C40 C39	36.8(3)
C17 Ru1 C19 C20	-80.3(3)	C38 Ru2 C40 C41	-80.0(3)
C17 Ru1 C20 C19	80.5(3)	C38 Ru2 C41 C40	80.5(3)
C17 Ru1 C20 C21	-37.3(3)	C38 Ru2 C41 C42	-38.6(3)
C17 Ru1 C21 C20	117.9(5)	C38 Ru2 C42 C41	116.2(5)
C17 C18 C19 Ru1	-60.7(4)	C38 C39 C40 Ru2	-62.3(4)
C17 C18 C19 C20	0.3(6)	C38 C39 C40 C41	0.4(6)
C18 Ru1 C12 Si1	33.5(4)	C39 Ru2 C33 Si2	49.1(4)
C18 Ru1 C12 C13	-85.1(4)	C39 Ru2 C33 C34	-76.9(4)
C18 Ru1 C12 C16	159.0(3)	C39 Ru2 C33 C37	167.0(3)
C18 Ru1 C13 C12	115.5(3)	C39 Ru2 C34 C33	125.1(3)
C18 Ru1 C13 C14	-125.3(3)	C39 Ru2 C34 C35	-117.0(4)
C18 Ru1 C14 C13	76.5(4)	C39 Ru2 C35 C34	83.2(4)
C18 Ru1 C14 C15	-166.3(3)	C39 Ru2 C35 C36	-158.2(3)
C18 Ru1 C15 C14	41.2(9)	C39 Ru2 C36 C35	49.5(7)
C18 Ru1 C15 C16	159.2(7)	C39 Ru2 C36 C37	167.5(5)
C18 Ru1 C16 C12	-47.1(7)	C39 Ru2 C37 C33	-41.7(9)
C18 Ru1 C16 C15	-166.0(5)	C39 Ru2 C37 C36	-160.5(7)
C18 Ru1 C17 C21	117.2(5)	C39 Ru2 C38 C42	118.4(5)

C18 Ru1 C19 C20	-117.9(5)	C39 Ru2 C40 C41	-116.9(5)
C18 Ru1 C20 C19	37.5(3)	C39 Ru2 C41 C40	38.4(3)
C18 Ru1 C20 C21	-80.3(3)	C39 Ru2 C41 C42	-80.7(4)
C18 Ru1 C21 C17	-38.1(3)	C39 Ru2 C42 C38	-36.6(4)
C18 Ru1 C21 C20	79.8(3)	C39 Ru2 C42 C41	79.6(4)
C18 C17 C21 Ru1	62.4(4)	C39 C38 C42 Ru2	60.7(4)
C18 C17 C21 C20	1.7(7)	C39 C38 C42 C41	-1.6(7)
C18 C19 C20 Ru1	-61.5(4)	C39 C40 C41 Ru2	-62.3(4)
C18 C19 C20 C21	0.8(6)	C39 C40 C41 C42	-1.4(6)
C19 Ru1 C12 Si1	66.1(6)	C40 Ru2 C33 Si2	80.1(8)
C19 Ru1 C12 C13	-52.4(6)	C40 Ru2 C33 C34	-45.9(8)
C19 Ru1 C12 C16	-168.3(4)	C40 Ru2 C33 C37	-161.9(6)
C19 Ru1 C13 C12	157.0(3)	C40 Ru2 C34 C33	165.7(3)
C19 Ru1 C13 C14	-83.8(4)	C40 Ru2 C34 C35	-76.3(4)
C19 Ru1 C14 C13	116.7(3)	C40 Ru2 C35 C34	125.4(4)
C19 Ru1 C14 C15	-126.1(3)	C40 Ru2 C35 C36	-116.0(4)
C19 Ru1 C15 C14	75.2(4)	C40 Ru2 C36 C35	84.5(4)
C19 Ru1 C15 C16	-166.8(3)	C40 Ru2 C36 C37	-157.5(3)
C19 Ru1 C16 C12	161.5(7)	C40 Ru2 C37 C33	168.6(4)
C19 Ru1 C16 C15	42.6(9)	C40 Ru2 C37 C36	49.8(6)
C19 Ru1 C17 C18	-37.3(3)	C40 Ru2 C38 C39	-37.8(3)
C19 Ru1 C17 C21	80.0(4)	C40 Ru2 C38 C42	80.5(4)
C19 Ru1 C18 C17	118.0(5)	C40 Ru2 C39 C38	118.0(5)
C19 Ru1 C20 C21	-117.8(4)	C40 Ru2 C41 C42	-119.1(5)
C19 Ru1 C21 C17	-80.7(3)	C40 Ru2 C42 C38	-79.7(4)
C19 Ru1 C21 C20	37.2(3)	C40 Ru2 C42 C41	36.5(3)
C19 C20 C21 Ru1	-62.5(4)	C40 C41 C42 Ru2	-60.7(4)
C19 C20 C21 C17	-1.5(6)	C40 C41 C42 C38	1.8(6)
C20 Ru1 C12 Si1	-78.0(8)	C41 Ru2 C33 Si2	-64.2(6)
C20 Ru1 C12 C13	163.5(6)	C41 Ru2 C33 C34	169.8(4)
C20 Ru1 C12 C16	47.6(8)	C41 Ru2 C33 C37	53.8(6)
C20 Ru1 C13 C12	-169.2(4)	C41 Ru2 C34 C33	-164.4(7)
C20 Ru1 C13 C14	-50.0(6)	C41 Ru2 C34 C35	-46.4(9)
C20 Ru1 C14 C13	158.0(3)	C41 Ru2 C35 C34	165.2(3)
C20 Ru1 C14 C15	-84.8(4)	C41 Ru2 C35 C36	-76.2(4)
C20 Ru1 C15 C14	115.6(3)	C41 Ru2 C36 C35	126.0(4)
C20 Ru1 C15 C16	-126.4(3)	C41 Ru2 C36 C37	-116.0(4)
C20 Ru1 C16 C12	-164.9(3)	C41 Ru2 C37 C33	-156.5(3)
C20 Ru1 C16 C15	76.2(4)	C41 Ru2 C37 C36	84.6(4)
C20 Ru1 C17 C18	-79.5(4)	C41 Ru2 C38 C39	-80.1(4)
C20 Ru1 C17 C21	37.7(3)	C41 Ru2 C38 C42	38.2(3)
C20 Ru1 C18 C17	80.8(4)	C41 Ru2 C39 C38	80.4(4)
C20 Ru1 C18 C19	-37.2(3)	C41 Ru2 C39 C40	-37.6(3)
C20 Ru1 C19 C18	117.9(5)	C41 Ru2 C40 C39	116.9(5)
C20 Ru1 C21 C17	-117.9(5)	C41 Ru2 C42 C38	-116.2(5)
C21 Ru1 C12 Si1	-47.7(4)	C42 Ru2 C33 Si2	-32.1(4)
C21 Ru1 C12 C13	-166.3(3)	C42 Ru2 C33 C34	-158.1(3)
C21 Ru1 C12 C16	77.8(4)	C42 Ru2 C33 C37	85.8(4)

C21 Ru1 C13 C12	42.4(9)	C42 Ru2 C34 C33	49.7(6)
C21 Ru1 C13 C14	161.6(7)	C42 Ru2 C34 C35	167.6(5)
C21 Ru1 C14 C13	-167.6(4)	C42 Ru2 C35 C34	-160.4(7)
C21 Ru1 C14 C15	-50.4(6)	C42 Ru2 C35 C36	-41.8(10)
C21 Ru1 C15 C14	157.8(3)	C42 Ru2 C36 C35	166.9(3)
C21 Ru1 C15 C16	-84.2(4)	C42 Ru2 C36 C37	-75.2(4)
C21 Ru1 C16 C12	-124.0(3)	C42 Ru2 C37 C33	-114.8(3)
C21 Ru1 C16 C15	117.1(4)	C42 Ru2 C37 C36	126.3(3)
C21 Ru1 C17 C18	-117.2(5)	C42 Ru2 C38 C39	-118.4(5)
C21 Ru1 C18 C17	37.6(3)	C42 Ru2 C39 C38	37.6(3)
C21 Ru1 C18 C19	-80.3(4)	C42 Ru2 C39 C40	-80.4(3)
C21 Ru1 C19 C18	80.1(4)	C42 Ru2 C40 C39	80.0(3)
C21 Ru1 C19 C20	-37.8(3)	C42 Ru2 C40 C41	-36.9(3)
C21 Ru1 C20 C19	117.8(4)	C42 Ru2 C41 C40	119.1(5)
C21 C17 C18 Ru1	-62.4(4)	C42 C38 C39 Ru2	-60.5(4)
C21 C17 C18 C19	-1.3(7)	C42 C38 C39 C40	0.8(7)

Table S1.7 Hydrogen Atom Coordinates (Å×10^4) and Isotropic Displacement Parameters (Å^2×10^3) for [{Fe(η-C$_5$H$_4$)$_2$}SiMe(η-C$_5$H$_4$)Ru(η-C$_5$H$_5$)] (4).

Atom	*x*	*y*	*z*	U(eq)
H2	11384	11300	8611	24
H3	11098	13991	8299	28
H4	9558	13934	7631	27
H5	8857	11195	7523	21
H7	9667	11308	9203	19
H8	8981	14012	9062	22
H9	7451	14023	8380	23
H10	7204	11283	8101	18
H11A	8857	7359	7829	33
H11B	7915	8592	7777	33
H11C	7977	7334	8145	33
H13	9765	5795	8572	21
H14	11113	4894	9256	21
H15	11971	7238	9664	24
H16	11154	9601	9236	20
H17	7687	9046	9250	20
H18	7453	6150	9167	21
H19	8726	4898	9818	20
H20	9727	6991	10298	23
H21	9072	9564	9957	26
H23	6132	11157	7483	21
H24	6734	13889	7382	25
H25	7625	13987	6692	23
H26	7614	11336	6365	19
H28	3957	11259	6954	23
H29	3925	14001	6668	26
H30	4760	14018	5961	26
H31	5324	11309	5814	20

H32A	4738	7262	6875	33
H32B	4993	8535	7239	33
H32C	5912	7349	7176	33
H34	6803	9646	5731	20
H35	7264	7300	5312	27
H36	6797	4940	5730	28
H37	6056	5806	6408	22
H38	3335	9076	5738	22
H39	4106	9556	5036	29
H40	4450	6982	4693	26
H41	3891	4915	5186	22
H42	3210	6168	5841	19

Experimental

X-ray diffraction experiments on [{Fe(η-C_5H_4)$_2$}SiMe(η-C_5H_4)Ru(η-C_5H_5)] (**4**) were carried out at 100(2) K on a Bruker APEX II diffractometer using MoKα radiation (λ=0.71073Å).Data collection was performed using a CCD area detector from a single crystal mounted on a glass fiber. Intensities were integrated from several series of exposures. Absorption corrections were based on equivalent reflections using SADABS and TWINABS. The structures were solved using SHELXS and refined against all F_o^2 data with hydrogen atoms attached to carbon atoms riding in calculated positions using SHELXL.

1. O. V. Dolomanov, L. J. Bourhis, R. J. Gildea, J. A. K. Howard and H. Puschmann, OLEX2: a complete structure solution, refinement and analysis program. J. Appl. Cryst. (2009). 42, 339-341.
2. XS, G.M. Sheldrick, Acta Cryst. (2008). A64, 112-122
3. XL, G.M. Sheldrick, Acta Cryst. (2008). A64, 112-122

Crystal structure determination of [{Fe(η-C_5H_4)$_2$}SiMe(η-C_5H_4)Ru(η-C_5H_5)] (4)

Crystal Data for $C_{21}H_{20}FeRuSi$ (M = 457.38): monoclinic, space group $P2_1/c$ (no. 14), a = 12.4947(4) Å, b = 8.9461(3) Å, c = 31.2176(9) Å, β = 100.039(2)°, V = 3436.04(19) Å^3, Z = 8, T = 100(2) K, μ(MoKα) = 1.791 mm^{-1}, *Dcalc* = 1.768 g/mm^3, 7380 reflections measured ($3.32 \leq 2\Theta \leq 56.02$), 7380 unique ($R_{int}$ = 0.0000) which were used in all calculations. The final R_1 was 0.0402 (>2sigma(I)) and wR_2 was 0.1110 (all data).

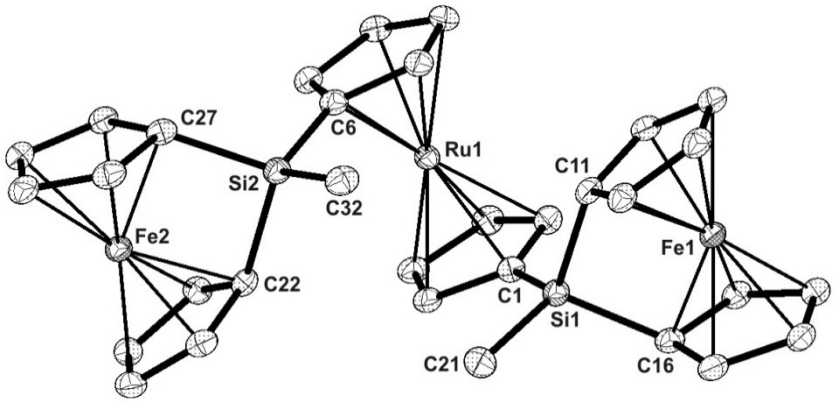

Figure S2. Molecular structure of [Fe(η-C_5H_4)$_2$SiMe(η-C_5H_4)Ru(η-C_5H_4)SiMe(η-C_5H_4)$_2$Fe] (**10**) with thermal ellipsoids displayed at 50% (hydrogen atoms have been omitted for clarity).

Table S2. Crystallographic data and tables for [Fe(η-C_5H_4)$_2$SiMe(η-C_5H_4)Ru(η-C_5H_4)SiMe(η-C_5H_4)$_2$Fe] (**10**, CCDC 956488)

Identification code	_fcSiMe_2rc
Empirical formula	$C_{32}H_{30}Fe_2RuSi_2$
Formula weight	683.51
Temperature/K	100(2)
Crystal system	triclinic
Space group	P-1
a/Å	14.3465(4)
b/Å	14.4684(4)
c/Å	14.5968(4)
α/°	66.4400(10)
β/°	68.640(2)
γ/°	86.120(2)
Volume/Å^3	2575.74(12)
Z	4
ρ_{calc}mg/mm^3	1.763
m/mm^{-1}	1.806
F(000)	1384.0
Crystal size/mm^3	0.31 × 0.16 × 0.09
2Θ range for data collection	3.06 to 55.18°
Index ranges	-18 ≤ h ≤ 18, -18 ≤ k ≤ 18, -19 ≤ l ≤ 18
Reflections collected	112179
Independent reflections	11932[R(int) = 0.0322]
Data/restraints/parameters	11932/0/671
Goodness-of-fit on F^2	1.035
Final R indexes [I>=2σ (I)]	R_1 = 0.0220, wR_2 = 0.0496
Final R indexes [all data]	R_1 = 0.0287, wR_2 = 0.0526
Largest diff. peak/hole / e Å^{-3}	0.44/-0.32

Table S2.2 Fractional Atomic Coordinates (×10^4) and Equivalent Isotropic Displacement Parameters (Å^2×10^3) for [Fe(η-C_5H_4)$_2$SiMe(η-C_5H_4)Ru(η-C_5H_4)SiMe(η-C_5H_4)$_2$Fe] (10). U_{eq} is defined as 1/3 of of the trace of the orthogonalised U_{IJ} tensor.

Atom	*x*	*y*	*z*	U(eq)
Ru1	4293.75(10)	4999.89(10)	2453.59(11)	14.11(4)
Fe1	2393.39(19)	4976.38(19)	6472.54(19)	15.93(6)
Fe2	1721.19(19)	4852.30(19)	524.6(2)	15.70(6)
Si1	2393.1(4)	4147.5(4)	5092.8(4)	15.85(10)
Si2	2199.6(4)	5726.5(4)	1662.2(4)	16.09(10)
C1	3532.2(13)	3911.2(13)	4117.1(14)	16.6(3)
C2	4582.0(14)	4095.4(13)	3913.0(14)	18.3(4)
C3	5178.3(14)	3785.5(13)	3077.1(14)	19.2(4)
C4	4515.0(14)	3406.8(13)	2752.4(14)	19.8(4)
C5	3512.1(14)	3481.7(13)	3386.3(14)	17.5(4)
C6	3496.5(14)	6052.4(13)	1497.9(14)	17.6(4)
C7	3733.8(15)	6496.5(13)	2124.0(14)	19.2(4)
C8	4799.3(15)	6609.3(13)	1814.2(15)	20.2(4)
C9	5238.8(14)	6236.6(13)	994.7(14)	19.9(4)
C10	4443.7(14)	5901.6(13)	797.0(14)	18.8(4)
C11	2400.0(14)	5501.9(13)	4964.1(14)	17.5(4)
C12	3269.0(14)	5948.7(13)	4974.4(14)	18.7(4)
C13	2953.1(15)	6490.1(13)	5650.9(14)	21.0(4)
C14	1882.8(15)	6416.7(14)	6059.7(15)	21.3(4)
C15	1543.6(14)	5820.0(13)	5642.2(14)	19.1(4)
C16	2394.1(14)	3568.8(13)	6506.0(14)	17.5(4)
C17	3258.1(14)	3797.2(13)	6701.1(14)	18.5(4)
C18	2929.8(15)	4023.3(14)	7630.0(14)	20.0(4)
C19	1856.0(14)	3916.4(13)	8055.6(14)	19.8(4)
C20	1528.0(14)	3631.0(13)	7386.4(14)	19.1(4)
C21	1232.0(14)	3734.1(14)	5016.5(15)	21.7(4)
C22	1934.9(13)	4362.4(13)	1929.1(14)	16.6(3)
C23	2617.2(14)	3924.3(13)	1234.3(14)	17.3(4)
C24	2060.8(14)	3343.0(13)	981.6(15)	19.5(4)
C25	1020.1(15)	3389.8(14)	1521.8(15)	21.4(4)
C26	937.5(14)	4003.8(14)	2103.4(14)	19.6(4)
C27	2010.2(14)	6275.9(13)	337.3(14)	17.6(4)
C28	2701.5(14)	6087.1(13)	-570.0(14)	18.6(4)
C29	2146.8(15)	5837.8(14)	-1089.8(14)	21.0(4)
C30	1107.3(15)	5874.6(14)	-533.8(15)	21.9(4)
C31	1020.8(15)	6149.4(14)	325.2(15)	21.5(4)
C32	1250.6(14)	6063.2(14)	2719.4(15)	21.5(4)
Ru2	4303.84(10)	10022.44(10)	2423.29(10)	13.63(4)
Fe3	2418.85(19)	9870.59(19)	6494.20(19)	15.61(6)
Fe4	1754.23(19)	10066.67(19)	435.5(2)	16.22(6)
Si3	2515.9(4)	10742.8(4)	4416.7(4)	15.55(10)
Si4	2089.0(4)	9186.9(4)	2312.3(4)	16.52(10)
C33	3697.8(13)	11053.6(13)	3216.3(14)	15.7(3)
C34	3724.4(14)	11509.5(13)	2126.9(14)	17.0(3)
C35	4740.5(14)	11640.3(13)	1400.1(14)	18.8(4)
C36	5360.6(14)	11271.1(13)	2025.9(14)	18.2(4)
C37	4721.6(14)	10910.6(13)	3138.1(14)	16.6(3)

C38	3354.9(14)	8934.3(13)	2364.4(14)	16.7(3)
C39	4329.6(14)	9129.8(13)	1516.0(14)	17.5(4)
C40	5081.6(14)	8828.4(13)	1980.2(14)	18.5(4)
C41	4583.9(14)	8433.4(13)	3127.2(15)	19.4(4)
C42	3534.9(14)	8498.1(13)	3358.2(14)	17.9(4)
C43	2590.3(14)	11291.1(13)	5366.0(14)	17.0(3)
C44	3434.6(14)	11111.0(13)	5722.2(14)	18.3(4)
C45	3081.3(15)	10858.7(14)	6849.2(15)	20.1(4)
C46	2018.3(15)	10896.3(14)	7221.9(15)	20.5(4)
C47	1717.8(14)	11156.7(14)	6328.6(14)	19.1(4)
C48	2330.6(14)	9376.2(13)	5413.3(14)	17.3(4)
C49	3145.4(14)	8946.0(13)	5766.7(15)	18.9(4)
C50	2757.8(15)	8365.8(14)	6903.3(15)	21.9(4)
C51	1697.6(15)	8412.2(14)	7282.8(15)	22.9(4)
C52	1430.8(14)	9017.1(14)	6382.4(14)	20.3(4)
C53	1427.9(14)	11157.9(15)	3986.4(15)	22.4(4)
C54	1809.4(14)	8645.7(13)	1451.1(14)	17.8(4)
C55	2533.2(14)	8844.6(13)	379.8(14)	18.4(4)
C56	2022.8(15)	9085.4(14)	-350.7(15)	21.1(4)
C57	978.0(15)	9040.5(14)	237.2(16)	22.3(4)
C58	837.0(14)	8766.6(14)	1329.5(15)	21.1(4)
C59	2005.5(14)	10545.5(14)	1453.5(14)	18.1(4)
C60	2781.7(14)	11006.6(13)	388.9(14)	18.1(4)
C61	2336.1(15)	11583.0(14)	-372.8(15)	20.5(4)
C62	1280.1(15)	11509.7(14)	200.8(16)	21.8(4)
C63	1072.6(14)	10887.0(14)	1304.6(15)	20.4(4)
C64	1131.3(15)	8712.5(16)	3702.2(15)	25.7(4)

Table S2.3 Anisotropic Displacement Parameters ($Å^2×10^3$) for [Fe(η-C_5H_4)$_2$SiMe(η-C_5H_4)Ru(η-C_5H_4)SiMe(η-C_5H_4)$_2$Fe] (10). The Anisotropic displacement factor exponent takes the form: $-2π^2[h^2a^{*2}U_{11}+...+2hka×b×U_{12}]$

Atom	U_{11}	U_{22}	U_{33}	U_{23}	U_{13}	U_{12}
Ru1	16.39(7)	12.23(7)	13.75(7)	-6.10(5)	-4.57(5)	0.87(5)
Fe1	19.36(13)	13.75(12)	13.38(12)	-4.5(1)	-5.67(10)	1.32(10)
Fe2	16.05(13)	14.33(12)	15.91(12)	-4.4(1)	-6.88(10)	1.17(10)
Si1	17.2(2)	15.2(2)	14.5(2)	-6.13(18)	-4.99(18)	1.37(18)
Si2	17.7(2)	14.2(2)	15.7(2)	-5.98(18)	-5.63(19)	2.36(18)
C1	18.9(9)	13.5(8)	16.1(8)	-4.3(7)	-6.8(7)	1.2(7)
C2	19.9(9)	17.4(9)	17.5(8)	-5.9(7)	-8.0(7)	2.2(7)
C3	18.6(9)	17.2(9)	20.1(9)	-6.8(7)	-6.8(7)	5.4(7)
C4	25(1)	13.3(8)	18.0(8)	-6.1(7)	-4.9(7)	2.2(7)
C5	21.6(9)	12.5(8)	16.5(8)	-4.2(7)	-6.9(7)	0.9(7)
C6	22.2(9)	12.4(8)	16.9(8)	-5.0(7)	-7.0(7)	1.7(7)
C7	26.6(10)	12.5(8)	18.8(8)	-6.5(7)	-8.8(7)	2.9(7)
C8	26(1)	13.1(8)	21.8(9)	-5.7(7)	-10.2(8)	-1.2(7)
C9	20.1(9)	16.5(9)	18.8(9)	-4.4(7)	-5.1(7)	-1.0(7)
C10	23.6(9)	15.5(9)	15.2(8)	-4.5(7)	-6.5(7)	0.7(7)
C11	22.3(9)	15.1(8)	12.8(8)	-3.7(7)	-6.0(7)	2.0(7)

C12	22.1(9)	14.1(8)	15.6(8)	-2.7(7)	-5.4(7)	-0.6(7)
C13	29.9(10)	13.8(9)	17.5(8)	-3.2(7)	-10.0(8)	0.1(7)
C14	30(1)	16.1(9)	17.0(8)	-6.4(7)	-8.9(8)	6.1(7)
C15	22.2(9)	16.6(9)	17.5(8)	-5.6(7)	-8.0(7)	4.8(7)
C16	21.3(9)	12.0(8)	17.0(8)	-4.6(7)	-6.2(7)	1.4(7)
C17	20.8(9)	15.3(8)	17.1(8)	-4.1(7)	-7.4(7)	3.0(7)
C18	24.6(10)	15.9(9)	18.6(9)	-4.0(7)	-10.2(7)	1.3(7)
C19	25.4(10)	16.4(9)	14.2(8)	-4.2(7)	-5.8(7)	1.7(7)
C20	21.2(9)	15.6(9)	16.3(8)	-3.7(7)	-5.0(7)	-0.1(7)
C21	19.9(9)	21.7(9)	23.9(9)	-9.6(8)	-8.0(8)	1.3(7)
C22	18.9(9)	15.1(8)	14.4(8)	-3.3(7)	-7.9(7)	2.8(7)
C23	17.9(9)	14.9(8)	19.8(8)	-6.3(7)	-8.8(7)	3.1(7)
C24	25.3(10)	14.4(9)	21.0(9)	-6.5(7)	-12.0(8)	3.4(7)
C25	22.7(10)	16.3(9)	23.9(9)	-3.2(7)	-12.1(8)	-1.0(7)
C26	17.2(9)	17.6(9)	18.3(8)	-2.6(7)	-5.4(7)	0.7(7)
C27	19.7(9)	12.2(8)	18.8(8)	-4.1(7)	-7.5(7)	3.3(7)
C28	18.8(9)	17.0(9)	16.3(8)	-3.8(7)	-5.6(7)	-0.1(7)
C29	25(1)	18.6(9)	16.7(8)	-3.0(7)	-8.9(7)	-1.2(7)
C30	23(1)	18.7(9)	21.6(9)	-1.7(7)	-12.6(8)	0.8(7)
C31	21.3(9)	16.8(9)	22.3(9)	-3.6(7)	-8.7(8)	3.4(7)
C32	23(1)	17.2(9)	20.9(9)	-7.6(7)	-5.1(7)	4.0(7)
Ru2	16.14(7)	11.69(7)	12.85(6)	-4.96(5)	-5.24(5)	1.99(5)
Fe3	18.44(13)	14.67(12)	14.30(12)	-5.94(10)	-6.66(10)	2.08(10)
Fe4	17.84(13)	14.82(13)	18.37(12)	-7.75(10)	-8.31(10)	2.83(10)
Si3	17.0(2)	16.3(2)	14.1(2)	-6.69(18)	-6.12(18)	2.83(18)
Si4	17.4(2)	16.9(2)	14.9(2)	-6.48(19)	-5.17(19)	0.17(19)
C33	19.2(9)	12.5(8)	16.7(8)	-7.0(7)	-6.9(7)	2.7(7)
C34	22.6(9)	11.5(8)	17.1(8)	-5.7(7)	-8.1(7)	3.5(7)
C35	25.5(10)	12.1(8)	16.4(8)	-5.7(7)	-5.1(7)	1.1(7)
C36	18.3(9)	15.2(8)	21.1(9)	-9.3(7)	-5.0(7)	0.7(7)
C37	20.4(9)	13.8(8)	18.2(8)	-8.1(7)	-8.2(7)	2.6(7)
C38	20.8(9)	12.8(8)	17.6(8)	-7.1(7)	-6.8(7)	0.2(7)
C39	22.3(9)	13.9(8)	17.9(8)	-8.7(7)	-6.7(7)	2.0(7)
C40	19.7(9)	15.6(9)	21.5(9)	-10.2(7)	-6.7(7)	4.3(7)
C41	26.2(10)	11.2(8)	22.3(9)	-5.8(7)	-11.9(8)	3.7(7)
C42	22.9(9)	12.0(8)	16.7(8)	-4.6(7)	-5.9(7)	0.1(7)
C43	21.0(9)	13.4(8)	18.0(8)	-7.2(7)	-8.0(7)	3.5(7)
C44	20.4(9)	15.0(8)	19.6(9)	-7.1(7)	-7.4(7)	1.5(7)
C45	26.1(10)	17.8(9)	21.0(9)	-9.2(7)	-12.2(8)	3.1(7)
C46	26.1(10)	19.2(9)	18.5(9)	-10.0(7)	-8.6(7)	5.1(7)
C47	22.2(9)	17.8(9)	18.2(8)	-8.5(7)	-8.1(7)	7.2(7)
C48	21.7(9)	15.4(8)	16.8(8)	-8.3(7)	-7.4(7)	1.6(7)
C49	22.6(9)	14.8(9)	21.4(9)	-9.3(7)	-8.5(7)	3.8(7)
C50	31.3(11)	13.3(9)	22.7(9)	-6.2(7)	-13.1(8)	3.4(7)
C51	30.5(11)	17.8(9)	18.5(9)	-5.9(7)	-8.0(8)	-2.1(8)
C52	21.4(9)	19.7(9)	19.3(9)	-8.1(7)	-6.1(7)	-1.9(7)
C53	20.1(9)	27.8(10)	20.4(9)	-10.4(8)	-8.5(7)	5.0(8)
C54	20.7(9)	13.6(8)	19.2(8)	-6.3(7)	-7.5(7)	0.0(7)

C55	21.2(9)	15.4(9)	20.9(9)	-8.9(7)	-8.9(7)	4.6(7)
C56	26.6(10)	19.8(9)	23.0(9)	-12.1(8)	-12.5(8)	5.7(8)
C57	24.9(10)	18.5(9)	30.4(10)	-11.9(8)	-15.7(8)	3.8(7)
C58	19.8(9)	18.2(9)	26.2(9)	-10.0(8)	-8.2(8)	0.0(7)
C59	19.9(9)	17.7(9)	20.8(9)	-10.4(7)	-9.1(7)	2.2(7)
C60	19.2(9)	14.9(8)	22.4(9)	-8.4(7)	-9.4(7)	2.3(7)
C61	24.1(10)	14.6(9)	22.9(9)	-6.7(7)	-9.7(8)	1.9(7)
C62	23.7(10)	17.5(9)	29.7(10)	-11.3(8)	-14.3(8)	5.4(7)
C63	19.7(9)	18.7(9)	26.9(9)	-13.5(8)	-8.6(8)	4.5(7)
C64	22.4(10)	32.6(11)	19.0(9)	-10.2(8)	-3.7(8)	-2.4(8)

Table S2.4 Bond Lengths for [Fe(η-C_5H_4)$_2$SiMe(η-C_5H_4)Ru(η-C_5H_4)SiMe(η-C_5H_4)$_2$Fe] (10).

Atom	Atom	Length/Å	Atom	Atom	Length/Å
Ru1	C1	2.1940(17)	Ru2	C33	2.1894(17)
Ru1	C2	2.1822(18)	Ru2	C34	2.1870(17)
Ru1	C3	2.1879(18)	Ru2	C35	2.1964(17)
Ru1	C4	2.1913(18)	Ru2	C36	2.1889(17)
Ru1	C5	2.1832(17)	Ru2	C37	2.1750(17)
Ru1	C6	2.1913(18)	Ru2	C38	2.1962(17)
Ru1	C7	2.1861(18)	Ru2	C39	2.1791(17)
Ru1	C8	2.1948(17)	Ru2	C40	2.1806(18)
Ru1	C9	2.1803(18)	Ru2	C41	2.1887(18)
Ru1	C10	2.1755(17)	Ru2	C42	2.1840(17)
Fe1	Si1	2.7251(5)	Fe3	Si3	2.7322(5)
Fe1	C11	2.0184(17)	Fe3	C43	2.0160(17)
Fe1	C12	2.0293(17)	Fe3	C44	2.0385(18)
Fe1	C13	2.0776(18)	Fe3	C45	2.0857(18)
Fe1	C14	2.0865(19)	Fe3	C46	2.0883(18)
Fe1	C15	2.0341(19)	Fe3	C47	2.0241(18)
Fe1	C16	2.0175(17)	Fe3	C48	2.0192(17)
Fe1	C17	2.0301(18)	Fe3	C49	2.0357(18)
Fe1	C18	2.0711(18)	Fe3	C50	2.0886(19)
Fe1	C19	2.0773(17)	Fe3	C51	2.0819(19)
Fe1	C20	2.0383(18)	Fe3	C52	2.0316(18)
Fe2	Si2	2.7305(6)	Fe4	Si4	2.7284(6)
Fe2	C22	2.0165(17)	Fe4	C54	2.0144(18)
Fe2	C23	2.0379(18)	Fe4	C55	2.0403(18)
Fe2	C24	2.0927(18)	Fe4	C56	2.0947(18)
Fe2	C25	2.0898(18)	Fe4	C57	2.0810(19)
Fe2	C26	2.0298(18)	Fe4	C58	2.0235(18)
Fe2	C27	2.0179(18)	Fe4	C59	2.0162(18)
Fe2	C28	2.0356(17)	Fe4	C60	2.0374(18)
Fe2	C29	2.0838(18)	Fe4	C61	2.0889(18)
Fe2	C30	2.0828(18)	Fe4	C62	2.0845(19)
Fe2	C31	2.0341(19)	Fe4	C63	2.0290(18)
Si1	C1	1.8530(19)	Si3	C33	1.8591(18)
Si1	C11	1.8929(18)	Si3	C43	1.8865(18)
Si1	C16	1.8915(18)	Si3	C48	1.8939(18)

Si1	C21	1.8623(19)	Si3	C53	1.8647(19)
Si2	C6	1.8560(19)	Si4	C38	1.8509(19)
Si2	C22	1.8895(18)	Si4	C54	1.8845(19)
Si2	C27	1.8897(19)	Si4	C59	1.8862(19)
Si2	C32	1.8582(19)	Si4	C64	1.8598(19)
C1	C2	1.446(2)	C33	C34	1.444(2)
C1	C5	1.442(2)	C33	C37	1.438(3)
C2	C3	1.431(2)	C34	C35	1.427(3)
C3	C4	1.427(3)	C35	C36	1.431(3)
C4	C5	1.424(3)	C36	C37	1.432(2)
C6	C7	1.446(2)	C38	C39	1.443(2)
C6	C10	1.438(3)	C38	C42	1.445(2)
C7	C8	1.428(3)	C39	C40	1.430(3)
C8	C9	1.428(3)	C40	C41	1.435(2)
C9	C10	1.430(3)	C41	C42	1.423(3)
C11	C12	1.450(3)	C43	C44	1.454(3)
C11	C15	1.450(3)	C43	C47	1.453(2)
C12	C13	1.428(3)	C44	C45	1.426(2)
C13	C14	1.424(3)	C45	C46	1.426(3)
C14	C15	1.431(3)	C46	C47	1.422(3)
C16	C17	1.454(3)	C48	C49	1.450(3)
C16	C20	1.455(2)	C48	C52	1.453(2)
C17	C18	1.427(3)	C49	C50	1.430(3)
C18	C19	1.429(3)	C50	C51	1.424(3)
C19	C20	1.425(3)	C51	C52	1.429(3)
C22	C23	1.448(2)	C54	C55	1.451(2)
C22	C26	1.453(2)	C54	C58	1.460(3)
C23	C24	1.426(2)	C55	C56	1.425(3)
C24	C25	1.424(3)	C56	C57	1.421(3)
C25	C26	1.428(3)	C57	C58	1.418(3)
C27	C28	1.452(2)	C59	C60	1.453(2)
C27	C31	1.451(3)	C59	C63	1.456(3)
C28	C29	1.427(3)	C60	C61	1.430(3)
C29	C30	1.424(3)	C61	C62	1.426(3)
C30	C31	1.423(3)	C62	C63	1.422(3)

Table S2.5 Bond Angles for [Fe(η-C_5H_4)$_2$SiMe(η-C_5H_4)Ru(η-C_5H_4)SiMe(η-C_5H_4)$_2$Fe] (10).

Atom	Atom	Atom	Angle/°	Atom	Atom	Atom	Angle/°
C1	Ru1	C8	130.31(7)	C33	Ru2	C35	64.46(6)
C2	Ru1	C1	38.60(7)	C33	Ru2	C38	123.24(7)
C2	Ru1	C3	38.22(7)	C34	Ru2	C33	38.54(6)
C2	Ru1	C4	63.88(7)	C34	Ru2	C35	38.00(7)
C2	Ru1	C5	63.83(7)	C34	Ru2	C36	63.68(7)
C2	Ru1	C6	155.90(7)	C34	Ru2	C38	113.16(7)
C2	Ru1	C7	123.88(7)	C34	Ru2	C41	165.32(7)
C2	Ru1	C8	112.61(7)	C36	Ru2	C33	64.47(7)
C3	Ru1	C1	64.49(7)	C36	Ru2	C35	38.10(7)
C3	Ru1	C4	38.04(7)	C36	Ru2	C38	165.00(7)

C3	Ru1	C6	164.51(7)	C37	Ru2	C33	38.48(7)
C3	Ru1	C8	122.71(7)	C37	Ru2	C34	63.87(7)
C4	Ru1	C1	64.43(7)	C37	Ru2	C35	63.98(7)
C4	Ru1	C8	154.30(7)	C37	Ru2	C36	38.32(6)
C5	Ru1	C1	38.47(6)	C37	Ru2	C38	155.54(7)
C5	Ru1	C3	63.62(7)	C37	Ru2	C39	164.28(7)
C5	Ru1	C4	37.99(7)	C37	Ru2	C40	128.76(7)
C5	Ru1	C6	112.76(7)	C37	Ru2	C41	111.62(7)
C5	Ru1	C7	131.41(7)	C37	Ru2	C42	123.14(7)
C5	Ru1	C8	166.31(7)	C38	Ru2	C35	130.17(7)
C6	Ru1	C1	123.12(7)	C39	Ru2	C33	156.18(7)
C6	Ru1	C4	129.63(7)	C39	Ru2	C34	124.20(7)
C6	Ru1	C8	64.55(7)	C39	Ru2	C35	112.89(7)
C7	Ru1	C1	113.21(7)	C39	Ru2	C36	129.49(7)
C7	Ru1	C3	155.25(7)	C39	Ru2	C38	38.50(6)
C7	Ru1	C4	165.93(7)	C39	Ru2	C40	38.30(7)
C7	Ru1	C6	38.57(6)	C39	Ru2	C41	64.02(7)
C7	Ru1	C8	38.05(7)	C39	Ru2	C42	63.75(7)
C9	Ru1	C1	165.13(7)	C40	Ru2	C33	164.12(7)
C9	Ru1	C2	129.38(7)	C40	Ru2	C34	155.59(7)
C9	Ru1	C3	111.62(7)	C40	Ru2	C35	122.93(7)
C9	Ru1	C4	122.30(7)	C40	Ru2	C36	111.57(7)
C9	Ru1	C5	154.65(7)	C40	Ru2	C38	64.67(7)
C9	Ru1	C6	64.59(7)	C40	Ru2	C41	38.35(7)
C9	Ru1	C7	63.73(7)	C40	Ru2	C42	63.81(7)
C9	Ru1	C8	38.10(7)	C41	Ru2	C33	129.08(7)
C10	Ru1	C1	155.40(7)	C41	Ru2	C35	154.77(7)
C10	Ru1	C2	164.46(7)	C41	Ru2	C36	122.44(7)
C10	Ru1	C3	129.18(7)	C41	Ru2	C38	64.58(7)
C10	Ru1	C4	112.04(7)	C42	Ru2	C33	112.59(7)
C10	Ru1	C5	123.23(7)	C42	Ru2	C34	131.09(7)
C10	Ru1	C6	38.44(7)	C42	Ru2	C35	166.02(7)
C10	Ru1	C7	63.77(7)	C42	Ru2	C36	154.82(7)
C10	Ru1	C8	63.92(7)	C42	Ru2	C38	38.53(6)
C10	Ru1	C9	38.34(7)	C42	Ru2	C41	37.97(7)
C11	Fe1	Si1	43.97(5)	C43	Fe3	Si3	43.65(5)
C11	Fe1	C12	41.99(7)	C43	Fe3	C44	42.02(7)
C11	Fe1	C13	70.26(7)	C43	Fe3	C45	70.04(7)
C11	Fe1	C14	70.06(7)	C43	Fe3	C46	70.00(7)
C11	Fe1	C15	41.93(7)	C43	Fe3	C47	42.17(7)
C11	Fe1	C17	109.21(7)	C43	Fe3	C48	87.51(7)
C11	Fe1	C18	149.64(8)	C43	Fe3	C49	108.96(7)
C11	Fe1	C19	149.80(7)	C43	Fe3	C50	149.33(7)
C11	Fe1	C20	109.53(7)	C43	Fe3	C51	149.26(8)
C12	Fe1	Si1	73.08(5)	C43	Fe3	C52	108.82(8)
C12	Fe1	C13	40.67(7)	C44	Fe3	Si3	73.14(5)
C12	Fe1	C14	68.03(7)	C44	Fe3	C45	40.44(7)
C12	Fe1	C15	68.81(8)	C44	Fe3	C46	67.94(7)

C12	Fe1	C17	100.56(7)	C44	Fe3	C50	125.97(8)
C12	Fe1	C18	124.76(8)	C44	Fe3	C51	165.78(8)
C12	Fe1	C19	164.99(8)	C45	Fe3	Si3	110.93(5)
C12	Fe1	C20	146.47(7)	C45	Fe3	C46	39.95(7)
C13	Fe1	Si1	111.27(5)	C45	Fe3	C50	121.02(8)
C13	Fe1	C14	40.01(8)	C46	Fe3	Si3	110.93(5)
C14	Fe1	Si1	111.43(5)	C46	Fe3	C50	138.16(7)
C15	Fe1	Si1	73.55(5)	C47	Fe3	Si3	73.25(5)
C15	Fe1	C13	68.26(8)	C47	Fe3	C44	68.97(8)
C15	Fe1	C14	40.61(7)	C47	Fe3	C45	68.09(8)
C15	Fe1	C18	166.10(8)	C47	Fe3	C46	40.43(7)
C15	Fe1	C19	126.03(8)	C47	Fe3	C49	146.15(7)
C15	Fe1	C20	102.13(8)	C47	Fe3	C50	164.95(8)
C16	Fe1	Si1	43.93(5)	C47	Fe3	C51	125.07(8)
C16	Fe1	C11	87.90(7)	C47	Fe3	C52	100.43(8)
C16	Fe1	C12	108.72(7)	C48	Fe3	Si3	43.86(5)
C16	Fe1	C13	149.08(7)	C48	Fe3	C44	109.46(7)
C16	Fe1	C14	150.26(8)	C48	Fe3	C45	149.76(7)
C16	Fe1	C15	109.80(8)	C48	Fe3	C46	148.83(8)
C16	Fe1	C17	42.11(7)	C48	Fe3	C47	108.62(7)
C16	Fe1	C18	70.46(7)	C48	Fe3	C49	41.92(7)
C16	Fe1	C19	70.23(7)	C48	Fe3	C50	69.98(7)
C16	Fe1	C20	42.05(7)	C48	Fe3	C51	70.03(7)
C17	Fe1	Si1	73.44(5)	C48	Fe3	C52	42.03(7)
C17	Fe1	C13	124.41(8)	C49	Fe3	Si3	72.91(5)
C17	Fe1	C14	164.32(8)	C49	Fe3	C44	101.70(7)
C17	Fe1	C15	146.99(7)	C49	Fe3	C45	126.27(8)
C17	Fe1	C18	40.70(7)	C49	Fe3	C46	166.16(8)
C17	Fe1	C19	68.27(7)	C49	Fe3	C50	40.54(7)
C17	Fe1	C20	68.92(7)	C49	Fe3	C51	68.05(8)
C18	Fe1	Si1	111.58(5)	C50	Fe3	Si3	110.91(5)
C18	Fe1	C13	119.08(8)	C51	Fe3	Si3	111.30(5)
C18	Fe1	C14	136.97(7)	C51	Fe3	C45	137.77(7)
C18	Fe1	C19	40.29(7)	C51	Fe3	C46	120.25(8)
C19	Fe1	Si1	111.34(5)	C51	Fe3	C50	39.92(8)
C19	Fe1	C13	137.38(7)	C52	Fe3	Si3	73.48(5)
C19	Fe1	C14	120.65(7)	C52	Fe3	C44	146.60(7)
C20	Fe1	Si1	73.40(5)	C52	Fe3	C45	164.67(8)
C20	Fe1	C13	166.41(8)	C52	Fe3	C46	124.79(8)
C20	Fe1	C14	126.55(8)	C52	Fe3	C49	68.94(8)
C20	Fe1	C18	68.35(7)	C52	Fe3	C50	68.14(8)
C20	Fe1	C19	40.49(7)	C52	Fe3	C51	40.63(7)
C22	Fe2	Si2	43.77(5)	C54	Fe4	Si4	43.67(5)
C22	Fe2	C23	41.83(7)	C54	Fe4	C55	41.92(7)
C22	Fe2	C24	69.82(7)	C54	Fe4	C56	69.70(7)
C22	Fe2	C25	69.95(7)	C54	Fe4	C57	70.04(7)
C22	Fe2	C26	42.09(7)	C54	Fe4	C58	42.38(7)
C22	Fe2	C27	87.55(7)	C54	Fe4	C59	87.36(7)

C22	Fe2	C28	109.24(7)	C54	Fe4	C60	108.79(7)
C22	Fe2	C29	149.63(7)	C54	Fe4	C61	149.13(8)
C22	Fe2	C30	148.81(8)	C54	Fe4	C62	149.21(8)
C22	Fe2	C31	108.63(8)	C54	Fe4	C63	108.92(8)
C23	Fe2	Si2	73.06(5)	C55	Fe4	Si4	73.12(5)
C23	Fe2	C24	40.37(7)	C55	Fe4	C56	40.30(7)
C23	Fe2	C25	67.81(7)	C55	Fe4	C57	67.96(7)
C23	Fe2	C29	126.40(8)	C55	Fe4	C61	126.36(8)
C23	Fe2	C30	166.31(8)	C55	Fe4	C62	166.17(8)
C24	Fe2	Si2	110.81(5)	C56	Fe4	Si4	110.68(5)
C25	Fe2	Si2	111.02(5)	C57	Fe4	Si4	110.96(6)
C25	Fe2	C24	39.81(7)	C57	Fe4	C56	39.79(8)
C26	Fe2	Si2	73.27(5)	C57	Fe4	C61	138.54(8)
C26	Fe2	C23	68.80(7)	C57	Fe4	C62	119.86(8)
C26	Fe2	C24	67.97(7)	C58	Fe4	Si4	73.36(6)
C26	Fe2	C25	40.53(7)	C58	Fe4	C55	69.09(8)
C26	Fe2	C28	146.48(8)	C58	Fe4	C56	67.84(8)
C26	Fe2	C29	164.69(8)	C58	Fe4	C57	40.39(7)
C26	Fe2	C30	124.78(8)	C58	Fe4	C60	145.59(8)
C26	Fe2	C31	100.56(8)	C58	Fe4	C61	164.49(8)
C27	Fe2	Si2	43.78(5)	C58	Fe4	C62	124.53(8)
C27	Fe2	C23	109.11(7)	C58	Fe4	C63	99.52(8)
C27	Fe2	C24	149.31(7)	C59	Fe4	Si4	43.72(5)
C27	Fe2	C25	149.23(8)	C59	Fe4	C55	110.08(7)
C27	Fe2	C26	108.87(7)	C59	Fe4	C56	150.34(8)
C27	Fe2	C28	41.97(7)	C59	Fe4	C57	147.83(8)
C27	Fe2	C29	69.88(7)	C59	Fe4	C58	107.74(8)
C27	Fe2	C30	69.91(7)	C59	Fe4	C60	42.00(7)
C27	Fe2	C31	41.96(7)	C59	Fe4	C61	70.10(7)
C28	Fe2	Si2	73.22(5)	C59	Fe4	C62	69.91(7)
C28	Fe2	C23	101.66(7)	C59	Fe4	C63	42.18(7)
C28	Fe2	C24	125.96(8)	C60	Fe4	Si4	72.30(5)
C28	Fe2	C25	165.68(8)	C60	Fe4	C55	102.40(7)
C28	Fe2	C29	40.52(7)	C60	Fe4	C56	127.56(8)
C28	Fe2	C30	68.12(7)	C60	Fe4	C57	167.31(8)
C29	Fe2	Si2	110.98(5)	C60	Fe4	C61	40.53(7)
C29	Fe2	C24	121.28(8)	C60	Fe4	C62	67.93(7)
C29	Fe2	C25	138.00(8)	C61	Fe4	Si4	110.49(5)
C30	Fe2	Si2	110.84(6)	C61	Fe4	C56	121.92(8)
C30	Fe2	C24	138.34(8)	C62	Fe4	Si4	111.39(6)
C30	Fe2	C25	120.38(7)	C62	Fe4	C56	137.92(8)
C30	Fe2	C29	39.97(7)	C62	Fe4	C61	39.97(7)
C31	Fe2	Si2	73.04(6)	C63	Fe4	Si4	74.09(6)
C31	Fe2	C23	146.10(8)	C63	Fe4	C55	147.14(8)
C31	Fe2	C24	165.07(8)	C63	Fe4	C56	163.27(8)
C31	Fe2	C25	125.29(8)	C63	Fe4	C57	123.54(8)
C31	Fe2	C28	68.90(8)	C63	Fe4	C60	69.06(7)
C31	Fe2	C29	67.93(8)	C63	Fe4	C61	68.24(8)

C31	Fe2	C30	40.41(8)	C63	Fe4	C62	40.43(7)
C1	Si1	Fe1	125.11(6)	C33	Si3	Fe3	124.48(6)
C1	Si1	C11	113.11(8)	C33	Si3	C43	112.02(8)
C1	Si1	C16	112.13(8)	C33	Si3	C48	113.59(8)
C1	Si1	C21	110.94(8)	C33	Si3	C53	109.90(8)
C11	Si1	Fe1	47.76(5)	C43	Si3	Fe3	47.54(5)
C16	Si1	Fe1	47.73(5)	C43	Si3	C48	95.16(8)
C16	Si1	C11	95.49(8)	C48	Si3	Fe3	47.63(5)
C21	Si1	Fe1	123.95(6)	C53	Si3	Fe3	125.59(6)
C21	Si1	C11	111.95(9)	C53	Si3	C43	112.02(9)
C21	Si1	C16	112.44(8)	C53	Si3	C48	113.52(9)
C6	Si2	Fe2	125.09(6)	C38	Si4	Fe4	123.18(6)
C6	Si2	C22	114.09(8)	C38	Si4	C54	112.00(8)
C6	Si2	C27	111.81(8)	C38	Si4	C59	113.22(8)
C6	Si2	C32	111.20(9)	C38	Si4	C64	109.59(9)
C22	Si2	Fe2	47.59(5)	C54	Si4	Fe4	47.57(5)
C22	Si2	C27	95.22(8)	C54	Si4	C59	95.16(8)
C27	Si2	Fe2	47.63(5)	C59	Si4	Fe4	47.63(5)
C32	Si2	Fe2	123.71(7)	C64	Si4	Fe4	127.20(7)
C32	Si2	C22	110.37(8)	C64	Si4	C54	112.26(9)
C32	Si2	C27	113.31(9)	C64	Si4	C59	114.02(9)
Si1	C1	Ru1	124.06(9)	Si3	C33	Ru2	123.63(9)
C2	C1	Ru1	70.26(10)	C34	C33	Ru2	70.64(10)
C2	C1	Si1	129.90(14)	C34	C33	Si3	123.20(14)
C5	C1	Ru1	70.36(10)	C37	C33	Ru2	70.22(10)
C5	C1	Si1	124.05(13)	C37	C33	Si3	130.45(13)
C5	C1	C2	106.05(15)	C37	C33	C34	106.34(15)
C1	C2	Ru1	71.14(10)	C33	C34	Ru2	70.82(10)
C3	C2	Ru1	71.11(10)	C35	C34	Ru2	71.36(10)
C3	C2	C1	108.70(16)	C35	C34	C33	109.09(16)
C2	C3	Ru1	70.67(10)	C34	C35	Ru2	70.64(10)
C4	C3	Ru1	71.11(10)	C34	C35	C36	107.73(15)
C4	C3	C2	108.11(16)	C36	C35	Ru2	70.67(10)
C3	C4	Ru1	70.85(10)	C35	C36	Ru2	71.24(10)
C5	C4	Ru1	70.70(10)	C35	C36	C37	107.95(16)
C5	C4	C3	107.82(16)	C37	C36	Ru2	70.32(10)
C1	C5	Ru1	71.17(10)	C33	C37	Ru2	71.30(10)
C4	C5	Ru1	71.31(10)	C36	C37	Ru2	71.36(10)
C4	C5	C1	109.32(16)	C36	C37	C33	108.88(15)
Si2	C6	Ru1	122.32(9)	Si4	C38	Ru2	122.65(9)
C7	C6	Ru1	70.52(10)	C39	C38	Ru2	70.11(10)
C7	C6	Si2	124.23(14)	C39	C38	Si4	130.99(14)
C10	C6	Ru1	70.19(10)	C39	C38	C42	105.86(16)
C10	C6	Si2	129.66(14)	C42	C38	Ru2	70.28(10)
C10	C6	C7	106.08(16)	C42	C38	Si4	123.12(13)
C6	C7	Ru1	70.91(10)	C38	C39	Ru2	71.39(10)
C8	C7	Ru1	71.31(10)	C40	C39	Ru2	70.90(10)
C8	C7	C6	109.19(16)	C40	C39	C38	109.14(15)

C7	C8	Ru1	70.65(10)	C39	C40	Ru2	70.79(10)
C7	C8	C9	107.63(16)	C39	C40	C41	107.81(16)
C9	C8	Ru1	70.40(10)	C41	C40	Ru2	71.13(10)
C8	C9	Ru1	71.50(10)	C40	C41	Ru2	70.52(10)
C8	C9	C10	108.05(16)	C42	C41	Ru2	70.84(10)
C10	C9	Ru1	70.65(10)	C42	C41	C40	107.66(16)
C6	C10	Ru1	71.37(10)	C38	C42	Ru2	71.19(10)
C9	C10	Ru1	71.01(10)	C41	C42	Ru2	71.19(10)
C9	C10	C6	109.05(16)	C41	C42	C38	109.53(16)
Si1	C11	Fe1	88.27(7)	Si3	C43	Fe3	88.81(7)
C12	C11	Fe1	69.41(10)	C44	C43	Fe3	69.82(10)
C12	C11	Si1	118.74(13)	C44	C43	Si3	119.69(13)
C12	C11	C15	104.69(15)	C47	C43	Fe3	69.21(10)
C15	C11	Fe1	69.62(10)	C47	C43	Si3	119.53(13)
C15	C11	Si1	119.93(13)	C47	C43	C44	104.60(15)
C11	C12	Fe1	68.60(10)	C43	C44	Fe3	68.16(10)
C13	C12	Fe1	71.48(10)	C45	C44	Fe3	71.56(10)
C13	C12	C11	110.00(17)	C45	C44	C43	109.68(16)
C12	C13	Fe1	67.85(10)	C44	C45	Fe3	68.00(10)
C14	C13	Fe1	70.33(10)	C46	C45	Fe3	70.12(10)
C14	C13	C12	107.69(17)	C46	C45	C44	107.93(16)
C13	C14	Fe1	69.66(11)	C45	C46	Fe3	69.93(10)
C13	C14	C15	107.82(16)	C47	C46	Fe3	67.36(10)
C15	C14	Fe1	67.73(10)	C47	C46	C45	107.82(16)
C11	C15	Fe1	68.45(10)	C43	C47	Fe3	68.62(10)
C14	C15	Fe1	71.66(11)	C46	C47	Fe3	72.21(11)
C14	C15	C11	109.79(17)	C46	C47	C43	109.95(17)
Si1	C16	Fe1	88.34(7)	Si3	C48	Fe3	88.51(7)
C17	C16	Fe1	69.41(10)	C49	C48	Fe3	69.65(10)
C17	C16	Si1	119.42(13)	C49	C48	Si3	118.84(13)
C17	C16	C20	104.60(15)	C49	C48	C52	104.91(15)
C20	C16	Fe1	69.74(10)	C52	C48	Fe3	69.44(10)
C20	C16	Si1	119.50(13)	C52	C48	Si3	119.85(14)
C16	C17	Fe1	68.48(10)	C48	C49	Fe3	68.43(10)
C18	C17	Fe1	71.19(11)	C50	C49	Fe3	71.72(11)
C18	C17	C16	109.92(16)	C50	C49	C48	109.77(16)
C17	C18	Fe1	68.10(10)	C49	C50	Fe3	67.74(10)
C17	C18	C19	107.66(16)	C51	C50	Fe3	69.78(11)
C19	C18	Fe1	70.09(10)	C51	C50	C49	107.72(17)
C18	C19	Fe1	69.62(10)	C50	C51	Fe3	70.29(11)
C20	C19	Fe1	68.28(10)	C50	C51	C52	108.06(16)
C20	C19	C18	108.01(16)	C52	C51	Fe3	67.80(10)
C16	C20	Fe1	68.21(10)	C48	C52	Fe3	68.52(10)
C19	C20	Fe1	71.22(10)	C51	C52	Fe3	71.58(11)
C19	C20	C16	109.77(16)	C51	C52	C48	109.53(17)
Si2	C22	Fe2	88.64(7)	Si4	C54	Fe4	88.76(7)
C23	C22	Fe2	69.87(10)	C55	C54	Fe4	70.00(10)
C23	C22	Si2	119.59(13)	C55	C54	Si4	119.81(13)

C23	C22	C26	104.81(15)	C55	C54	C58	104.72(16)
C26	C22	Fe2	69.45(10)	C58	C54	Fe4	69.14(10)
C26	C22	Si2	119.49(13)	C58	C54	Si4	119.32(13)
C22	C23	Fe2	68.29(10)	C54	C55	Fe4	68.08(10)
C24	C23	Fe2	71.88(10)	C56	C55	Fe4	71.90(11)
C24	C23	C22	109.89(16)	C56	C55	C54	109.52(17)
C23	C24	Fe2	67.75(10)	C55	C56	Fe4	67.80(10)
C25	C24	Fe2	69.99(10)	C57	C56	Fe4	69.59(11)
C25	C24	C23	107.82(16)	C57	C56	C55	108.07(17)
C24	C25	Fe2	70.21(10)	C56	C57	Fe4	70.63(11)
C24	C25	C26	107.86(16)	C58	C57	Fe4	67.62(10)
C26	C25	Fe2	67.48(10)	C58	C57	C56	108.14(17)
C22	C26	Fe2	68.47(10)	C54	C58	Fe4	68.47(10)
C25	C26	Fe2	71.99(11)	C57	C58	Fe4	71.98(11)
C25	C26	C22	109.61(16)	C57	C58	C54	109.55(17)
Si2	C27	Fe2	88.59(7)	Si4	C59	Fe4	88.66(7)
C28	C27	Fe2	69.67(10)	C60	C59	Fe4	69.78(10)
C28	C27	Si2	119.61(13)	C60	C59	Si4	117.67(13)
C31	C27	Fe2	69.62(10)	C60	C59	C63	104.83(16)
C31	C27	Si2	119.24(13)	C63	C59	Fe4	69.38(10)
C31	C27	C28	104.95(16)	C63	C59	Si4	121.24(13)
C27	C28	Fe2	68.36(10)	C59	C60	Fe4	68.22(10)
C29	C28	Fe2	71.56(10)	C61	C60	Fe4	71.67(10)
C29	C28	C27	109.40(16)	C61	C60	C59	109.77(16)
C28	C29	Fe2	67.93(10)	C60	C61	Fe4	67.80(10)
C30	C29	Fe2	69.98(10)	C62	C61	Fe4	69.85(10)
C30	C29	C28	108.03(17)	C62	C61	C60	107.49(16)
C29	C30	Fe2	70.06(10)	C61	C62	Fe4	70.18(11)
C31	C30	Fe2	67.96(10)	C63	C62	Fe4	67.69(10)
C31	C30	C29	107.87(17)	C63	C62	C61	108.40(17)
C27	C31	Fe2	68.42(10)	C59	C63	Fe4	68.44(10)
C30	C31	Fe2	71.64(11)	C62	C63	Fe4	71.89(11)
C30	C31	C27	109.74(17)	C62	C63	C59	109.49(17)

Table S2.6 Torsion Angles for [Fe(η-C_5H_4)$_2$SiMe(η-C_5H_4)Ru(η-C_5H_4)SiMe(η-C_5H_4)$_2$Fe] (10).

A	B	C	D	Angle/°	A	B	C	D	Angle/°
Ru1	C1	C2	C3	-61.53(12)	Ru2	C33	C34	C35	-61.41(12)
Ru1	C1	C5	C4	61.43(12)	Ru2	C33	C37	C36	61.81(12)
Ru1	C2	C3	C4	-61.60(12)	Ru2	C34	C35	C36	-61.26(12)
Ru1	C3	C4	C5	-61.37(12)	Ru2	C35	C36	C37	-61.06(12)
Ru1	C4	C5	C1	-61.34(12)	Ru2	C36	C37	C33	-61.77(12)
Ru1	C6	C7	C8	61.35(13)	Ru2	C38	C39	C40	61.16(12)
Ru1	C6	C10	C9	-61.34(12)	Ru2	C38	C42	C41	-61.17(12)
Ru1	C7	C8	C9	61.01(12)	Ru2	C39	C40	C41	61.86(12)
Ru1	C8	C9	C10	61.54(12)	Ru2	C40	C41	C42	61.45(12)
Ru1	C9	C10	C6	61.56(12)	Ru2	C41	C42	C38	61.17(12)
Fe1	Si1	C1	Ru1	-91.14(10)	Fe3	Si3	C33	Ru2	91.94(10)
Fe1	Si1	C1	C2	0.8(2)	Fe3	Si3	C33	C34	179.62(11)

Fe1	Si1	C1	C5	-179.26(12)	Fe3	Si3	C33	C37	0.05(19)
Fe1	Si1	C11	C12	65.30(13)	Fe3	Si3	C43	C44	65.85(13)
Fe1	Si1	C11	C15	-65.20(13)	Fe3	Si3	C43	C47	-65.18(13)
Fe1	Si1	C16	C17	-65.14(13)	Fe3	Si3	C48	C49	-65.71(13)
Fe1	Si1	C16	C20	65.52(13)	Fe3	Si3	C48	C52	65.17(13)
Fe1	C11	C12	C13	-59.63(12)	Fe3	C43	C44	C45	-59.66(13)
Fe1	C11	C15	C14	59.90(13)	Fe3	C43	C47	C46	60.59(13)
Fe1	C12	C13	C14	-59.25(12)	Fe3	C44	C45	C46	-58.93(13)
Fe1	C13	C14	C15	-57.06(12)	Fe3	C45	C46	C47	-56.77(13)
Fe1	C14	C15	C11	-57.97(12)	Fe3	C46	C47	C43	-58.42(12)
Fe1	C16	C17	C18	59.24(13)	Fe3	C48	C49	C50	59.96(13)
Fe1	C16	C20	C19	-59.20(13)	Fe3	C48	C52	C51	-60.00(13)
Fe1	C17	C18	C19	59.13(13)	Fe3	C49	C50	C51	58.48(13)
Fe1	C18	C19	C20	57.60(12)	Fe3	C50	C51	C52	57.38(13)
Fe1	C19	C20	C16	57.39(12)	Fe3	C51	C52	C48	58.15(12)
Fe2	Si2	C6	Ru1	-91.36(10)	Fe4	Si4	C38	Ru2	91.41(10)
Fe2	Si2	C6	C7	-178.69(12)	Fe4	Si4	C38	C39	0.17(19)
Fe2	Si2	C6	C10	-1.2(2)	Fe4	Si4	C38	C42	177.95(12)
Fe2	Si2	C22	C23	65.84(13)	Fe4	Si4	C54	C55	66.00(13)
Fe2	Si2	C22	C26	-65.36(13)	Fe4	Si4	C54	C58	-65.12(13)
Fe2	Si2	C27	C28	-65.56(13)	Fe4	Si4	C59	C60	-66.25(13)
Fe2	Si2	C27	C31	65.61(13)	Fe4	Si4	C59	C63	64.77(13)
Fe2	C22	C23	C24	-60.01(13)	Fe4	C54	C55	C56	-60.14(13)
Fe2	C22	C26	C25	60.43(13)	Fe4	C54	C58	C57	60.47(13)
Fe2	C23	C24	C25	-58.67(13)	Fe4	C55	C56	C57	-58.03(13)
Fe2	C24	C25	C26	-57.07(12)	Fe4	C56	C57	C58	-57.33(13)
Fe2	C25	C26	C22	-58.30(12)	Fe4	C57	C58	C54	-58.34(12)
Fe2	C27	C28	C29	59.97(13)	Fe4	C59	C60	C61	59.77(13)
Fe2	C27	C31	C30	-59.88(13)	Fe4	C59	C63	C62	-60.36(13)
Fe2	C28	C29	C30	58.63(13)	Fe4	C60	C61	C62	58.75(13)
Fe2	C29	C30	C31	57.56(13)	Fe4	C61	C62	C63	56.97(13)
Fe2	C30	C31	C27	57.94(12)	Fe4	C62	C63	C59	58.27(12)
Si1	Fe1	C11	C12	-121.68(13)	Si3	Fe3	C43	C44	-122.38(12)
Si1	Fe1	C11	C15	122.94(13)	Si3	Fe3	C43	C47	122.35(13)
Si1	Fe1	C12	C11	38.14(9)	Si3	Fe3	C44	C43	37.53(9)
Si1	Fe1	C12	C13	159.37(12)	Si3	Fe3	C44	C45	158.60(11)
Si1	Fe1	C13	C12	-21.20(12)	Si3	Fe3	C45	C44	-21.96(12)
Si1	Fe1	C13	C14	98.39(10)	Si3	Fe3	C45	C46	97.99(10)
Si1	Fe1	C14	C13	-97.97(10)	Si3	Fe3	C46	C45	-97.99(10)
Si1	Fe1	C14	C15	22.33(11)	Si3	Fe3	C46	C47	22.37(12)
Si1	Fe1	C15	C11	-37.41(9)	Si3	Fe3	C47	C43	-37.52(9)
Si1	Fe1	C15	C14	-158.36(11)	Si3	Fe3	C47	C46	-158.21(11)
Si1	Fe1	C16	C17	122.40(12)	Si3	Fe3	C48	C49	121.62(12)
Si1	Fe1	C16	C20	-122.40(13)	Si3	Fe3	C48	C52	-122.78(13)
Si1	Fe1	C17	C16	-37.67(9)	Si3	Fe3	C49	C48	-38.12(9)
Si1	Fe1	C17	C18	-159.08(11)	Si3	Fe3	C49	C50	-159.03(12)
Si1	Fe1	C18	C17	21.60(11)	Si3	Fe3	C50	C49	21.48(12)
Si1	Fe1	C18	C19	-97.96(10)	Si3	Fe3	C50	C51	-98.59(10)

Si1	Fe1	C19	C18	98.63(10)
Si1	Fe1	C19	C20	-21.57(12)
Si1	Fe1	C20	C16	37.68(9)
Si1	Fe1	C20	C19	159.06(11)
Si1	C1	C2	Ru1	-118.40(15)
Si1	C1	C2	C3	-179.92(13)
Si1	C1	C5	Ru1	118.46(13)
Si1	C1	C5	C4	179.89(13)
Si1	C11	C12	Fe1	-75.95(11)
Si1	C11	C12	C13	-135.58(14)
Si1	C11	C15	Fe1	75.46(11)
Si1	C11	C15	C14	135.36(14)
Si1	C16	C17	Fe1	75.67(11)
Si1	C16	C17	C18	134.91(14)
Si1	C16	C20	Fe1	-75.85(11)
Si1	C16	C20	C19	-135.05(14)
Si2	Fe2	C22	C23	-122.32(12)
Si2	Fe2	C22	C26	122.33(13)
Si2	Fe2	C23	C22	37.67(9)
Si2	Fe2	C23	C24	158.70(11)
Si2	Fe2	C24	C23	-21.82(11)
Si2	Fe2	C24	C25	98.24(10)
Si2	Fe2	C25	C24	-97.67(10)
Si2	Fe2	C25	C26	22.47(12)
Si2	Fe2	C26	C22	-37.62(9)
Si2	Fe2	C26	C25	-158.13(11)
Si2	Fe2	C27	C28	122.43(13)
Si2	Fe2	C27	C31	-122.03(13)
Si2	Fe2	C28	C27	-37.58(9)
Si2	Fe2	C28	C29	-158.18(12)
Si2	Fe2	C29	C28	22.41(12)
Si2	Fe2	C29	C30	-97.81(11)
Si2	Fe2	C30	C29	98.17(11)
Si2	Fe2	C30	C31	-21.77(12)
Si2	Fe2	C31	C27	37.82(9)
Si2	Fe2	C31	C30	158.75(11)
Si2	C6	C7	Ru1	116.45(13)
Si2	C6	C7	C8	177.79(13)
Si2	C6	C10	Ru1	-116.08(15)
Si2	C6	C10	C9	-177.42(14)
Si2	C22	C23	Fe2	-76.28(11)
Si2	C22	C23	C24	-136.29(14)
Si2	C22	C26	Fe2	76.04(11)
Si2	C22	C26	C25	136.48(14)
Si2	C27	C28	Fe2	76.07(11)
Si2	C27	C28	C29	136.04(14)
Si2	C27	C31	Fe2	-76.23(11)
Si2	C27	C31	C30	-136.11(14)
Si3	Fe3	C51	C50	97.52(10)
Si3	Fe3	C51	C52	-22.60(12)
Si3	Fe3	C52	C48	37.42(9)
Si3	Fe3	C52	C51	158.07(12)
Si3	C33	C34	Ru2	-118.13(13)
Si3	C33	C34	C35	-179.55(12)
Si3	C33	C37	Ru2	117.82(15)
Si3	C33	C37	C36	179.63(13)
Si3	C43	C44	Fe3	-76.41(11)
Si3	C43	C44	C45	-136.06(14)
Si3	C43	C47	Fe3	76.08(11)
Si3	C43	C47	C46	136.67(14)
Si3	C48	C49	Fe3	76.36(11)
Si3	C48	C49	C50	136.32(14)
Si3	C48	C52	Fe3	-75.69(11)
Si3	C48	C52	C51	-135.70(14)
Si4	Fe4	C54	C55	-122.48(13)
Si4	Fe4	C54	C58	122.17(13)
Si4	Fe4	C55	C54	37.50(9)
Si4	Fe4	C55	C56	158.19(11)
Si4	Fe4	C56	C55	-22.33(12)
Si4	Fe4	C56	C57	98.29(11)
Si4	Fe4	C57	C56	-97.53(11)
Si4	Fe4	C57	C58	22.58(12)
Si4	Fe4	C58	C54	-37.59(9)
Si4	Fe4	C58	C57	-158.02(12)
Si4	Fe4	C59	C60	120.25(13)
Si4	Fe4	C59	C63	-124.28(13)
Si4	Fe4	C60	C59	-38.81(9)
Si4	Fe4	C60	C61	-159.88(11)
Si4	Fe4	C61	C60	20.48(11)
Si4	Fe4	C61	C62	-99.23(11)
Si4	Fe4	C62	C61	96.77(11)
Si4	Fe4	C62	C63	-23.93(12)
Si4	Fe4	C63	C59	36.43(9)
Si4	Fe4	C63	C62	156.88(11)
Si4	C38	C39	Ru2	116.47(15)
Si4	C38	C39	C40	177.64(13)
Si4	C38	C42	Ru2	-116.78(13)
Si4	C38	C42	C41	-177.95(12)
Si4	C54	C55	Fe4	-76.40(12)
Si4	C54	C55	C56	-136.53(14)
Si4	C54	C58	Fe4	76.07(11)
Si4	C54	C58	C57	136.54(14)
Si4	C59	C60	Fe4	77.21(11)
Si4	C59	C60	C61	136.98(14)
Si4	C59	C63	Fe4	-75.07(12)
Si4	C59	C63	C62	-135.43(14)

C1	Ru1	C2	C3	118.35(15)	C33	Ru2	C34	C35	118.87(15)
C1	Ru1	C3	C2	-37.47(10)	C33	Ru2	C35	C34	-37.21(10)
C1	Ru1	C3	C4	80.44(11)	C33	Ru2	C35	C36	80.53(11)
C1	Ru1	C4	C3	-80.60(11)	C33	Ru2	C36	C35	-80.48(11)
C1	Ru1	C4	C5	37.11(10)	C33	Ru2	C36	C37	37.37(10)
C1	Ru1	C5	C4	-118.97(15)	C33	Ru2	C37	C36	-118.34(15)
C1	Ru1	C6	Si2	-32.48(13)	C33	Ru2	C38	Si4	32.29(13)
C1	Ru1	C6	C7	86.36(12)	C33	Ru2	C38	C39	158.92(10)
C1	Ru1	C6	C10	-157.56(10)	C33	Ru2	C38	C42	-85.08(12)
C1	Ru1	C7	C6	-114.57(11)	C33	Ru2	C39	C38	-48.1(2)
C1	Ru1	C7	C8	126.46(11)	C33	Ru2	C39	C40	-167.01(14)
C1	Ru1	C8	C7	-75.79(13)	C33	Ru2	C40	C39	160.6(2)
C1	Ru1	C8	C9	166.45(11)	C33	Ru2	C40	C41	43.2(3)
C1	Ru1	C9	C8	-44.1(3)	C33	Ru2	C41	C40	-166.05(10)
C1	Ru1	C9	C10	-161.8(2)	C33	Ru2	C41	C42	76.33(13)
C1	Ru1	C10	C6	50.2(2)	C33	Ru2	C42	C38	115.50(11)
C1	Ru1	C10	C9	168.88(15)	C33	Ru2	C42	C41	-125.22(11)
C1	Si1	C11	Fe1	-117.21(8)	C33	Si3	C43	Fe3	-117.23(8)
C1	Si1	C11	C12	-51.90(16)	C33	Si3	C43	C44	-51.38(16)
C1	Si1	C11	C15	177.60(14)	C33	Si3	C43	C47	177.58(13)
C1	Si1	C16	Fe1	118.00(8)	C33	Si3	C48	Fe3	115.96(8)
C1	Si1	C16	C17	52.86(16)	C33	Si3	C48	C49	50.25(16)
C1	Si1	C16	C20	-176.49(13)	C33	Si3	C48	C52	-178.87(14)
C1	C2	C3	Ru1	61.55(12)	C33	C34	C35	Ru2	61.08(12)
C1	C2	C3	C4	0.0(2)	C33	C34	C35	C36	-0.2(2)
C2	Ru1	C1	Si1	125.46(16)	C34	Ru2	C33	Si3	117.61(16)
C2	Ru1	C1	C5	-116.10(15)	C34	Ru2	C33	C37	-116.32(14)
C2	Ru1	C3	C4	117.91(15)	C34	Ru2	C35	C36	117.74(15)
C2	Ru1	C4	C3	-37.51(10)	C34	Ru2	C36	C35	-37.44(10)
C2	Ru1	C4	C5	80.20(11)	C34	Ru2	C36	C37	80.41(11)
C2	Ru1	C5	C1	38.63(10)	C34	Ru2	C37	C33	38.46(10)
C2	Ru1	C5	C4	-80.34(12)	C34	Ru2	C37	C36	-79.88(11)
C2	Ru1	C6	Si2	-66.7(2)	C34	Ru2	C38	Si4	-10.25(12)
C2	Ru1	C6	C7	52.1(2)	C34	Ru2	C38	C39	116.38(11)
C2	Ru1	C6	C10	168.21(15)	C34	Ru2	C38	C42	-127.62(11)
C2	Ru1	C7	C6	-157.16(10)	C34	Ru2	C39	C38	-84.81(12)
C2	Ru1	C7	C8	83.88(12)	C34	Ru2	C39	C40	156.33(10)
C2	Ru1	C8	C7	-116.60(11)	C34	Ru2	C40	C39	-53.5(2)
C2	Ru1	C8	C9	125.64(11)	C34	Ru2	C40	C41	-170.94(15)
C2	Ru1	C9	C8	-76.07(13)	C34	Ru2	C41	C40	165.1(2)
C2	Ru1	C9	C10	166.29(10)	C34	Ru2	C41	C42	47.5(3)
C2	Ru1	C10	C6	-161.8(2)	C34	Ru2	C42	C38	75.08(13)
C2	Ru1	C10	C9	-43.1(3)	C34	Ru2	C42	C41	-165.65(10)
C2	C1	C5	Ru1	-61.58(12)	C34	C33	C37	Ru2	-61.80(11)
C2	C1	C5	C4	-0.15(19)	C34	C33	C37	C36	0.01(19)
C2	C3	C4	Ru1	61.32(12)	C34	C35	C36	Ru2	61.25(12)
C2	C3	C4	C5	0.0(2)	C34	C35	C36	C37	0.19(19)
C3	Ru1	C1	Si1	162.56(13)	C35	Ru2	C33	Si3	154.30(13)

C3	Ru1	C1	C2	37.10(10)	C35	Ru2	C33	C34	36.69(10)
C3	Ru1	C1	C5	-79.00(11)	C35	Ru2	C33	C37	-79.62(11)
C3	Ru1	C2	C1	-118.35(15)	C35	Ru2	C34	C33	-118.87(15)
C3	Ru1	C4	C5	117.71(15)	C35	Ru2	C36	C37	117.85(15)
C3	Ru1	C5	C1	81.45(11)	C35	Ru2	C37	C33	80.96(11)
C3	Ru1	C5	C4	-37.52(11)	C35	Ru2	C37	C36	-37.38(11)
C3	Ru1	C6	Si2	82.9(3)	C35	Ru2	C38	Si4	-50.74(14)
C3	Ru1	C6	C7	-158.3(2)	C35	Ru2	C38	C39	75.89(13)
C3	Ru1	C6	C10	-42.2(3)	C35	Ru2	C38	C42	-168.11(10)
C3	Ru1	C7	C6	166.33(14)	C35	Ru2	C39	C38	-126.45(11)
C3	Ru1	C7	C8	47.4(2)	C35	Ru2	C39	C40	114.69(11)
C3	Ru1	C8	C7	-158.52(10)	C35	Ru2	C40	C39	-85.84(12)
C3	Ru1	C8	C9	83.72(12)	C35	Ru2	C40	C41	156.69(11)
C3	Ru1	C9	C8	-115.89(11)	C35	Ru2	C41	C40	-51.2(2)
C3	Ru1	C9	C10	126.47(11)	C35	Ru2	C41	C42	-168.81(14)
C3	Ru1	C10	C6	166.63(10)	C35	Ru2	C42	C38	40.7(3)
C3	Ru1	C10	C9	-74.67(13)	C35	Ru2	C42	C41	160.0(2)
C3	C4	C5	Ru1	61.47(12)	C35	C36	C37	Ru2	61.64(12)
C3	C4	C5	C1	0.1(2)	C35	C36	C37	C33	-0.1(2)
C4	Ru1	C1	Si1	-155.09(13)	C36	Ru2	C33	Si3	-163.29(13)
C4	Ru1	C1	C2	79.45(11)	C36	Ru2	C33	C34	79.10(11)
C4	Ru1	C1	C5	-36.65(11)	C36	Ru2	C33	C37	-37.21(10)
C4	Ru1	C2	C1	-81.02(11)	C36	Ru2	C34	C33	-81.33(11)
C4	Ru1	C2	C3	37.33(11)	C36	Ru2	C34	C35	37.54(10)
C4	Ru1	C3	C2	-117.91(15)	C36	Ru2	C35	C34	-117.74(15)
C4	Ru1	C5	C1	118.97(15)	C36	Ru2	C37	C33	118.34(15)
C4	Ru1	C6	Si2	50.13(14)	C36	Ru2	C38	Si4	-84.8(3)
C4	Ru1	C6	C7	168.96(10)	C36	Ru2	C38	C39	41.8(3)
C4	Ru1	C6	C10	-74.96(13)	C36	Ru2	C38	C42	157.8(2)
C4	Ru1	C7	C6	-37.3(3)	C36	Ru2	C39	C38	-167.07(10)
C4	Ru1	C7	C8	-156.3(3)	C36	Ru2	C39	C40	74.06(13)
C4	Ru1	C8	C7	166.96(14)	C36	Ru2	C40	C39	-127.06(11)
C4	Ru1	C8	C9	49.2(2)	C36	Ru2	C40	C41	115.47(11)
C4	Ru1	C9	C8	-157.15(11)	C36	Ru2	C41	C40	-84.19(12)
C4	Ru1	C9	C10	85.21(12)	C36	Ru2	C41	C42	158.19(10)
C4	Ru1	C10	C6	126.64(11)	C36	Ru2	C42	C38	-166.73(14)
C4	Ru1	C10	C9	-114.66(11)	C36	Ru2	C42	C41	-47.5(2)
C5	Ru1	C1	Si1	-118.44(16)	C37	Ru2	C33	Si3	-126.08(16)
C5	Ru1	C1	C2	116.10(15)	C37	Ru2	C33	C34	116.32(14)
C5	Ru1	C2	C1	-38.50(10)	C37	Ru2	C34	C33	-38.41(10)
C5	Ru1	C2	C3	79.85(11)	C37	Ru2	C34	C35	80.46(11)
C5	Ru1	C3	C2	-80.45(11)	C37	Ru2	C35	C34	-80.14(11)
C5	Ru1	C3	C4	37.47(10)	C37	Ru2	C35	C36	37.60(10)
C5	Ru1	C4	C3	-117.71(15)	C37	Ru2	C36	C35	-117.85(15)
C5	Ru1	C6	Si2	9.79(13)	C37	Ru2	C38	Si4	67.3(2)
C5	Ru1	C6	C7	128.63(11)	C37	Ru2	C38	C39	-166.12(15)
C5	Ru1	C6	C10	-115.30(11)	C37	Ru2	C38	C42	-50.1(2)
C5	Ru1	C7	C6	-73.83(13)	C37	Ru2	C39	C38	158.5(2)

C5	Ru1	C7	C8	167.20(10)	C37	Ru2	C39	C40	39.6(3)
C5	Ru1	C8	C7	-44.6(3)	C37	Ru2	C40	C39	-167.20(10)
C5	Ru1	C8	C9	-162.4(3)	C37	Ru2	C40	C41	75.33(13)
C5	Ru1	C9	C8	170.37(15)	C37	Ru2	C41	C40	-125.76(11)
C5	Ru1	C9	C10	52.7(2)	C37	Ru2	C41	C42	116.62(11)
C5	Ru1	C10	C6	85.33(12)	C37	Ru2	C42	C38	157.70(10)
C5	Ru1	C10	C9	-155.97(11)	C37	Ru2	C42	C41	-83.03(12)
C5	C1	C2	Ru1	61.65(11)	C37	C33	C34	Ru2	61.52(11)
C5	C1	C2	C3	0.12(19)	C37	C33	C34	C35	0.11(19)
C6	Ru1	C1	Si1	-32.94(14)	C38	Ru2	C33	Si3	31.51(14)
C6	Ru1	C1	C2	-158.40(10)	C38	Ru2	C33	C34	-86.10(12)
C6	Ru1	C1	C5	85.50(12)	C38	Ru2	C33	C37	157.58(10)
C6	Ru1	C2	C1	49.0(2)	C38	Ru2	C34	C33	114.83(10)
C6	Ru1	C2	C3	167.39(15)	C38	Ru2	C34	C35	-126.31(11)
C6	Ru1	C3	C2	-160.5(2)	C38	Ru2	C35	C34	75.85(13)
C6	Ru1	C3	C4	-42.6(3)	C38	Ru2	C35	C36	-166.42(10)
C6	Ru1	C4	C3	166.43(10)	C38	Ru2	C36	C35	43.9(3)
C6	Ru1	C4	C5	-75.86(13)	C38	Ru2	C36	C37	161.8(2)
C6	Ru1	C5	C1	-115.12(11)	C38	Ru2	C37	C33	-50.4(2)
C6	Ru1	C5	C4	125.91(11)	C38	Ru2	C37	C36	-168.72(15)
C6	Ru1	C7	C8	-118.97(15)	C38	Ru2	C39	C40	-118.87(15)
C6	Ru1	C8	C7	37.16(10)	C38	Ru2	C40	C39	37.10(10)
C6	Ru1	C8	C9	-80.60(12)	C38	Ru2	C40	C41	-80.37(11)
C6	Ru1	C9	C8	80.50(12)	C38	Ru2	C41	C40	80.64(11)
C6	Ru1	C9	C10	-37.14(11)	C38	Ru2	C41	C42	-36.98(10)
C6	Ru1	C10	C9	118.70(15)	C38	Ru2	C42	C41	119.28(15)
C6	Si2	C22	Fe2	-116.39(8)	C38	Si4	C54	Fe4	-115.49(8)
C6	Si2	C22	C23	-50.55(16)	C38	Si4	C54	C55	-49.49(17)
C6	Si2	C22	C26	178.25(13)	C38	Si4	C54	C58	179.39(13)
C6	Si2	C27	Fe2	118.23(8)	C38	Si4	C59	Fe4	114.50(8)
C6	Si2	C27	C28	52.68(16)	C38	Si4	C59	C60	48.25(16)
C6	Si2	C27	C31	-176.16(14)	C38	Si4	C59	C63	179.27(14)
C6	C7	C8	Ru1	-61.10(12)	C38	C39	C40	Ru2	-61.47(12)
C6	C7	C8	C9	-0.1(2)	C38	C39	C40	C41	0.4(2)
C7	Ru1	C1	Si1	9.66(13)	C39	Ru2	C33	Si3	65.2(2)
C7	Ru1	C1	C2	-115.79(11)	C39	Ru2	C33	C34	-52.4(2)
C7	Ru1	C1	C5	128.10(11)	C39	Ru2	C33	C37	-168.75(14)
C7	Ru1	C2	C1	85.40(12)	C39	Ru2	C34	C33	157.23(10)
C7	Ru1	C2	C3	-156.25(11)	C39	Ru2	C34	C35	-83.90(12)
C7	Ru1	C3	C2	53.0(2)	C39	Ru2	C35	C34	116.79(11)
C7	Ru1	C3	C4	170.89(15)	C39	Ru2	C35	C36	-125.47(11)
C7	Ru1	C4	C3	-164.2(2)	C39	Ru2	C36	C35	76.46(13)
C7	Ru1	C4	C5	-46.5(3)	C39	Ru2	C36	C37	-165.69(10)
C7	Ru1	C5	C1	-74.63(13)	C39	Ru2	C37	C33	163.1(2)
C7	Ru1	C5	C4	166.40(10)	C39	Ru2	C37	C36	44.7(3)
C7	Ru1	C6	Si2	-118.84(16)	C39	Ru2	C38	Si4	-126.63(16)
C7	Ru1	C6	C10	116.08(15)	C39	Ru2	C38	C42	116.00(15)
C7	Ru1	C8	C9	-117.76(16)	C39	Ru2	C40	C41	-117.47(15)

C7	Ru1	C9	C8	37.46(11)
C7	Ru1	C9	C10	-80.18(12)
C7	Ru1	C10	C6	-38.63(10)
C7	Ru1	C10	C9	80.07(12)
C7	C6	C10	Ru1	61.79(12)
C7	C6	C10	C9	0.5(2)
C7	C8	C9	Ru1	-61.17(12)
C7	C8	C9	C10	0.4(2)
C8	Ru1	C1	Si1	50.21(14)
C8	Ru1	C1	C2	-75.25(13)
C8	Ru1	C1	C5	168.65(11)
C8	Ru1	C2	C1	126.98(11)
C8	Ru1	C2	C3	-114.66(11)
C8	Ru1	C3	C2	85.58(12)
C8	Ru1	C3	C4	-156.50(10)
C8	Ru1	C4	C3	50.7(2)
C8	Ru1	C4	C5	168.39(14)
C8	Ru1	C5	C1	-39.4(3)
C8	Ru1	C5	C4	-158.4(3)
C8	Ru1	C6	Si2	-155.50(13)
C8	Ru1	C6	C7	-36.66(10)
C8	Ru1	C6	C10	79.41(11)
C8	Ru1	C7	C6	118.97(15)
C8	Ru1	C9	C10	-117.64(16)
C8	Ru1	C10	C6	-81.21(11)
C8	Ru1	C10	C9	37.49(11)
C8	C9	C10	Ru1	-62.08(12)
C8	C9	C10	C6	-0.5(2)
C9	Ru1	C1	Si1	84.5(3)
C9	Ru1	C1	C2	-41.0(3)
C9	Ru1	C1	C5	-157.1(2)
C9	Ru1	C2	C1	167.43(10)
C9	Ru1	C2	C3	-74.22(13)
C9	Ru1	C3	C2	126.86(11)
C9	Ru1	C3	C4	-115.22(11)
C9	Ru1	C4	C3	84.23(12)
C9	Ru1	C4	C5	-158.07(10)
C9	Ru1	C5	C1	166.49(15)
C9	Ru1	C5	C4	47.5(2)
C9	Ru1	C6	Si2	162.13(13)
C9	Ru1	C6	C7	-79.04(11)
C9	Ru1	C6	C10	37.04(10)
C9	Ru1	C7	C6	81.46(11)
C9	Ru1	C7	C8	-37.51(11)
C9	Ru1	C8	C7	117.76(16)
C9	Ru1	C10	C6	-118.70(15)
C10	Ru1	C1	Si1	-67.7(2)
C10	Ru1	C1	C2	166.84(15)
C39	Ru2	C41	C40	37.71(10)
C39	Ru2	C41	C42	-79.91(11)
C39	Ru2	C42	C38	-38.60(10)
C39	Ru2	C42	C41	80.68(11)
C39	C38	C42	Ru2	61.48(11)
C39	C38	C42	C41	0.31(19)
C39	C40	C41	Ru2	-61.65(12)
C39	C40	C41	C42	-0.2(2)
C40	Ru2	C33	Si3	-84.2(3)
C40	Ru2	C33	C34	158.2(2)
C40	Ru2	C33	C37	41.9(3)
C40	Ru2	C34	C33	-165.74(15)
C40	Ru2	C34	C35	-46.9(2)
C40	Ru2	C35	C34	158.94(10)
C40	Ru2	C35	C36	-83.33(12)
C40	Ru2	C36	C35	116.31(11)
C40	Ru2	C36	C37	-125.84(11)
C40	Ru2	C37	C33	-166.46(10)
C40	Ru2	C37	C36	75.20(13)
C40	Ru2	C38	Si4	-163.54(13)
C40	Ru2	C38	C39	-36.91(10)
C40	Ru2	C38	C42	79.09(11)
C40	Ru2	C39	C38	118.87(15)
C40	Ru2	C41	C42	-117.62(15)
C40	Ru2	C42	C38	-81.50(11)
C40	Ru2	C42	C41	37.78(10)
C40	C41	C42	Ru2	-61.24(12)
C40	C41	C42	C38	-0.1(2)
C41	Ru2	C33	Si3	-51.08(14)
C41	Ru2	C33	C34	-168.69(10)
C41	Ru2	C33	C37	74.99(12)
C41	Ru2	C34	C33	36.9(3)
C41	Ru2	C34	C35	155.8(2)
C41	Ru2	C35	C34	-165.89(14)
C41	Ru2	C35	C36	-48.2(2)
C41	Ru2	C36	C35	157.90(10)
C41	Ru2	C36	C37	-84.25(12)
C41	Ru2	C37	C33	-126.25(10)
C41	Ru2	C37	C36	115.41(11)
C41	Ru2	C38	Si4	153.83(13)
C41	Ru2	C38	C39	-79.54(11)
C41	Ru2	C38	C42	36.46(10)
C41	Ru2	C39	C38	81.11(11)
C41	Ru2	C39	C40	-37.76(10)
C41	Ru2	C40	C39	117.47(15)
C41	Ru2	C42	C38	-119.28(15)
C42	Ru2	C33	Si3	-10.73(13)
C42	Ru2	C33	C34	-128.33(11)

C10	Ru1	C1	C5	50.7(2)	C42	Ru2	C33	C37	115.35(10)
C10	Ru1	C2	C1	-159.3(2)	C42	Ru2	C34	C33	73.93(13)
C10	Ru1	C2	C3	-40.9(3)	C42	Ru2	C34	C35	-167.20(10)
C10	Ru1	C3	C2	166.92(10)	C42	Ru2	C35	C34	43.7(3)
C10	Ru1	C3	C4	-75.17(13)	C42	Ru2	C35	C36	161.5(2)
C10	Ru1	C4	C3	126.06(11)	C42	Ru2	C36	C35	-169.62(14)
C10	Ru1	C4	C5	-116.24(11)	C42	Ru2	C36	C37	-51.8(2)
C10	Ru1	C5	C1	-157.34(10)	C42	Ru2	C37	C33	-85.18(12)
C10	Ru1	C5	C4	83.69(12)	C42	Ru2	C37	C36	156.48(11)
C10	Ru1	C6	Si2	125.08(16)	C42	Ru2	C38	Si4	117.37(15)
C10	Ru1	C6	C7	-116.08(15)	C42	Ru2	C38	C39	-116.00(15)
C10	Ru1	C7	C6	38.50(10)	C42	Ru2	C39	C38	38.63(10)
C10	Ru1	C7	C8	-80.47(11)	C42	Ru2	C39	C40	-80.24(11)
C10	Ru1	C8	C7	80.04(11)	C42	Ru2	C40	C39	80.07(11)
C10	Ru1	C8	C9	-37.72(11)	C42	Ru2	C40	C41	-37.41(11)
C10	Ru1	C9	C8	117.64(16)	C42	Ru2	C41	C40	117.62(15)
C10	C6	C7	Ru1	-61.57(12)	C42	C38	C39	Ru2	-61.59(11)
C10	C6	C7	C8	-0.2(2)	C42	C38	C39	C40	-0.43(19)
C11	Fe1	Si1	C1	90.55(10)	C43	Fe3	Si3	C33	89.32(10)
C11	Fe1	Si1	C16	179.59(11)	C43	Fe3	Si3	C48	-178.92(11)
C11	Fe1	Si1	C21	-89.85(11)	C43	Fe3	Si3	C53	-88.28(11)
C11	Fe1	C12	C13	121.24(16)	C43	Fe3	C44	C45	121.07(15)
C11	Fe1	C13	C12	-37.42(11)	C43	Fe3	C45	C44	-37.59(11)
C11	Fe1	C13	C14	82.17(11)	C43	Fe3	C45	C46	82.36(11)
C11	Fe1	C14	C13	-82.73(11)	C43	Fe3	C46	C45	-82.46(11)
C11	Fe1	C14	C15	37.56(11)	C43	Fe3	C46	C47	37.90(11)
C11	Fe1	C15	C14	-120.95(15)	C43	Fe3	C47	C46	-120.69(16)
C11	Fe1	C16	Si1	-0.29(8)	C43	Fe3	C48	Si3	0.75(8)
C11	Fe1	C16	C17	122.12(11)	C43	Fe3	C48	C49	122.36(11)
C11	Fe1	C16	C20	-122.69(11)	C43	Fe3	C48	C52	-122.03(12)
C11	Fe1	C17	C16	-63.68(11)	C43	Fe3	C49	C48	-63.16(12)
C11	Fe1	C17	C18	174.91(11)	C43	Fe3	C49	C50	175.93(11)
C11	Fe1	C18	C17	-9.5(2)	C43	Fe3	C50	C49	-7.6(2)
C11	Fe1	C18	C19	-129.10(15)	C43	Fe3	C50	C51	-127.64(15)
C11	Fe1	C19	C18	128.75(15)	C43	Fe3	C51	C50	127.78(15)
C11	Fe1	C19	C20	8.6(2)	C43	Fe3	C51	C52	7.7(2)
C11	Fe1	C20	C16	63.17(12)	C43	Fe3	C52	C48	63.48(12)
C11	Fe1	C20	C19	-175.45(11)	C43	Fe3	C52	C51	-175.87(11)
C11	Si1	C1	Ru1	-37.55(13)	C43	Si3	C33	Ru2	144.66(10)
C11	Si1	C1	C2	54.39(19)	C43	Si3	C33	C34	-127.66(14)
C11	Si1	C1	C5	-125.66(15)	C43	Si3	C33	C37	52.77(18)
C11	Si1	C16	Fe1	0.31(8)	C43	Si3	C48	Fe3	-0.80(8)
C11	Si1	C16	C17	-64.84(15)	C43	Si3	C48	C49	-66.51(15)
C11	Si1	C16	C20	65.82(15)	C43	Si3	C48	C52	64.37(15)
C11	C12	C13	Fe1	57.91(12)	C43	C44	C45	Fe3	57.61(12)
C11	C12	C13	C14	-1.3(2)	C43	C44	C45	C46	-1.3(2)
C12	Fe1	Si1	C1	54.04(9)	C44	Fe3	Si3	C33	53.11(9)
C12	Fe1	Si1	C11	-36.51(9)	C44	Fe3	Si3	C43	-36.21(9)

C12	Fe1	Si1	C16	143.07(10)	C44	Fe3	Si3	C48	144.87(10)
C12	Fe1	Si1	C21	-126.36(9)	C44	Fe3	Si3	C53	-124.48(10)
C12	Fe1	C11	Si1	121.68(13)	C44	Fe3	C43	Si3	122.38(12)
C12	Fe1	C11	C15	-115.38(15)	C44	Fe3	C43	C47	-115.27(15)
C12	Fe1	C13	C14	119.59(16)	C44	Fe3	C45	C46	119.95(15)
C12	Fe1	C14	C13	-37.66(11)	C44	Fe3	C46	C45	-37.33(11)
C12	Fe1	C14	C15	82.63(11)	C44	Fe3	C46	C47	83.03(12)
C12	Fe1	C15	C11	40.41(10)	C44	Fe3	C47	C43	40.43(10)
C12	Fe1	C15	C14	-80.54(12)	C44	Fe3	C47	C46	-80.26(12)
C12	Fe1	C16	Si1	-37.37(9)	C44	Fe3	C48	Si3	-35.73(9)
C12	Fe1	C16	C17	85.04(11)	C44	Fe3	C48	C49	85.89(11)
C12	Fe1	C16	C20	-159.77(11)	C44	Fe3	C48	C52	-158.51(11)
C12	Fe1	C17	C16	-106.31(11)	C44	Fe3	C49	C48	-106.18(11)
C12	Fe1	C17	C18	132.28(11)	C44	Fe3	C49	C50	132.91(11)
C12	Fe1	C18	C17	-62.29(13)	C44	Fe3	C50	C49	-62.40(14)
C12	Fe1	C18	C19	178.15(10)	C44	Fe3	C50	C51	177.52(11)
C12	Fe1	C19	C18	-5.9(3)	C44	Fe3	C51	C50	-8.2(3)
C12	Fe1	C19	C20	-126.1(3)	C44	Fe3	C51	C52	-128.3(3)
C12	Fe1	C20	C16	36.36(18)	C44	Fe3	C52	C48	38.86(19)
C12	Fe1	C20	C19	157.74(13)	C44	Fe3	C52	C51	159.51(14)
C12	C11	C15	Fe1	-60.97(11)	C44	C43	C47	Fe3	-61.30(11)
C12	C11	C15	C14	-1.07(19)	C44	C43	C47	C46	-0.7(2)
C12	C13	C14	Fe1	57.71(12)	C44	C45	C46	Fe3	57.61(12)
C12	C13	C14	C15	0.6(2)	C44	C45	C46	C47	0.8(2)
C13	Fe1	Si1	C1	68.30(9)	C45	Fe3	Si3	C33	67.79(9)
C13	Fe1	Si1	C11	-22.25(10)	C45	Fe3	Si3	C43	-21.53(10)
C13	Fe1	Si1	C16	157.33(10)	C45	Fe3	Si3	C48	159.55(10)
C13	Fe1	Si1	C21	-112.10(10)	C45	Fe3	Si3	C53	-109.80(10)
C13	Fe1	C11	Si1	157.98(10)	C45	Fe3	C43	Si3	158.62(9)
C13	Fe1	C11	C12	36.30(11)	C45	Fe3	C43	C44	36.24(10)
C13	Fe1	C11	C15	-79.08(11)	C45	Fe3	C43	C47	-79.03(11)
C13	Fe1	C12	C11	-121.24(16)	C45	Fe3	C44	C43	-121.07(15)
C13	Fe1	C14	C15	120.30(15)	C45	Fe3	C46	C47	120.36(16)
C13	Fe1	C15	C11	84.25(11)	C45	Fe3	C47	C43	84.02(11)
C13	Fe1	C15	C14	-36.70(11)	C45	Fe3	C47	C46	-36.67(11)
C13	Fe1	C16	Si1	-44.33(17)	C45	Fe3	C48	Si3	-40.39(17)
C13	Fe1	C16	C17	78.07(17)	C45	Fe3	C48	C49	81.23(17)
C13	Fe1	C16	C20	-166.73(14)	C45	Fe3	C48	C52	-163.17(14)
C13	Fe1	C17	C16	-142.45(10)	C45	Fe3	C49	C48	-141.88(11)
C13	Fe1	C17	C18	96.14(12)	C45	Fe3	C49	C50	97.21(13)
C13	Fe1	C18	C17	-110.19(12)	C45	Fe3	C50	C49	-111.04(12)
C13	Fe1	C18	C19	130.25(11)	C45	Fe3	C50	C51	128.89(11)
C13	Fe1	C19	C18	-80.10(15)	C45	Fe3	C51	C50	-83.00(15)
C13	Fe1	C19	C20	159.71(12)	C45	Fe3	C51	C52	156.87(12)
C13	Fe1	C20	C16	149.9(3)	C45	Fe3	C52	C48	146.5(3)
C13	Fe1	C20	C19	-88.8(3)	C45	Fe3	C52	C51	-92.8(3)
C13	C14	C15	Fe1	58.25(13)	C45	C46	C47	Fe3	58.35(13)
C13	C14	C15	C11	0.3(2)	C45	C46	C47	C43	-0.1(2)

C14	Fe1	Si1	C1	111.39(9)	C46	Fe3	Si3	C33	110.69(9)
C14	Fe1	Si1	C11	20.84(10)	C46	Fe3	Si3	C43	21.38(10)
C14	Fe1	Si1	C16	-159.57(10)	C46	Fe3	Si3	C48	-157.54(10)
C14	Fe1	Si1	C21	-69.00(10)	C46	Fe3	Si3	C53	-66.90(10)
C14	Fe1	C11	Si1	-159.37(9)	C46	Fe3	C43	Si3	-158.76(9)
C14	Fe1	C11	C12	78.95(11)	C46	Fe3	C43	C44	78.86(11)
C14	Fe1	C11	C15	-36.43(11)	C46	Fe3	C43	C47	-36.40(11)
C14	Fe1	C12	C11	-84.17(11)	C46	Fe3	C44	C43	-84.17(11)
C14	Fe1	C12	C13	37.07(11)	C46	Fe3	C44	C45	36.89(11)
C14	Fe1	C13	C12	-119.59(16)	C46	Fe3	C45	C44	-119.95(15)
C14	Fe1	C15	C11	120.95(15)	C46	Fe3	C47	C43	120.69(16)
C14	Fe1	C16	Si1	40.92(17)	C46	Fe3	C48	Si3	43.58(17)
C14	Fe1	C16	C17	163.33(14)	C46	Fe3	C48	C49	165.20(13)
C14	Fe1	C16	C20	-81.48(17)	C46	Fe3	C48	C52	-79.20(17)
C14	Fe1	C17	C16	-148.2(2)	C46	Fe3	C49	C48	-146.4(3)
C14	Fe1	C17	C18	90.4(3)	C46	Fe3	C49	C50	92.7(3)
C14	Fe1	C18	C17	-156.67(12)	C46	Fe3	C50	C49	-159.01(12)
C14	Fe1	C18	C19	83.78(14)	C46	Fe3	C50	C51	80.91(15)
C14	Fe1	C19	C18	-127.96(11)	C46	Fe3	C51	C50	-130.32(11)
C14	Fe1	C19	C20	111.85(12)	C46	Fe3	C51	C52	109.55(12)
C14	Fe1	C20	C16	142.36(11)	C46	Fe3	C52	C48	141.75(11)
C14	Fe1	C20	C19	-96.26(13)	C46	Fe3	C52	C51	-97.60(13)
C15	Fe1	Si1	C1	126.34(9)	C47	Fe3	Si3	C33	125.63(9)
C15	Fe1	Si1	C11	35.78(9)	C47	Fe3	Si3	C43	36.32(9)
C15	Fe1	Si1	C16	-144.63(9)	C47	Fe3	Si3	C48	-142.61(10)
C15	Fe1	Si1	C21	-54.06(9)	C47	Fe3	Si3	C53	-51.96(10)
C15	Fe1	C11	Si1	-122.94(13)	C47	Fe3	C43	Si3	-122.35(13)
C15	Fe1	C11	C12	115.38(15)	C47	Fe3	C43	C44	115.27(15)
C15	Fe1	C12	C11	-40.36(10)	C47	Fe3	C44	C43	-40.57(10)
C15	Fe1	C12	C13	80.88(12)	C47	Fe3	C44	C45	80.49(12)
C15	Fe1	C13	C12	-82.36(12)	C47	Fe3	C45	C44	-82.85(12)
C15	Fe1	C13	C14	37.23(11)	C47	Fe3	C45	C46	37.09(11)
C15	Fe1	C14	C13	-120.30(15)	C47	Fe3	C46	C45	-120.36(16)
C15	Fe1	C16	Si1	36.16(9)	C47	Fe3	C48	Si3	37.85(9)
C15	Fe1	C16	C17	158.56(10)	C47	Fe3	C48	C49	159.47(10)
C15	Fe1	C16	C20	-86.24(11)	C47	Fe3	C48	C52	-84.93(12)
C15	Fe1	C17	C16	-39.14(18)	C47	Fe3	C49	C48	-36.62(18)
C15	Fe1	C17	C18	-160.55(13)	C47	Fe3	C49	C50	-157.53(14)
C15	Fe1	C18	C17	130.9(3)	C47	Fe3	C50	C49	124.9(3)
C15	Fe1	C18	C19	11.4(4)	C47	Fe3	C50	C51	4.8(3)
C15	Fe1	C19	C18	-176.64(11)	C47	Fe3	C51	C50	-178.46(11)
C15	Fe1	C19	C20	63.16(14)	C47	Fe3	C51	C52	61.41(14)
C15	Fe1	C20	C16	106.19(11)	C47	Fe3	C52	C48	106.30(11)
C15	Fe1	C20	C19	-132.43(11)	C47	Fe3	C52	C51	-133.05(12)
C15	C11	C12	Fe1	61.11(11)	C47	C43	C44	Fe3	60.89(11)
C15	C11	C12	C13	1.48(19)	C47	C43	C44	C45	1.23(19)
C16	Fe1	Si1	C1	-89.04(10)	C48	Fe3	Si3	C33	-91.76(10)
C16	Fe1	Si1	C11	-179.59(11)	C48	Fe3	Si3	C43	178.92(11)

C16	Fe1	Si1	C21	90.57(11)	C48	Fe3	Si3	C53	90.64(11)
C16	Fe1	C11	Si1	0.29(8)	C48	Fe3	C43	Si3	-0.75(8)
C16	Fe1	C11	C12	-121.40(11)	C48	Fe3	C43	C44	-123.13(11)
C16	Fe1	C11	C15	123.23(11)	C48	Fe3	C43	C47	121.61(11)
C16	Fe1	C12	C11	64.25(12)	C48	Fe3	C44	C43	62.55(12)
C16	Fe1	C12	C13	-174.51(11)	C48	Fe3	C44	C45	-176.39(11)
C16	Fe1	C13	C12	10.1(2)	C48	Fe3	C45	C44	6.8(2)
C16	Fe1	C13	C14	129.74(15)	C48	Fe3	C45	C46	126.72(15)
C16	Fe1	C14	C13	-127.19(15)	C48	Fe3	C46	C45	-128.75(15)
C16	Fe1	C14	C15	-6.9(2)	C48	Fe3	C46	C47	-8.4(2)
C16	Fe1	C15	C11	-62.68(12)	C48	Fe3	C47	C43	-63.88(12)
C16	Fe1	C15	C14	176.37(11)	C48	Fe3	C47	C46	175.43(11)
C16	Fe1	C17	C18	-121.41(15)	C48	Fe3	C49	C50	-120.91(15)
C16	Fe1	C18	C17	37.39(11)	C48	Fe3	C50	C49	37.60(11)
C16	Fe1	C18	C19	-82.16(11)	C48	Fe3	C50	C51	-82.48(12)
C16	Fe1	C19	C18	82.78(12)	C48	Fe3	C51	C50	82.33(12)
C16	Fe1	C19	C20	-37.42(11)	C48	Fe3	C51	C52	-37.80(11)
C16	Fe1	C20	C19	121.38(16)	C48	Fe3	C52	C51	120.65(16)
C16	Si1	C1	Ru1	-144.15(10)	C48	Si3	C33	Ru2	38.26(13)
C16	Si1	C1	C2	-52.22(18)	C48	Si3	C33	C34	125.93(14)
C16	Si1	C1	C5	127.73(15)	C48	Si3	C33	C37	-53.63(19)
C16	Si1	C11	Fe1	-0.31(8)	C48	Si3	C43	Fe3	0.80(8)
C16	Si1	C11	C12	65.00(15)	C48	Si3	C43	C44	66.65(15)
C16	Si1	C11	C15	-65.50(15)	C48	Si3	C43	C47	-64.38(15)
C16	C17	C18	Fe1	-57.62(12)	C48	C49	C50	Fe3	-57.98(12)
C16	C17	C18	C19	1.5(2)	C48	C49	C50	C51	0.5(2)
C17	Fe1	Si1	C1	-52.83(9)	C49	Fe3	Si3	C33	-55.24(9)
C17	Fe1	Si1	C11	-143.38(9)	C49	Fe3	Si3	C43	-144.56(10)
C17	Fe1	Si1	C16	36.20(9)	C49	Fe3	Si3	C48	36.52(9)
C17	Fe1	Si1	C21	126.77(9)	C49	Fe3	Si3	C53	127.17(10)
C17	Fe1	C11	Si1	37.26(9)	C49	Fe3	C43	Si3	35.88(9)
C17	Fe1	C11	C12	-84.42(12)	C49	Fe3	C43	C44	-86.49(11)
C17	Fe1	C11	C15	160.20(10)	C49	Fe3	C43	C47	158.24(11)
C17	Fe1	C12	C11	107.06(11)	C49	Fe3	C44	C43	105.43(11)
C17	Fe1	C12	C13	-131.70(12)	C49	Fe3	C44	C45	-133.51(11)
C17	Fe1	C13	C12	62.83(13)	C49	Fe3	C45	C44	61.75(13)
C17	Fe1	C13	C14	-177.57(10)	C49	Fe3	C45	C46	-178.30(10)
C17	Fe1	C14	C13	7.4(3)	C49	Fe3	C46	C45	5.7(4)
C17	Fe1	C14	C15	127.7(3)	C49	Fe3	C46	C47	126.1(3)
C17	Fe1	C15	C11	-35.94(18)	C49	Fe3	C47	C43	-39.01(18)
C17	Fe1	C15	C14	-156.89(13)	C49	Fe3	C47	C46	-159.70(13)
C17	Fe1	C16	Si1	-122.40(12)	C49	Fe3	C48	Si3	-121.62(12)
C17	Fe1	C16	C20	115.19(14)	C49	Fe3	C48	C52	115.60(15)
C17	Fe1	C18	C19	-119.55(15)	C49	Fe3	C50	C51	-120.08(16)
C17	Fe1	C19	C18	37.64(11)	C49	Fe3	C51	C50	37.33(11)
C17	Fe1	C19	C20	-82.56(12)	C49	Fe3	C51	C52	-82.79(12)
C17	Fe1	C20	C16	-40.57(10)	C49	Fe3	C52	C48	-40.21(11)
C17	Fe1	C20	C19	80.81(12)	C49	Fe3	C52	C51	80.44(12)

C17	C16	C20	Fe1	61.08(11)	C49	C48	C52	Fe3	61.04(11)
C17	C16	C20	C19	1.88(19)	C49	C48	C52	C51	1.0(2)
C17	C18	C19	Fe1	-57.89(12)	C49	C50	C51	Fe3	-57.22(12)
C17	C18	C19	C20	-0.3(2)	C49	C50	C51	C52	0.2(2)
C18	Fe1	Si1	C1	-67.33(9)	C50	Fe3	Si3	C33	-69.66(9)
C18	Fe1	Si1	C11	-157.89(10)	C50	Fe3	Si3	C43	-158.98(10)
C18	Fe1	Si1	C16	21.70(10)	C50	Fe3	Si3	C48	22.10(10)
C18	Fe1	Si1	C21	112.27(9)	C50	Fe3	Si3	C53	112.75(10)
C18	Fe1	C11	Si1	43.83(17)	C50	Fe3	C43	Si3	41.07(17)
C18	Fe1	C11	C12	-77.85(17)	C50	Fe3	C43	C44	-81.31(17)
C18	Fe1	C11	C15	166.78(14)	C50	Fe3	C43	C47	163.43(14)
C18	Fe1	C12	C11	143.02(11)	C50	Fe3	C44	C43	141.46(11)
C18	Fe1	C12	C13	-95.74(13)	C50	Fe3	C44	C45	-97.47(13)
C18	Fe1	C13	C12	110.72(12)	C50	Fe3	C45	C44	110.56(12)
C18	Fe1	C13	C14	-129.68(11)	C50	Fe3	C45	C46	-129.50(11)
C18	Fe1	C14	C13	80.30(14)	C50	Fe3	C46	C45	82.51(15)
C18	Fe1	C14	C15	-159.41(11)	C50	Fe3	C46	C47	-157.13(12)
C18	Fe1	C15	C11	-151.2(3)	C50	Fe3	C47	C43	-145.9(3)
C18	Fe1	C15	C14	87.8(3)	C50	Fe3	C47	C46	93.4(3)
C18	Fe1	C16	Si1	-158.60(9)	C50	Fe3	C48	Si3	-158.03(9)
C18	Fe1	C16	C17	-36.20(10)	C50	Fe3	C48	C49	-36.41(10)
C18	Fe1	C16	C20	79.00(11)	C50	Fe3	C48	C52	79.19(12)
C18	Fe1	C17	C16	121.41(15)	C50	Fe3	C49	C48	120.91(15)
C18	Fe1	C19	C20	-120.20(16)	C50	Fe3	C51	C52	-120.13(16)
C18	Fe1	C20	C16	-84.42(11)	C50	Fe3	C52	C48	-83.92(12)
C18	Fe1	C20	C19	36.96(11)	C50	Fe3	C52	C51	36.73(11)
C18	C19	C20	Fe1	-58.42(12)	C50	C51	C52	Fe3	-58.92(13)
C18	C19	C20	C16	-1.0(2)	C50	C51	C52	C48	-0.8(2)
C19	Fe1	Si1	C1	-110.77(9)	C51	Fe3	Si3	C33	-112.59(9)
C19	Fe1	Si1	C11	158.68(10)	C51	Fe3	Si3	C43	158.09(10)
C19	Fe1	Si1	C16	-21.74(10)	C51	Fe3	Si3	C48	-20.83(10)
C19	Fe1	Si1	C21	68.83(10)	C51	Fe3	Si3	C53	69.82(10)
C19	Fe1	C11	Si1	-42.33(17)	C51	Fe3	C43	Si3	-42.85(17)
C19	Fe1	C11	C12	-164.01(14)	C51	Fe3	C43	C44	-165.23(14)
C19	Fe1	C11	C15	80.61(17)	C51	Fe3	C43	C47	79.50(17)
C19	Fe1	C12	C11	147.6(3)	C51	Fe3	C44	C43	148.0(3)
C19	Fe1	C12	C13	-91.1(3)	C51	Fe3	C44	C45	-91.0(3)
C19	Fe1	C13	C12	157.52(12)	C51	Fe3	C45	C44	158.57(12)
C19	Fe1	C13	C14	-82.89(15)	C51	Fe3	C45	C46	-81.48(15)
C19	Fe1	C14	C13	128.65(11)	C51	Fe3	C46	C45	129.70(11)
C19	Fe1	C14	C15	-111.05(12)	C51	Fe3	C46	C47	-109.94(12)
C19	Fe1	C15	C11	-142.15(11)	C51	Fe3	C47	C43	-142.12(11)
C19	Fe1	C15	C14	96.90(12)	C51	Fe3	C47	C46	97.19(13)
C19	Fe1	C16	Si1	158.50(9)	C51	Fe3	C48	Si3	159.36(10)
C19	Fe1	C16	C17	-79.10(11)	C51	Fe3	C48	C49	-79.02(11)
C19	Fe1	C16	C20	36.09(11)	C51	Fe3	C48	C52	36.58(11)
C19	Fe1	C17	C16	84.14(11)	C51	Fe3	C49	C48	84.13(11)
C19	Fe1	C17	C18	-37.27(11)	C51	Fe3	C49	C50	-36.78(11)

C19	Fe1	C18	C17	119.55(15)	C51	Fe3	C50	C49	120.08(16)
C19	Fe1	C20	C16	-121.38(16)	C51	Fe3	C52	C48	-120.65(16)
C20	Fe1	Si1	C1	-125.20(9)	C52	Fe3	Si3	C33	-127.72(9)
C20	Fe1	Si1	C11	144.25(10)	C52	Fe3	Si3	C43	142.96(10)
C20	Fe1	Si1	C16	-36.16(9)	C52	Fe3	Si3	C48	-35.96(10)
C20	Fe1	Si1	C21	54.40(9)	C52	Fe3	Si3	C53	54.69(10)
C20	Fe1	C11	Si1	-36.45(9)	C52	Fe3	C43	Si3	-37.59(9)
C20	Fe1	C11	C12	-158.13(11)	C52	Fe3	C43	C44	-159.97(10)
C20	Fe1	C11	C15	86.49(11)	C52	Fe3	C43	C47	84.76(12)
C20	Fe1	C12	C11	39.46(18)	C52	Fe3	C44	C43	36.09(18)
C20	Fe1	C12	C13	160.70(14)	C52	Fe3	C44	C45	157.15(14)
C20	Fe1	C13	C12	-129.0(3)	C52	Fe3	C45	C44	-126.0(3)
C20	Fe1	C13	C14	-9.4(4)	C52	Fe3	C45	C46	-6.1(3)
C20	Fe1	C14	C13	177.27(11)	C52	Fe3	C46	C45	178.04(10)
C20	Fe1	C14	C15	-62.44(13)	C52	Fe3	C46	C47	-61.60(13)
C20	Fe1	C15	C11	-105.80(11)	C52	Fe3	C47	C43	-106.58(11)
C20	Fe1	C15	C14	133.25(11)	C52	Fe3	C47	C46	132.73(11)
C20	Fe1	C16	Si1	122.40(13)	C52	Fe3	C48	Si3	122.78(13)
C20	Fe1	C16	C17	-115.19(14)	C52	Fe3	C48	C49	-115.60(15)
C20	Fe1	C17	C16	40.51(10)	C52	Fe3	C49	C48	40.32(10)
C20	Fe1	C17	C18	-80.90(11)	C52	Fe3	C49	C50	-80.59(12)
C20	Fe1	C18	C17	82.41(11)	C52	Fe3	C50	C49	82.72(12)
C20	Fe1	C18	C19	-37.14(11)	C52	Fe3	C50	C51	-37.36(11)
C20	Fe1	C19	C18	120.20(16)	C52	Fe3	C51	C50	120.13(16)
C20	C16	C17	Fe1	-61.31(11)	C52	C48	C49	Fe3	-60.90(12)
C20	C16	C17	C18	-2.07(19)	C52	C48	C49	C50	-0.9(2)
C21	Si1	C1	Ru1	89.21(12)	C53	Si3	C33	Ru2	-90.14(12)
C21	Si1	C1	C2	-178.85(16)	C53	Si3	C33	C34	-2.46(17)
C21	Si1	C1	C5	1.09(18)	C53	Si3	C33	C37	177.97(16)
C21	Si1	C11	Fe1	116.57(8)	C53	Si3	C43	Fe3	118.74(8)
C21	Si1	C11	C12	-178.12(13)	C53	Si3	C43	C44	-175.40(14)
C21	Si1	C11	C15	51.38(17)	C53	Si3	C43	C47	53.56(16)
C21	Si1	C16	Fe1	-116.18(8)	C53	Si3	C48	Fe3	-117.53(8)
C21	Si1	C16	C17	178.68(14)	C53	Si3	C48	C49	176.77(13)
C21	Si1	C16	C20	-50.66(16)	C53	Si3	C48	C52	-52.35(17)
C22	Fe2	Si2	C6	91.94(10)	C54	Fe4	Si4	C38	90.51(10)
C22	Fe2	Si2	C27	-179.56(11)	C54	Fe4	Si4	C59	-177.14(11)
C22	Fe2	Si2	C32	-87.55(10)	C54	Fe4	Si4	C64	-87.17(11)
C22	Fe2	C23	C24	121.03(15)	C54	Fe4	C55	C56	120.69(15)
C22	Fe2	C24	C23	-37.51(11)	C54	Fe4	C56	C55	-37.77(11)
C22	Fe2	C24	C25	82.55(12)	C54	Fe4	C56	C57	82.85(12)
C22	Fe2	C25	C24	-82.20(11)	C54	Fe4	C57	C56	-81.91(12)
C22	Fe2	C25	C26	37.93(11)	C54	Fe4	C57	C58	38.20(11)
C22	Fe2	C26	C25	-120.51(15)	C54	Fe4	C58	C57	-120.43(16)
C22	Fe2	C27	Si2	0.30(7)	C54	Fe4	C59	Si4	1.98(8)
C22	Fe2	C27	C28	122.73(11)	C54	Fe4	C59	C60	122.22(11)
C22	Fe2	C27	C31	-121.72(11)	C54	Fe4	C59	C63	-122.30(11)
C22	Fe2	C28	C27	-62.89(12)	C54	Fe4	C60	C59	-63.21(12)

C22	Fe2	C28	C29	176.52(11)	C54	Fe4	C60	C61	175.72(11)
C22	Fe2	C29	C28	-6.5(2)	C54	Fe4	C61	C60	-7.9(2)
C22	Fe2	C29	C30	-126.73(15)	C54	Fe4	C61	C62	-127.62(15)
C22	Fe2	C30	C29	128.51(15)	C54	Fe4	C62	C61	127.45(15)
C22	Fe2	C30	C31	8.57(19)	C54	Fe4	C62	C63	6.8(2)
C22	Fe2	C31	C27	63.74(12)	C54	Fe4	C63	C59	63.20(12)
C22	Fe2	C31	C30	-175.33(11)	C54	Fe4	C63	C62	-176.35(11)
C22	Si2	C6	Ru1	-37.43(13)	C54	Si4	C38	Ru2	144.17(9)
C22	Si2	C6	C7	-124.76(15)	C54	Si4	C38	C39	52.93(19)
C22	Si2	C6	C10	52.77(19)	C54	Si4	C38	C42	-129.29(14)
C22	Si2	C27	Fe2	-0.32(8)	C54	Si4	C59	Fe4	-2.12(8)
C22	Si2	C27	C28	-65.88(15)	C54	Si4	C59	C60	-68.37(15)
C22	Si2	C27	C31	65.28(16)	C54	Si4	C59	C63	62.65(16)
C22	C23	C24	Fe2	57.85(12)	C54	C55	C56	Fe4	57.82(12)
C22	C23	C24	C25	-0.8(2)	C54	C55	C56	C57	-0.2(2)
C23	Fe2	Si2	C6	55.84(9)	C55	Fe4	Si4	C38	54.42(9)
C23	Fe2	Si2	C22	-36.10(9)	C55	Fe4	Si4	C54	-36.08(9)
C23	Fe2	Si2	C27	144.34(9)	C55	Fe4	Si4	C59	146.78(9)
C23	Fe2	Si2	C32	-123.64(9)	C55	Fe4	Si4	C64	-123.25(10)
C23	Fe2	C22	Si2	122.32(12)	C55	Fe4	C54	Si4	122.48(13)
C23	Fe2	C22	C26	-115.35(15)	C55	Fe4	C54	C58	-115.34(15)
C23	Fe2	C24	C25	120.06(15)	C55	Fe4	C56	C57	120.62(16)
C23	Fe2	C25	C24	-37.25(11)	C55	Fe4	C57	C56	-36.90(11)
C23	Fe2	C25	C26	82.88(11)	C55	Fe4	C57	C58	83.20(12)
C23	Fe2	C26	C22	40.28(10)	C55	Fe4	C58	C54	40.27(10)
C23	Fe2	C26	C25	-80.23(11)	C55	Fe4	C58	C57	-80.16(12)
C23	Fe2	C27	Si2	-36.17(9)	C55	Fe4	C59	Si4	-33.93(9)
C23	Fe2	C27	C28	86.26(11)	C55	Fe4	C59	C60	86.32(11)
C23	Fe2	C27	C31	-158.20(11)	C55	Fe4	C59	C63	-158.21(11)
C23	Fe2	C28	C27	-105.69(11)	C55	Fe4	C60	C59	-106.33(11)
C23	Fe2	C28	C29	133.72(11)	C55	Fe4	C60	C61	132.60(11)
C23	Fe2	C29	C28	-61.57(14)	C55	Fe4	C61	C60	-63.21(13)
C23	Fe2	C29	C30	178.22(11)	C55	Fe4	C61	C62	177.08(11)
C23	Fe2	C30	C29	-6.1(4)	C55	Fe4	C62	C61	-9.9(4)
C23	Fe2	C30	C31	-126.0(3)	C55	Fe4	C62	C63	-130.6(3)
C23	Fe2	C31	C27	38.99(18)	C55	Fe4	C63	C59	39.99(18)
C23	Fe2	C31	C30	159.92(13)	C55	Fe4	C63	C62	160.44(13)
C23	C22	C26	Fe2	-61.36(11)	C55	C54	C58	Fe4	-61.41(12)
C23	C22	C26	C25	-0.93(19)	C55	C54	C58	C57	-0.9(2)
C23	C24	C25	Fe2	57.29(12)	C55	C56	C57	Fe4	56.94(13)
C23	C24	C25	C26	0.2(2)	C55	C56	C57	C58	-0.4(2)
C24	Fe2	Si2	C6	70.42(9)	C56	Fe4	Si4	C38	69.31(9)
C24	Fe2	Si2	C22	-21.52(9)	C56	Fe4	Si4	C54	-21.20(10)
C24	Fe2	Si2	C27	158.92(10)	C56	Fe4	Si4	C59	161.66(10)
C24	Fe2	Si2	C32	-109.07(9)	C56	Fe4	Si4	C64	-108.37(10)
C24	Fe2	C22	Si2	158.57(9)	C56	Fe4	C54	Si4	158.86(9)
C24	Fe2	C22	C23	36.25(10)	C56	Fe4	C54	C55	36.37(11)
C24	Fe2	C22	C26	-79.10(11)	C56	Fe4	C54	C58	-78.97(11)

C24	Fe2	C23	C22	-121.03(15)	C56	Fe4	C55	C54	-120.69(15)
C24	Fe2	C25	C26	120.13(15)	C56	Fe4	C57	C58	120.11(16)
C24	Fe2	C26	C22	83.84(11)	C56	Fe4	C58	C54	83.72(11)
C24	Fe2	C26	C25	-36.67(11)	C56	Fe4	C58	C57	-36.71(11)
C24	Fe2	C27	Si2	-41.21(17)	C56	Fe4	C59	Si4	-36.50(18)
C24	Fe2	C27	C28	81.22(17)	C56	Fe4	C59	C60	83.75(18)
C24	Fe2	C27	C31	-163.24(14)	C56	Fe4	C59	C63	-160.78(14)
C24	Fe2	C28	C27	-141.46(11)	C56	Fe4	C60	C59	-141.64(11)
C24	Fe2	C28	C29	97.95(13)	C56	Fe4	C60	C61	97.29(13)
C24	Fe2	C29	C28	-110.29(12)	C56	Fe4	C61	C60	-112.13(12)
C24	Fe2	C29	C30	129.50(12)	C56	Fe4	C61	C62	128.17(12)
C24	Fe2	C30	C29	-82.82(15)	C56	Fe4	C62	C61	-84.67(15)
C24	Fe2	C30	C31	157.24(12)	C56	Fe4	C62	C63	154.64(12)
C24	Fe2	C31	C27	145.2(3)	C56	Fe4	C63	C59	145.5(2)
C24	Fe2	C31	C30	-93.9(3)	C56	Fe4	C63	C62	-94.0(3)
C24	C25	C26	Fe2	58.75(13)	C56	C57	C58	Fe4	59.18(13)
C24	C25	C26	C22	0.5(2)	C56	C57	C58	C54	0.8(2)
C25	Fe2	Si2	C6	113.17(9)	C57	Fe4	Si4	C38	112.00(9)
C25	Fe2	Si2	C22	21.23(10)	C57	Fe4	Si4	C54	21.50(10)
C25	Fe2	Si2	C27	-158.34(10)	C57	Fe4	Si4	C59	-155.64(10)
C25	Fe2	Si2	C32	-66.32(9)	C57	Fe4	Si4	C64	-65.67(10)
C25	Fe2	C22	Si2	-158.91(9)	C57	Fe4	C54	Si4	-158.65(10)
C25	Fe2	C22	C23	78.76(11)	C57	Fe4	C54	C55	78.87(11)
C25	Fe2	C22	C26	-36.58(11)	C57	Fe4	C54	C58	-36.47(11)
C25	Fe2	C23	C22	-84.28(11)	C57	Fe4	C55	C54	-84.24(11)
C25	Fe2	C23	C24	36.75(11)	C57	Fe4	C55	C56	36.45(11)
C25	Fe2	C24	C23	-120.06(15)	C57	Fe4	C56	C55	-120.62(16)
C25	Fe2	C26	C22	120.51(15)	C57	Fe4	C58	C54	120.43(16)
C25	Fe2	C27	Si2	42.34(17)	C57	Fe4	C59	Si4	46.33(17)
C25	Fe2	C27	C28	164.77(14)	C57	Fe4	C59	C60	166.57(13)
C25	Fe2	C27	C31	-79.69(17)	C57	Fe4	C59	C63	-77.95(17)
C25	Fe2	C28	C27	-147.1(3)	C57	Fe4	C60	C59	-145.7(3)
C25	Fe2	C28	C29	92.3(3)	C57	Fe4	C60	C61	93.2(3)
C25	Fe2	C29	C28	-158.33(12)	C57	Fe4	C61	C60	-160.65(12)
C25	Fe2	C29	C30	81.46(15)	C57	Fe4	C61	C62	79.64(15)
C25	Fe2	C30	C29	-129.91(12)	C57	Fe4	C62	C61	-131.33(12)
C25	Fe2	C30	C31	110.15(12)	C57	Fe4	C62	C63	107.98(12)
C25	Fe2	C31	C27	141.92(11)	C57	Fe4	C63	C59	141.33(11)
C25	Fe2	C31	C30	-97.14(12)	C57	Fe4	C63	C62	-98.22(12)
C26	Fe2	Si2	C6	128.20(9)	C58	Fe4	Si4	C38	127.05(9)
C26	Fe2	Si2	C22	36.26(9)	C58	Fe4	Si4	C54	36.55(9)
C26	Fe2	Si2	C27	-143.31(9)	C58	Fe4	Si4	C59	-140.59(10)
C26	Fe2	Si2	C32	-51.29(9)	C58	Fe4	Si4	C64	-50.62(10)
C26	Fe2	C22	Si2	-122.33(13)	C58	Fe4	C54	Si4	-122.17(13)
C26	Fe2	C22	C23	115.35(15)	C58	Fe4	C54	C55	115.34(15)
C26	Fe2	C23	C22	-40.52(10)	C58	Fe4	C55	C54	-40.71(11)
C26	Fe2	C23	C24	80.51(11)	C58	Fe4	C55	C56	79.99(12)
C26	Fe2	C24	C23	-82.74(11)	C58	Fe4	C56	C55	-83.37(12)

C26	Fe2	C24	C25	37.32(11)
C26	Fe2	C25	C24	-120.13(15)
C26	Fe2	C27	Si2	37.21(9)
C26	Fe2	C27	C28	159.64(11)
C26	Fe2	C27	C31	-84.82(12)
C26	Fe2	C28	C27	-36.60(18)
C26	Fe2	C28	C29	-157.20(13)
C26	Fe2	C29	C28	125.9(3)
C26	Fe2	C29	C30	5.6(3)
C26	Fe2	C30	C29	-178.19(11)
C26	Fe2	C30	C31	61.87(14)
C26	Fe2	C31	C27	106.53(11)
C26	Fe2	C31	C30	-132.54(11)
C26	C22	C23	Fe2	61.08(11)
C26	C22	C23	C24	1.07(19)
C27	Fe2	Si2	C6	-88.50(10)
C27	Fe2	Si2	C22	179.56(11)
C27	Fe2	Si2	C32	92.02(11)
C27	Fe2	C22	Si2	-0.30(7)
C27	Fe2	C22	C23	-122.63(11)
C27	Fe2	C22	C26	122.03(11)
C27	Fe2	C23	C22	62.94(11)
C27	Fe2	C23	C24	-176.03(11)
C27	Fe2	C24	C23	7.4(2)
C27	Fe2	C24	C25	127.42(15)
C27	Fe2	C25	C24	-127.61(15)
C27	Fe2	C25	C26	-7.5(2)
C27	Fe2	C26	C22	-63.52(12)
C27	Fe2	C26	C25	175.96(11)
C27	Fe2	C28	C29	-120.59(16)
C27	Fe2	C29	C28	37.82(11)
C27	Fe2	C29	C30	-82.40(12)
C27	Fe2	C30	C29	82.30(12)
C27	Fe2	C30	C31	-37.64(11)
C27	Fe2	C31	C30	120.93(15)
C27	Si2	C6	Ru1	-144.07(9)
C27	Si2	C6	C7	128.61(15)
C27	Si2	C6	C10	-53.87(19)
C27	Si2	C22	Fe2	0.33(8)
C27	Si2	C22	C23	66.16(15)
C27	Si2	C22	C26	-65.04(15)
C27	C28	C29	Fe2	-58.03(12)
C27	C28	C29	C30	0.6(2)
C28	Fe2	Si2	C6	-52.37(9)
C28	Fe2	Si2	C22	-144.31(9)
C28	Fe2	Si2	C27	36.13(9)
C28	Fe2	Si2	C32	128.14(9)
C28	Fe2	C22	Si2	36.27(9)
C58	Fe4	C56	C57	37.25(11)
C58	Fe4	C57	C56	-120.11(16)
C58	Fe4	C59	Si4	39.69(9)
C58	Fe4	C59	C60	159.94(11)
C58	Fe4	C59	C63	-84.59(12)
C58	Fe4	C60	C59	-35.33(18)
C58	Fe4	C60	C61	-156.40(13)
C58	Fe4	C61	C60	122.2(3)
C58	Fe4	C61	C62	2.5(3)
C58	Fe4	C62	C61	-179.18(11)
C58	Fe4	C62	C63	60.12(14)
C58	Fe4	C63	C59	105.96(11)
C58	Fe4	C63	C62	-133.59(11)
C58	C54	C55	Fe4	60.83(12)
C58	C54	C55	C56	0.7(2)
C59	Fe4	Si4	C38	-92.36(10)
C59	Fe4	Si4	C54	177.14(11)
C59	Fe4	Si4	C64	89.97(11)
C59	Fe4	C54	Si4	-1.98(8)
C59	Fe4	C54	C55	-124.46(11)
C59	Fe4	C54	C58	120.20(11)
C59	Fe4	C55	C54	61.27(12)
C59	Fe4	C55	C56	-178.03(11)
C59	Fe4	C56	C55	3.7(2)
C59	Fe4	C56	C57	124.35(16)
C59	Fe4	C57	C56	-129.89(15)
C59	Fe4	C57	C58	-9.8(2)
C59	Fe4	C58	C54	-65.02(12)
C59	Fe4	C58	C57	174.55(11)
C59	Fe4	C60	C61	-121.07(15)
C59	Fe4	C61	C60	37.56(11)
C59	Fe4	C61	C62	-82.15(12)
C59	Fe4	C62	C61	82.65(12)
C59	Fe4	C62	C63	-38.05(11)
C59	Fe4	C63	C62	120.45(15)
C59	Si4	C38	Ru2	37.97(13)
C59	Si4	C38	C39	-53.26(19)
C59	Si4	C38	C42	124.51(15)
C59	Si4	C54	Fe4	2.12(8)
C59	Si4	C54	C55	68.12(16)
C59	Si4	C54	C58	-63.00(15)
C59	C60	C61	Fe4	-57.70(12)
C59	C60	C61	C62	1.1(2)
C60	Fe4	Si4	C38	-54.99(9)
C60	Fe4	Si4	C54	-145.50(10)
C60	Fe4	Si4	C59	37.36(9)
C60	Fe4	Si4	C64	127.33(10)
C60	Fe4	C54	Si4	34.75(9)

C28	Fe2	C22	C23	-86.05(11)	C60	Fe4	C54	C55	-87.74(11)
C28	Fe2	C22	C26	158.60(11)	C60	Fe4	C54	C58	156.92(11)
C28	Fe2	C23	C22	105.89(11)	C60	Fe4	C55	C54	104.41(11)
C28	Fe2	C23	C24	-133.08(11)	C60	Fe4	C55	C56	-134.90(11)
C28	Fe2	C24	C23	62.10(13)	C60	Fe4	C56	C55	60.79(14)
C28	Fe2	C24	C25	-177.83(11)	C60	Fe4	C56	C57	-178.59(11)
C28	Fe2	C25	C24	7.1(3)	C60	Fe4	C57	C56	5.1(4)
C28	Fe2	C25	C26	127.2(3)	C60	Fe4	C57	C58	125.2(3)
C28	Fe2	C26	C22	-38.60(18)	C60	Fe4	C58	C54	-41.05(18)
C28	Fe2	C26	C25	-159.11(13)	C60	Fe4	C58	C57	-161.48(13)
C28	Fe2	C27	Si2	-122.43(13)	C60	Fe4	C59	Si4	-120.25(13)
C28	Fe2	C27	C31	115.54(15)	C60	Fe4	C59	C63	115.48(15)
C28	Fe2	C29	C30	-120.21(16)	C60	Fe4	C61	C62	-119.71(16)
C28	Fe2	C30	C29	37.23(11)	C60	Fe4	C62	C61	37.52(11)
C28	Fe2	C30	C31	-82.71(12)	C60	Fe4	C62	C63	-83.18(12)
C28	Fe2	C31	C27	-40.30(10)	C60	Fe4	C63	C59	-40.30(10)
C28	Fe2	C31	C30	80.63(12)	C60	Fe4	C63	C62	80.15(12)
C28	C27	C31	Fe2	61.12(11)	C60	C59	C63	Fe4	61.20(11)
C28	C27	C31	C30	1.2(2)	C60	C59	C63	C62	0.8(2)
C28	C29	C30	Fe2	-57.37(12)	C60	C61	C62	Fe4	-57.48(12)
C28	C29	C30	C31	0.2(2)	C60	C61	C62	C63	-0.5(2)
C29	Fe2	Si2	C6	-67.36(9)	C61	Fe4	Si4	C38	-68.80(9)
C29	Fe2	Si2	C22	-159.30(10)	C61	Fe4	Si4	C54	-159.31(10)
C29	Fe2	Si2	C27	21.14(10)	C61	Fe4	Si4	C59	23.55(10)
C29	Fe2	Si2	C32	113.15(9)	C61	Fe4	Si4	C64	113.52(10)
C29	Fe2	C22	Si2	40.75(18)	C61	Fe4	C54	Si4	40.17(17)
C29	Fe2	C22	C23	-81.58(17)	C61	Fe4	C54	C55	-82.31(17)
C29	Fe2	C22	C26	163.08(14)	C61	Fe4	C54	C58	162.35(14)
C29	Fe2	C23	C22	141.58(11)	C61	Fe4	C55	C54	140.85(11)
C29	Fe2	C23	C24	-97.39(12)	C61	Fe4	C55	C56	-98.46(13)
C29	Fe2	C24	C23	110.94(12)	C61	Fe4	C56	C55	110.20(12)
C29	Fe2	C24	C25	-129.00(11)	C61	Fe4	C56	C57	-129.18(12)
C29	Fe2	C25	C24	83.07(15)	C61	Fe4	C57	C56	83.61(15)
C29	Fe2	C25	C26	-156.80(12)	C61	Fe4	C57	C58	-156.28(12)
C29	Fe2	C26	C22	-146.1(3)	C61	Fe4	C58	C54	-144.4(3)
C29	Fe2	C26	C25	93.4(3)	C61	Fe4	C58	C57	95.2(3)
C29	Fe2	C27	Si2	-158.99(9)	C61	Fe4	C59	Si4	-156.54(9)
C29	Fe2	C27	C28	-36.56(11)	C61	Fe4	C59	C60	-36.30(10)
C29	Fe2	C27	C31	78.99(11)	C61	Fe4	C59	C63	79.18(11)
C29	Fe2	C28	C27	120.59(16)	C61	Fe4	C60	C59	121.07(15)
C29	Fe2	C30	C31	-119.94(16)	C61	Fe4	C62	C63	-120.70(16)
C29	Fe2	C31	C27	-84.01(11)	C61	Fe4	C63	C59	-83.95(11)
C29	Fe2	C31	C30	36.92(11)	C61	Fe4	C63	C62	36.49(11)
C29	C30	C31	Fe2	-58.86(13)	C61	C62	C63	Fe4	-58.49(13)
C29	C30	C31	C27	-0.9(2)	C61	C62	C63	C59	-0.2(2)
C30	Fe2	Si2	C6	-110.28(9)	C62	Fe4	Si4	C38	-111.72(9)
C30	Fe2	Si2	C22	157.78(10)	C62	Fe4	Si4	C54	157.77(10)
C30	Fe2	Si2	C27	-21.78(10)	C62	Fe4	Si4	C59	-19.37(10)

C30	Fe2	Si2	C32	70.23(9)
C30	Fe2	C22	Si2	-43.03(16)
C30	Fe2	C22	C23	-165.36(13)
C30	Fe2	C22	C26	79.30(17)
C30	Fe2	C23	C22	146.4(3)
C30	Fe2	C23	C24	-92.6(3)
C30	Fe2	C24	C23	159.16(12)
C30	Fe2	C24	C25	-80.78(15)
C30	Fe2	C25	C24	130.49(11)
C30	Fe2	C25	C26	-109.38(12)
C30	Fe2	C26	C22	-141.72(11)
C30	Fe2	C26	C25	97.77(13)
C30	Fe2	C27	Si2	158.33(9)
C30	Fe2	C27	C28	-79.24(11)
C30	Fe2	C27	C31	36.30(11)
C30	Fe2	C28	C27	83.85(11)
C30	Fe2	C28	C29	-36.74(11)
C30	Fe2	C29	C28	120.21(16)
C30	Fe2	C31	C27	-120.93(15)
C31	Fe2	Si2	C6	-124.84(9)
C31	Fe2	Si2	C22	143.22(9)
C31	Fe2	Si2	C27	-36.34(9)
C31	Fe2	Si2	C32	55.68(9)
C31	Fe2	C22	Si2	-37.18(9)
C31	Fe2	C22	C23	-159.51(10)
C31	Fe2	C22	C26	85.15(12)
C31	Fe2	C23	C22	36.50(17)
C31	Fe2	C23	C24	157.53(13)
C31	Fe2	C24	C23	-124.2(3)
C31	Fe2	C24	C25	-4.1(3)
C31	Fe2	C25	C24	178.69(11)
C31	Fe2	C25	C26	-61.17(14)
C31	Fe2	C26	C22	-106.16(11)
C31	Fe2	C26	C25	133.33(11)
C31	Fe2	C27	Si2	122.03(13)
C31	Fe2	C27	C28	-115.54(15)
C31	Fe2	C28	C27	40.29(11)
C31	Fe2	C28	C29	-80.31(12)
C31	Fe2	C29	C28	82.90(12)
C31	Fe2	C29	C30	-37.31(11)
C31	Fe2	C30	C29	119.94(16)
C31	C27	C28	Fe2	-61.09(12)
C31	C27	C28	C29	-1.13(19)
C32	Si2	C6	Ru1	88.18(11)
C32	Si2	C6	C7	0.85(18)
C32	Si2	C6	C10	178.38(16)
C32	Si2	C22	Fe2	117.56(8)
C32	Si2	C22	C23	-176.60(14)
C62	Fe4	Si4	C64	70.60(10)
C62	Fe4	C54	Si4	-43.47(17)
C62	Fe4	C54	C55	-165.96(14)
C62	Fe4	C54	C58	78.70(17)
C62	Fe4	C55	C54	148.7(3)
C62	Fe4	C55	C56	-90.6(3)
C62	Fe4	C56	C55	159.10(12)
C62	Fe4	C56	C57	-80.28(15)
C62	Fe4	C57	C56	130.38(12)
C62	Fe4	C57	C58	-109.51(12)
C62	Fe4	C58	C54	-142.45(11)
C62	Fe4	C58	C57	97.12(13)
C62	Fe4	C59	Si4	160.81(9)
C62	Fe4	C59	C60	-78.95(11)
C62	Fe4	C59	C63	36.53(11)
C62	Fe4	C60	C59	84.05(11)
C62	Fe4	C60	C61	-37.02(11)
C62	Fe4	C61	C60	119.71(16)
C62	Fe4	C63	C59	-120.45(15)
C63	Fe4	Si4	C38	-127.59(9)
C63	Fe4	Si4	C54	141.90(10)
C63	Fe4	Si4	C59	-35.24(9)
C63	Fe4	Si4	C64	54.73(10)
C63	Fe4	C54	Si4	-38.85(9)
C63	Fe4	C54	C55	-161.33(10)
C63	Fe4	C54	C58	83.33(12)
C63	Fe4	C55	C54	33.92(18)
C63	Fe4	C55	C56	154.61(13)
C63	Fe4	C56	C55	-126.1(3)
C63	Fe4	C56	C57	-5.4(3)
C63	Fe4	C57	C56	178.12(11)
C63	Fe4	C57	C58	-61.77(14)
C63	Fe4	C58	C54	-107.70(11)
C63	Fe4	C58	C57	131.87(12)
C63	Fe4	C59	Si4	124.28(13)
C63	Fe4	C59	C60	-115.48(15)
C63	Fe4	C60	C59	40.47(11)
C63	Fe4	C60	C61	-80.60(12)
C63	Fe4	C61	C60	82.81(12)
C63	Fe4	C61	C62	-36.90(11)
C63	Fe4	C62	C61	120.70(16)
C63	C59	C60	Fe4	-60.93(11)
C63	C59	C60	C61	-1.2(2)
C64	Si4	C38	Ru2	-90.56(12)
C64	Si4	C38	C39	178.21(16)
C64	Si4	C38	C42	-4.01(17)
C64	Si4	C54	Fe4	120.72(9)
C64	Si4	C54	C55	-173.28(15)

C32	Si2	C22	C26	52.20(16)	C64	Si4	C54	C58	55.60(17)
C32	Si2	C27	Fe2	-115.15(8)	C64	Si4	C59	Fe4	-119.29(9)
C32	Si2	C27	C28	179.29(14)	C64	Si4	C59	C60	174.46(13)
C32	Si2	C27	C31	-49.54(17)	C64	Si4	C59	C63	-54.53(17)

Table 7 Hydrogen Atom Coordinates (Å×10^4) and Isotropic Displacement Parameters (Å^2×10^3) for [Fe(η-C$_5$H$_4$)$_2$SiMe(η-C$_5$H$_4$)Ru(η-C$_5$H$_4$)SiMe(η-C$_5$H$_4$)$_2$Fe] (10).

Atom	*x*	*y*	*z*	U(eq)
H2	4846	4367	4311	22
H3	5928	3802	2793	23
H4	4718	3112	2202	24
H5	2891	3251	3348	21
H7	3232	6711	2671	23
H8	5171	6919	2099	24
H9	5975	6243	601	24
H10	4533	5630	241	23
H12	3984	5870	4584	22
H13	3402	6843	5821	25
H14	1446	6705	6573	26
H15	824	5634	5809	23
H17	3976	3820	6236	22
H18	3371	4234	7921	24
H19	1412	4045	8695	24
H20	810	3519	7489	23
H21A	1302	3981	4262	33
H21B	654	4011	5402	33
H21C	1129	2993	5345	33
H23	3367	4029	956	21
H24	2350	2987	491	23
H25	449	3072	1479	26
H26	292	4170	2553	23
H28	3449	6112	-787	22
H29	2436	5645	-1717	25
H30	538	5714	-703	26
H31	374	6225	853	26
H32A	1467	5886	3329	32
H32B	601	5689	2962	32
H32C	1183	6792	2425	32
H34	3129	11720	1915	20
H35	4979	11960	597	23
H36	6110	11289	1737	22
H37	4953	10635	3758	20
H39	4457	9410	730	21
H40	5819	8854	1578	22
H41	4912	8137	3667	23
H42	3003	8261	4095	22
H44	4152	11137	5253	22
H45	3502	10668	7302	24
H46	1562	10736	7982	25

H47	1010	11227	6360	23
H49	3871	9054	5290	23
H50	3162	8013	7355	26
H51	1225	8096	8049	27
H52	734	9181	6417	24
H53A	1467	11899	3667	34
H53B	800	10893	4612	34
H53C	1445	10900	3454	34
H55	3277	8831	181	22
H56	2347	9285	-1144	25
H57	438	9197	-70	27
H58	174	8679	1923	25
H60	3515	10916	212	22
H61	2696	11952	-1166	25
H62	769	11817	-123	26
H63	390	10703	1886	25
H64A	1054	7971	4011	39
H64B	487	8972	3683	39
H64C	1348	8945	4144	39

Experimental

X-ray diffraction experiments on [Fe(η-C_5H_4)$_2$SiMe(η-C_5H_4)Ru(η-C_5H_4)SiMe(η-C_5H_4)$_2$Fe] (**10**) were carried out at 100(2) K on a Bruker APEX II diffractometer using MoKα radiation (λ=0.71073Å).Data collection was performed using a CCD area detector from a single crystal mounted on a glass fiber. Intensities were integrated from several series of exposures. Absorption corrections were based on equivalent reflections using SADABS. The structures were solved using SHELXS and refined against all F_o^2 data with hydrogen atoms attached to carbon atoms riding in calculated positions using SHELXL.

1. O. V. Dolomanov, L. J. Bourhis, R. J. Gildea, J. A. K. Howard and H. Puschmann, OLEX2: a complete structure solution, refinement and analysis program. J. Appl. Cryst. (2009). 42, 339-341.
2. XS, G.M. Sheldrick, Acta Cryst. (2008). A64, 112-122
3. XL, G.M. Sheldrick, Acta Cryst. (2008). A64, 112-122

Crystal structure determination of [Fe(η-C_5H_4)$_2$SiMe(η-C_5H_4)Ru(η-C_5H_4)SiMe(η-C_5H_4)$_2$Fe] (10).

Crystal Data for $C_{32}H_{30}Fe_2RuSi_2$ (M =683.51): triclinic, space group P-1 (no. 2), a = 14.3465(4) Å, b = 14.4684(4) Å, c = 14.5968(4) Å, α = 66.4400(10)°, β = 68.640(2)°, γ = 86.120(2)°, V = 2575.74(12) Å^3, Z = 4, T = 100(2) K, μ(MoKα) = 1.806 mm^{-1}, $Dcalc$ = 1.763 g/mm^3, 112179 reflections measured ($3.06 \leq 2\Theta \leq 55.18$), 11932 unique ($R_{int}$ = 0.0322) which were used in all calculations. The final R_1 was 0.0220 (>2sigma(I)) and wR_2 was 0.0526 (all data).

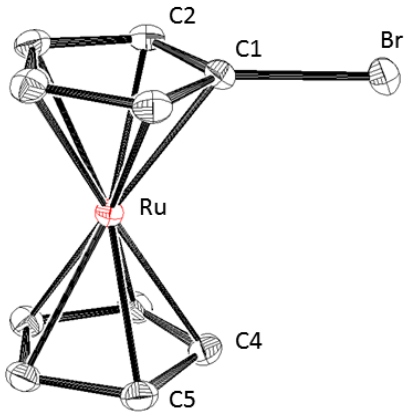

Figure S3. Molecular structure of for [(η-C_5H_5)Ru(η-C_5H_4Br)] (**13**) with thermal ellipsoids displayed at 50% (hydrogen atoms have been omitted for clarity).

Table S3. Crystallographic data and tables for [(η-C_5H_5)Ru(η-C_5H_4Br)] (**13**, CCDC 956490).

Identification code	RcBr
Empirical formula	$C_{10}H_9BrRu$
Formula weight	310.15
Temperature/K	100(2)
Crystal system	monoclinic
Space group	$P2_1/m$
a/Å	7.1295(3)
b/Å	8.9916(4)
c/Å	7.2907(3)
α/°	90.00
β/°	109.503(2)
γ/°	90.00
Volume/Å^3	440.56(3)
Z	2
ρ_{calc}mg/mm^3	2.338
m/mm^{-1}	6.247
F(000)	296.0
Crystal size/mm^3	0.28 × 0.15 × 0.1
2Θ range for data collection	5.92 to 55.1°
Index ranges	$-9 \le h \le 9$, $-11 \le k \le 11$, $-9 \le l \le 9$
Reflections collected	7385
Independent reflections	1084[R(int) = 0.0305]
Data/restraints/parameters	1084/0/61
Goodness-of-fit on F^2	1.097
Final R indexes [I>=2σ (I)]	R_1 = 0.0165, wR_2 = 0.0349
Final R indexes [all data]	R_1 = 0.0188, wR_2 = 0.0353

Largest diff. peak/hole / e Å^{-3} 0.42/-0.63

Table S3.2 Fractional Atomic Coordinates (×10^4) and Equivalent Isotropic Displacement Parameters (Å^2×10^3) for [(η-C$_5$H$_5$)Ru(η-C$_5$H$_4$Br)] (13). U$_{eq}$ is defined as 1/3 of of the trace of the orthogonalised U$_{IJ}$ tensor.

Atom	*x*	*y*	*z*	U(eq)
Br1	6290.3(4)	2500	4516.3(4)	17.47(8)
C1	3542(4)	2500	3049(4)	13.8(6)
C2	2344(3)	1198(2)	2458(3)	15.3(4)
C3	357(3)	1707(2)	1486(3)	16.9(4)
C4	4640(4)	2500	-1387(4)	19.0(6)
C5	3433(3)	1215(3)	-2040(3)	18.3(4)
C6	1454(3)	1704(2)	-3096(3)	17.3(4)
Ru1	2308.0(3)	2500	-82.5(3)	11.38(7)

Table S3.3 Anisotropic Displacement Parameters (Å^2×10^3) for [(η-C$_5$H$_5$)Ru(η-C$_5$H$_4$Br)] (13). The Anisotropic displacement factor exponent takes the form: -2π^2[h^{2}a*^{2}U$_{11}$+...+2hka×b×U$_{12}$]

Atom	U$_{11}$	U$_{22}$	U$_{33}$	U$_{23}$	U$_{13}$	U$_{12}$
Br1	15.43(16)	18.99(17)	15.57(15)	0	1.96(12)	0
C1	14.7(14)	15.4(15)	10.5(13)	0	3.3(11)	0
C2	20.1(10)	13.4(11)	14.6(9)	2.1(8)	8.7(8)	-0.4(8)
C3	18.5(10)	17.7(11)	16.8(10)	2.0(8)	8.9(8)	-2.3(9)
C4	16.0(14)	26.6(17)	16.7(14)	0	8.6(12)	0
C5	20.8(10)	20.8(12)	14.6(10)	-0.2(8)	7.6(8)	4.9(9)
C6	19.6(10)	19.5(11)	12.9(9)	-3.2(8)	5.5(8)	-1.7(9)
Ru1	11.77(12)	10.91(12)	11.50(11)	0	3.93(9)	0

Table S3.4 Bond Lengths for [(η-C$_5$H$_5$)Ru(η-C$_5$H$_4$Br)] (13).

Atom	Atom	Length/Å	Atom	Atom	Length/Å
Br1	C1	1.893(3)	C4	Ru1	2.174(3)
C1	C2	1.428(3)	C5	C6	1.433(3)
C1	C2^1	1.428(3)	C5	Ru1	2.1860(19)
C1	Ru1	2.155(3)	C6	C6^1	1.431(4)
C2	C3	1.431(3)	C6	Ru1	2.1948(19)
C2	Ru1	2.1841(19)	Ru1	C2^1	2.1841(19)
C3	C3^1	1.426(4)	Ru1	C3^1	2.1936(19)
C3	Ru1	2.1936(19)	Ru1	C5^1	2.1860(19)
C4	C5	1.424(3)	Ru1	C6^1	2.1948(19)
C4	C5^1	1.424(3)			

^{1}+X,1/2-Y,+Z

Table S3.5 Bond Angles for [(η-C$_5$H$_5$)Ru(η-C$_5$H$_4$Br)] (13).

Atom	Atom	Atom	Angle/°	Atom	Atom	Atom	Angle/°
Br1	C1	Ru1	125.31(14)	C2	Ru1	C3^1	64.04(7)
C2	C1	Br1	124.90(12)	C2^1	Ru1	C3	64.04(7)
C2^1	C1	Br1	124.90(12)	C2^1	Ru1	C5^1	111.56(8)
C2^1	C1	C2	110.1(2)	C2	Ru1	C5^1	159.04(8)

C2	C1	Ru1	71.89(13)	C2	Ru1	C5	111.56(8)
C2[1]	C1	Ru1	71.89(13)	C2[1]	Ru1	C5	159.04(8)
C1	C2	C3	106.31(19)	C2	Ru1	C6	126.52(8)
C1	C2	Ru1	69.69(13)	C2[1]	Ru1	C6[1]	126.52(8)
C3	C2	Ru1	71.28(11)	C2[1]	Ru1	C6	160.84(8)
C2	C3	Ru1	70.56(11)	C2	Ru1	C6[1]	160.84(8)
C3[1]	C3	C2	108.63(12)	C3	Ru1	C3[1]	37.95(11)
C3[1]	C3	Ru1	71.03(5)	C3[1]	Ru1	C6[1]	113.80(8)
C5[1]	C4	C5	108.4(3)	C3	Ru1	C6[1]	127.99(8)
C5	C4	Ru1	71.40(13)	C3[1]	Ru1	C6	127.99(8)
C5[1]	C4	Ru1	71.40(13)	C3	Ru1	C6	113.80(8)
C4	C5	C6	107.9(2)	C4	Ru1	C2[1]	125.24(8)
C4	C5	Ru1	70.48(14)	C4	Ru1	C2	125.23(8)
C6	C5	Ru1	71.24(11)	C4	Ru1	C3	159.84(6)
C5	C6	Ru1	70.58(11)	C4	Ru1	C3[1]	159.84(6)
C6[1]	C6	C5	107.86(13)	C4	Ru1	C5	38.12(7)
C6[1]	C6	Ru1	70.97(5)	C4	Ru1	C5[1]	38.12(7)
C1	Ru1	C2[1]	38.42(6)	C4	Ru1	C6	63.83(9)
C1	Ru1	C2	38.42(6)	C4	Ru1	C6[1]	63.83(9)
C1	Ru1	C3[1]	63.48(9)	C5	Ru1	C3	127.10(8)
C1	Ru1	C3	63.48(9)	C5[1]	Ru1	C3[1]	127.10(8)
C1	Ru1	C4	111.24(11)	C5	Ru1	C3[1]	161.22(8)
C1	Ru1	C5	125.63(8)	C5[1]	Ru1	C3	161.22(8)
C1	Ru1	C5[1]	125.63(8)	C5[1]	Ru1	C5	63.79(11)
C1	Ru1	C6[1]	159.91(6)	C5	Ru1	C6[1]	63.80(7)
C1	Ru1	C6	159.91(6)	C5[1]	Ru1	C6	63.80(7)
C2	Ru1	C2[1]	64.81(11)	C5	Ru1	C6	38.17(7)
C2[1]	Ru1	C3[1]	38.16(7)	C5[1]	Ru1	C6[1]	38.17(7)
C2	Ru1	C3	38.16(7)	C6	Ru1	C6[1]	38.06(11)

[1]+X,1/2-Y,+Z

Table S3.6 Torsion Angles for [(η-C_5H_5)Ru(η-C_5H_4Br)] (13).

A	B	C	D	Angle/°	A	B	C	D	Angle/°
Br1	C1	C2	C3	176.81(16)	C3[1]	C3	Ru1	C5	-163.85(9)
Br1	C1	C2	Ru1	-120.9(2)	C3[1]	C3	Ru1	C6	-121.90(7)
Br1	C1	Ru1	C2	120.40(12)	C3[1]	C3	Ru1	C6[1]	-80.27(8)
Br1	C1	Ru1	C2[1]	-120.40(12)	C4	C5	C6	C6[1]	0.25(18)
Br1	C1	Ru1	C3	158.69(6)	C4	C5	C6	Ru1	-61.27(16)
Br1	C1	Ru1	C3[1]	-158.69(6)	C4	C5	Ru1	C1	-78.97(16)
Br1	C1	Ru1	C4	0.0	C4	C5	Ru1	C2	-120.09(14)
Br1	C1	Ru1	C5	40.55(8)	C4	C5	Ru1	C2[1]	-44.4(3)
Br1	C1	Ru1	C5[1]	-40.55(8)	C4	C5	Ru1	C3[1]	167.4(2)
Br1	C1	Ru1	C6	71.7(2)	C4	C5	Ru1	C3	-160.53(13)
Br1	C1	Ru1	C6[1]	-71.7(2)	C4	C5	Ru1	C5[1]	37.52(15)
C1	C2	C3	C3[1]	0.13(17)	C4	C5	Ru1	C6	117.72(19)
C1	C2	C3	Ru1	61.25(15)	C4	C5	Ru1	C6[1]	80.27(15)
C1	C2	Ru1	C2[1]	-36.83(14)	C5[1]	C4	C5	C6	-0.4(3)

C1	C2	Ru1	C3	-116.20(18)	C5[1]	C4	C5	Ru1	-62.17(18)
C1	C2	Ru1	C3[1]	-79.32(14)	C5[1]	C4	Ru1	C1	-121.14(12)
C1	C2	Ru1	C4	79.81(15)	C5	C4	Ru1	C1	121.14(12)
C1	C2	Ru1	C5	120.65(13)	C5	C4	Ru1	C2[1]	162.14(12)
C1	C2	Ru1	C5[1]	47.9(3)	C5	C4	Ru1	C2	80.13(17)
C1	C2	Ru1	C6	161.25(13)	C5[1]	C4	Ru1	C2[1]	-80.13(17)
C1	C2	Ru1	C6[1]	-167.4(2)	C5[1]	C4	Ru1	C2	-162.14(12)
C2[1]	C1	C2	C3	-0.2(3)	C5[1]	C4	Ru1	C3[1]	-50.5(3)
C2[1]	C1	C2	Ru1	62.09(18)	C5	C4	Ru1	C3	50.5(3)
C2	C1	Ru1	C2[1]	119.2(2)	C5[1]	C4	Ru1	C3	168.2(2)
C2[1]	C1	Ru1	C2	-119.2(2)	C5	C4	Ru1	C3[1]	-168.2(2)
C2	C1	Ru1	C3	38.29(13)	C5[1]	C4	Ru1	C5	117.7(2)
C2[1]	C1	Ru1	C3	-80.90(14)	C5	C4	Ru1	C5[1]	-117.7(2)
C2	C1	Ru1	C3[1]	80.90(14)	C5[1]	C4	Ru1	C6[1]	37.56(13)
C2[1]	C1	Ru1	C3[1]	-38.29(13)	C5	C4	Ru1	C6[1]	-80.16(15)
C2	C1	Ru1	C4	-120.40(12)	C5[1]	C4	Ru1	C6	80.16(15)
C2[1]	C1	Ru1	C4	120.40(12)	C5	C4	Ru1	C6	-37.56(13)
C2	C1	Ru1	C5[1]	-160.95(12)	C5	C6	Ru1	C1	-42.8(3)
C2[1]	C1	Ru1	C5[1]	79.86(16)	C5	C6	Ru1	C2[1]	160.5(2)
C2[1]	C1	Ru1	C5	160.95(12)	C5	C6	Ru1	C2	-78.34(15)
C2	C1	Ru1	C5	-79.86(16)	C5	C6	Ru1	C3[1]	-161.86(12)
C2	C1	Ru1	C6[1]	167.9(2)	C5	C6	Ru1	C3	-120.38(13)
C2[1]	C1	Ru1	C6[1]	48.8(3)	C5	C6	Ru1	C4	37.51(11)
C2	C1	Ru1	C6	-48.8(3)	C5	C6	Ru1	C5[1]	80.19(17)
C2[1]	C1	Ru1	C6	-167.9(2)	C5	C6	Ru1	C6[1]	117.75(12)
C2	C3	Ru1	C1	-38.54(11)	C6	C5	Ru1	C1	163.31(11)
C2	C3	Ru1	C2[1]	-81.57(16)	C6	C5	Ru1	C2[1]	-162.16(18)
C2	C3	Ru1	C3[1]	-118.66(11)	C6	C5	Ru1	C2	122.19(12)
C2	C3	Ru1	C4	40.8(3)	C6	C5	Ru1	C3[1]	49.7(3)
C2	C3	Ru1	C5[1]	-162.2(2)	C6	C5	Ru1	C3	81.76(15)
C2	C3	Ru1	C5	77.49(14)	C6	C5	Ru1	C4	-117.72(19)
C2	C3	Ru1	C6	119.44(12)	C6	C5	Ru1	C5[1]	-80.20(13)
C2	C3	Ru1	C6[1]	161.07(12)	C6	C5	Ru1	C6[1]	-37.45(13)
C3	C2	Ru1	C1	116.20(18)	C6[1]	C6	Ru1	C1	-160.6(3)
C3	C2	Ru1	C2[1]	79.37(12)	C6[1]	C6	Ru1	C2[1]	42.7(2)
C3	C2	Ru1	C3[1]	36.88(13)	C6[1]	C6	Ru1	C2	163.91(9)
C3	C2	Ru1	C4	-163.99(11)	C6[1]	C6	Ru1	C3	121.87(7)
C3	C2	Ru1	C5[1]	164.06(19)	C6[1]	C6	Ru1	C3[1]	80.38(8)
C3	C2	Ru1	C5	-123.15(12)	C6[1]	C6	Ru1	C4	-80.24(5)
C3	C2	Ru1	C6[1]	-51.2(3)	C6[1]	C6	Ru1	C5[1]	-37.56(7)
C3	C2	Ru1	C6	-82.55(14)	C6[1]	C6	Ru1	C5	-117.75(12)
C3[1]	C3	Ru1	C1	80.12(5)	Ru1	C1	C2	C3	-62.30(13)
C3[1]	C3	Ru1	C2[1]	37.09(7)	Ru1	C2	C3	C3[1]	-61.13(5)
C3[1]	C3	Ru1	C2	118.66(11)	Ru1	C4	C5	C6	61.76(14)
C3[1]	C3	Ru1	C4	159.5(3)	Ru1	C5	C6	C6[1]	61.52(5)
C3[1]	C3	Ru1	C5[1]	-43.6(2)					

[1]+X,1/2-Y,+Z

Table S3.7 Hydrogen Atom Coordinates (Å×10^4) and Isotropic Displacement Parameters (Å^2×10^3) for [(η-C_5H_5)Ru(η-C_5H_4Br)] (13).

Atom	*x*	*y*	*z*	U(eq)
H2	2789	143	2745	18
H3	-839	1058	933	20
H4	6104	2500	-662	23
H5	3899	160	-1849	22
H6	293	1050	-3766	21

Experimental

X-ray diffraction experiments on [(η-C_5H_5)Ru(η-C_5H_4Br)] (**13**) were carried out at 100(2) K on a Bruker APEX II diffractometer using MoKα radiation (λ=0.71073Å).Data collection was performed using a CCD area detector from a single crystal mounted on a glass fiber. Intensities were integrated from several series of exposures. Absorption corrections were based on equivalent reflections using SADABS. The structures were solved using SHELXS and refined against all F_o^2 data with hydrogen atoms attached to carbon atoms riding in calculated positions using SHELXL.

1. O. V. Dolomanov, L. J. Bourhis, R. J. Gildea, J. A. K. Howard and H. Puschmann, OLEX2: a complete structure solution, refinement and analysis program. J. Appl. Cryst. (2009). 42, 339-341.
2. XS, G.M. Sheldrick, Acta Cryst. (2008). A64, 112-122
3. XL, G.M. Sheldrick, Acta Cryst. (2008). A64, 112-122

Crystal structure determination of [(η-C_5H_5)Ru(η-C_5H_4Br)] (13).

Crystal Data for $C_{10}H_9BrRu$ (M =310.15): monoclinic, space group $P2_1/m$ (no. 11), a = 7.1295(3) Å, b = 8.9916(4) Å, c = 7.2907(3) Å, β = 109.503(2)°, V = 440.56(3) Å^3, Z = 2, T = 100(2) K, μ(MoKα) = 6.247 mm^{-1}, *Dcalc* = 2.338 g/mm^3, 7385 reflections measured (5.92 ≤ 2Θ ≤ 55.1), 1084 unique (R_{int} = 0.0305) which were used in all calculations. The final R_1 was 0.0165 (>2sigma(I)) and wR_2 was 0.0353 (all data).