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Table S1: Positional Parameters and Their Estimated Standard Deviations 2

Atom	x	y	z	U(eq)
I1	0.5201(2)	0.4109(1)	0.6225(1)	0.0512(5)
I2	0.8023(2)	0.2142(2)	0.6725(1)	0.0641(6)
I3	0.5239(2)	0.0846(1)	0.6228(1)	0.0559(5)
Rh1	0.5334(2)	0.2409(2)	0.7689(1)	0.0502(6)
Rh2	0.7027(2)	0.2349(2)	0.5104(1)	0.0399(5)
Rh3	1.2429(2)	0.2753(2)	0.3174(1)	0.0508(6)
C11	0.105(1)	0.123(1)	0.774(1)	0.235(6)
C12	0.107(1)	0.365(1)	0.752(1)	0.289(7)
C1	0.030(3)	0.257(3)	0.821(3)	0.15(1)*
C10	0.474(2)	0.142(2)	0.913(2)	0.072(8)*
C11	0.363(2)	0.192(2)	0.889(2)	0.086(9)*
C12	0.370(2)	0.319(2)	0.882(2)	0.083(9)*
C13	0.480(2)	0.345(2)	0.908(2)	0.080(8)*
C14	0.662(3)	0.224(3)	0.974(3)	0.13(1)*
C15	0.716(4)	0.116(4)	0.987(3)	0.17(2)*
C16	0.820(4)	0.112(4)	1.049(3)	0.20(2)*
C17	0.862(4)	0.197(4)	1.088(3)	0.19(2)*
C18	0.816(4)	0.307(4)	1.075(3)	0.20(2)*
C19	0.701(4)	0.323(4)	1.020(3)	0.18(2)*
C20	0.795(2)	0.341(2)	0.377(1)	0.040(5)*
C21	0.698(2)	0.279(2)	0.359(1)	0.047(6)*
C22	0.735(2)	0.151(2)	0.364(2)	0.052(6)*
C23	0.850(2)	0.125(2)	0.390(2)	0.052(6)*
C24	1.031(2)	0.275(2)	0.423(1)	0.045(6)*
C25	1.068(2)	0.391(2)	0.418(1)	0.047(6)*
C26	1.181(2)	0.415(2)	0.440(1)	0.038(5)*
C27	1.256(2)	0.326(2)	0.473(2)	0.052(6)*
C28	1.224(2)	0.206(2)	0.479(2)	0.053(6)*
C29	1.114(2)	0.182(2)	0.454(1)	0.042(6)*
C30	1.320(2)	0.153(2)	0.196(2)	0.088(9)*
C31	1.423(2)	0.205(2)	0.208(2)	0.075(8)*
C32	1.404(2)	0.325(2)	0.194(2)	0.068(7)*
C33	1.293(3)	0.357(3)	0.166(2)	0.11(1)*
C34	1.094(4)	0.261(4)	0.131(3)	0.27(3)*
B10	0.553(3)	0.230(3)	0.928(2)	0.062(8)*
B20	0.906(2)	0.246(2)	0.398(2)	0.035(6)*
B30	1.231(3)	0.250(3)	0.163(2)	0.09(1)*

Starred atoms were refined isotropically.

Anisotropically refined atoms are given in the form of the isotropic equivalent displacement parameter defined as one third of the trace of the orthogonalized U tensor

Atom	x	y	z	U(eq)
H1a	0.037	0.259	0.891	0.1891
H1b	-0.064	0.263	0.826	0.1891
H10	0.507	0.056	0.905	0.0911
H11	0.295	0.146	0.881	0.1096
H12	0.297	0.373	0.869	0.1036
H13	0.501	0.427	0.902	0.1017
H15	0.699	0.046	0.955	0.2294
H16	0.862	0.031	1.058	0.2592
H17	0.941	0.192	1.111	0.2416
H18	0.827	0.379	1.107	0.2560
H19	0.661	0.403	1.007	0.2546
H20	0.792	0.428	0.380	0.0508
H21	0.620	0.318	0.343	0.0594
H22	0.684	0.089	0.353	0.0655
H23	0.889	0.045	0.404	0.0664
H25	1.017	0.457	0.393	0.0603
H26	1.198	0.499	0.438	0.0503
H27	1.331	0.345	0.493	0.0690
H28	1.275	0.138	0.501	0.0711
H29	1.099	0.099	0.447	0.0552
H30	1.308	0.068	0.208	0.1171
H31	1.498	0.162	0.226	0.0976
H32	1.463	0.382	0.201	0.0880
H33	1.267	0.440	0.149	0.1370
H34a	1.035	0.203	0.127	0.3154
H34b	1.125	0.293	0.061	0.3154
H34c	1.034	0.322	0.178	0.3154

Hydrogen atoms were not refined but included isotropically in structure factor calculations.

<u>Atom 1</u>	<u>Atom 2</u>	<u>Distance</u>	<u>Atom 1</u>	<u>Atom 2</u>	<u>Distance</u>
I1	Rh1	2.728(2)	Rh3	C32	2.12(2)
I1	Rh2	2.734(2)	Rh3	C33	2.16(3)
I2	Rh1	2.749(2)	Rh3	B30	2.19(3)
I2	Rh2	2.730(2)	C11	C1	1.67(3)
I3	Rh1	2.748(2)	C12	C1	1.65(3)
I3	Rh2	2.766(2)	C10	C11	1.38(3)
Rh1	C10	2.17(2)	C10	B10	1.44(3)
Rh1	C11	2.15(2)	C11	C12	1.43(3)
Rh1	C12	2.06(2)	C12	C13	1.40(3)
Rh1	C13	2.15(2)	C13	B10	1.48(3)
Rh1	B10	2.24(3)	C14	C15	1.31(4)
Rh2	C20	2.17(2)	C14	C19	1.47(4)
Rh2	C21	2.11(2)	C14	B10	1.48(4)
Rh2	C22	2.15(2)	C15	C16	1.60(4)
Rh2	C23	2.18(2)	C16	C17	1.31(5)
Rh2	B20	2.25(2)	C17	C18	1.30(5)
Rh3	C24	2.28(2)	C18	C19	1.62(5)
Rh3	C25	2.23(2)	C20	C21	1.41(2)
Rh3	C26	2.23(2)	C20	B20	1.58(3)
Rh3	C27	2.27(2)	C21	C22	1.45(2)
Rh3	C28	2.26(2)	C22	C23	1.38(2)
Rh3	C29	2.25(2)	C23	B20	1.58(3)
Rh3	C30	2.09(2)	C24	C25	1.41(2)
Rh3	C31	2.11(2)	C24	C29	1.42(2)
C24	B20	1.57(2)	C30	B30	1.51(3)
C25	C26	1.39(2)	C31	C32	1.36(3)
C26	C27	1.35(2)	C32	C33	1.36(3)
C27	C28	1.42(2)	C33	B30	1.46(4)
C28	C29	1.39(2)	C34	B30	1.65(4)
C30	C31	1.37(3)			

 All C-H distances have been idealized to 0.98 Å.
 Numbers in parentheses are estimated standard deviations in
 the least significant digits.

Atom 1	Atom 2	Atom 3	Angle	Atom 1	Atom 2	Atom 3	Angle
Rh1	I1	Rh2	77.46(6)	C10	Rh1	B10	38.2(8)
Rh1	I2	Rh2	77.17(6)	C11	Rh1	C12	39.7(8)
Rh1	I3	Rh2	76.58(6)	C11	Rh1	C13	65.4(9)
I1	Rh1	I2	86.04(6)	C11	Rh1	B10	65(1)
I1	Rh1	I3	84.13(7)	C12	Rh1	C13	38.9(7)
I1	Rh1	C10	159.0(6)	C12	Rh1	B10	66(1)
I1	Rh1	C11	123.4(7)	C13	Rh1	B10	39.3(8)
I1	Rh1	C12	95.2(7)	I1	Rh2	I2	86.29(6)
I1	Rh1	C13	102.8(6)	I1	Rh2	I3	83.68(5)
I1	Rh1	B10	138.4(7)	I1	Rh2	C20	98.5(5)
I2	Rh1	I3	85.76(6)	I1	Rh2	C21	101.1(5)
I2	Rh1	C10	113.5(6)	I1	Rh2	C22	134.2(5)
I2	Rh1	C11	150.5(7)	I1	Rh2	C23	166.1(5)
I2	Rh1	C12	149.9(7)	I1	Rh2	B20	130.2(5)
I2	Rh1	C13	111.5(6)	I2	Rh2	I3	85.76(6)
I2	Rh1	B10	93.7(7)	I2	Rh2	C20	119.2(5)
I3	Rh1	C10	104.0(6)	I2	Rh2	C21	157.0(5)
I3	Rh1	C11	96.5(7)	I2	Rh2	C22	139.5(5)
I3	Rh1	C12	124.3(7)	I2	Rh2	C23	103.9(5)
I3	Rh1	C13	161.6(6)	I2	Rh2	B20	91.2(5)
I3	Rh1	B10	137.4(7)	I3	Rh2	C20	155.0(5)
C10	Rh1	C11	37.4(7)	I3	Rh2	C21	116.5(5)
C10	Rh1	C12	64.1(9)	I3	Rh2	C22	94.8(5)
C10	Rh1	C13	64.0(9)	I3	Rh2	C23	106.3(5)
I3	Rh2	B20	145.7(5)	C25	Rh3	C29	65.1(7)
C20	Rh2	C21	38.5(6)	C25	Rh3	C30	148.7(8)
C20	Rh2	C22	65.7(7)	C25	Rh3	C31	166.3(8)
C20	Rh2	C23	68.3(7)	C25	Rh3	C32	128.9(8)
C20	Rh2	B20	41.8(6)	C25	Rh3	C33	106.6(9)
C21	Rh2	C22	39.6(6)	C25	Rh3	B30	113(1)
C21	Rh2	C23	65.9(7)	C26	Rh3	C27	35.0(6)
C21	Rh2	B20	67.4(7)	C26	Rh3	C28	64.8(7)
C22	Rh2	C23	37.2(6)	C26	Rh3	C29	77.3(6)
C22	Rh2	B20	66.2(7)	C26	Rh3	C30	173.6(8)
C23	Rh2	B20	41.6(7)	C26	Rh3	C31	135.8(8)
C24	Rh3	C25	36.5(6)	C26	Rh3	C32	109.6(7)
C24	Rh3	C26	66.2(6)	C26	Rh3	C33	110.5(9)
C24	Rh3	C27	77.0(7)	C26	Rh3	B30	139(1)
C24	Rh3	C28	65.2(7)	C27	Rh3	C28	36.6(6)
C24	Rh3	C29	36.6(6)	C27	Rh3	C29	65.2(7)
C24	Rh3	C30	120.2(8)	C27	Rh3	C30	143.9(9)
C24	Rh3	C31	156.4(8)	C27	Rh3	C31	115.9(8)
C24	Rh3	C32	159.1(8)	C27	Rh3	C32	111.9(8)
C24	Rh3	C33	123.3(9)	C27	Rh3	C33	134.3(9)
C24	Rh3	B30	104(1)	C27	Rh3	B30	173(1)
C25	Rh3	C26	36.4(5)	C28	Rh3	C29	35.9(6)
C25	Rh3	C27	63.8(7)	C28	Rh3	C30	117.6(9)
C25	Rh3	C28	75.9(7)	C28	Rh3	C31	112.3(8)
C28	Rh3	C32	133.2(8)	C10	C11	C12	106.(2)
C28	Rh3	C33	168.8(9)	Rh1	C12	C11	73.(1)
C28	Rh3	B30	150(1)	Rh1	C12	C13	74.(1)

Atom 1	Atom 2	Atom 3	Angle	Atom 1	Atom 2	Atom 3	Angle
C29	Rh3	C30	108.2(9)	C11	C12	C13	110.(2)
C29	Rh3	C31	128.1(8)	Rh1	C13	C12	67.(1)
C29	Rh3	C32	164.2(8)	Rh1	C13	B10	74.(1)
C29	Rh3	C33	155.1(9)	C12	C13	B10	108.(2)
C29	Rh3	B30	120.0(9)	C15	C14	C19	117.(4)
C30	Rh3	C31	38.1(7)	C15	C14	B10	115.(4)
C30	Rh3	C32	64.2(9)	C19	C14	B10	127.(4)
C30	Rh3	C33	66.(1)	C14	C15	C16	114.(4)
C30	Rh3	B30	41(1)	C15	C16	C17	132.(4)
C31	Rh3	C32	37.5(7)	C16	C17	C18	118.(5)
C31	Rh3	C33	63(1)	C17	C18	C19	116.(4)
C31	Rh3	B30	65.(1)	C14	C19	C18	124.(4)
C32	Rh3	C33	37.0(7)	Rh2	C20	C21	69.(1)
C32	Rh3	B30	64.(1)	Rh2	C20	B20	71.9(9)
C33	Rh3	B30	39.3(9)	C21	C20	B20	108.(2)
C11	C1	C12	111.(2)	Rh2	C21	C20	73.(1)
Rh1	C10	C11	71.(1)	Rh2	C21	C22	72.(1)
Rh1	C10	B10	74.(1)	C20	C21	C22	110.(2)
C11	C10	B10	113.(2)	Rh2	C22	C21	69.(1)
Rh1	C11	C10	72.(1)	Rh2	C22	C23	72.(1)
Rh1	C11	C12	67.(1)	C21	C22	C23	111.(2)
Rh2	C23	C22	70.(1)	Rh3	C30	C31	72.(1)
Rh2	C23	B20	72.(1)	Rh3	C30	B30	73.(2)
C22	C23	B20	109.(2)	C31	C30	B30	107.(2)
Rh3	C24	C25	70.(1)	Rh3	C31	C30	70.(1)
Rh3	C24	C29	71.(1)	Rh3	C31	C32	71.(1)
Rh3	C24	B20	129.(1)	C30	C31	C32	110.(2)
C25	C24	C29	116.(2)	Rh3	C32	C31	71.(1)
C25	C24	B20	123.(2)	Rh3	C32	C33	73.(2)
C29	C24	B20	120.(2)	C31	C32	C33	111.(2)
Rh3	C25	C24	73.(1)	Rh3	C33	C32	70.(2)
Rh3	C25	C26	71.(1)	Rh3	C33	B30	71.(2)
C24	C25	C26	122.(2)	C32	C33	B30	109.(3)
Rh3	C26	C25	72.(1)	Rh1	B10	C10	68.(1)
Rh3	C26	C27	74.(1)	Rh1	B10	C13	67.(1)
C25	C26	C27	120.(2)	Rh1	B10	C14	137.(2)
Rh3	C27	C26	71.(1)	C10	B10	C13	103.(2)
Rh3	C27	C28	71.(1)	C10	B10	C14	133.(3)
C26	C27	C28	120.(2)	C13	B10	C14	123.(3)
Rh3	C28	C27	72.(1)	Rh2	B20	C20	66.2(9)
Rh3	C28	C29	72.(1)	Rh2	B20	C23	66.7(9)
C27	C28	C29	120.(2)	Rh2	B20	C24	127.(1)
Rh3	C29	C24	73.(1)	C20	B20	C23	101.(2)
Rh3	C29	C28	72.(1)	C20	B20	C24	126.(2)
C24	C29	C28	121.(2)	C23	B20	C24	133.(2)
Rh3	B30	C30	66.(2)	C30	B30	C33	103.(3)
Rh3	B30	C33	69.(2)	C30	B30	C34	137.(3)
Rh3	B30	C34	125.(2)	C33	B30	C34	120.(3)

Numbers in parentheses are estimated standard deviations in the least significant digits.

Table S5: General Displacement Parameter Expressions - U's

Name	U(1,1)	U(2,2)	U(3,3)	U(1,2)	U(1,3)	U(2,3)
I1	0.0584(9)	0.0373(8)	0.0470(8)	-0.0092(7)	0.0001(7)	0.0024(7)
I2	0.0525(9)	0.099(1)	0.0348(8)	-0.0095(9)	-0.0050(7)	0.0044(9)
I3	0.0658(9)	0.0410(8)	0.0495(9)	-0.0214(7)	0.0039(7)	-0.0004(7)
Rh1	0.055(1)	0.047(1)	0.033(1)	-0.0095(9)	0.0088(8)	0.0004(9)
Rh2	0.0434(9)	0.0387(9)	0.0307(9)	-0.0128(8)	0.0009(7)	0.0004(8)
Rh3	0.048(1)	0.051(1)	0.035(1)	-0.0002(9)	0.0127(8)	-0.0042(9)
Cl1	0.21(1)	0.24(1)	0.26(1)	0.082(9)	-0.118(8)	-0.11(1)
Cl2	0.31(1)	0.36(1)	0.27(1)	-0.208(9)	-0.153(9)	0.19(1)

The form of the anisotropic displacement parameter is:
 $\exp[-2\pi i \{h^2 a^2 U(1,1) + k^2 b^2 U(2,2) + l^2 c^2 U(3,3) + 2hkabU(1,2) + 2hlacU(1,3) + 2klbcU(2,3)\}]$ where a, b, and c are reciprocal lattice constants.

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Rh1	1.1805	-2.0430	3.6882
B1	1.1792	-1.8880	1.4692
C10	2.5180	-2.0423	1.9201
C11	2.6198	-3.3008	2.5686
C12	1.3448	-3.9227	2.5238
C13	0.4539	-3.0507	1.8456
H10	3.3245	-1.3259	1.7892
H11	3.5164	-3.7147	3.0215
H12	1.0945	-4.8962	2.9362
H13	-0.5973	-3.2419	1.6474
C14	0.6314	-0.7096	0.7026
C15	1.5018	0.3705	0.3391
C16	0.9895	1.4856	-0.3965
C17	-0.3910	1.5236	-0.7707
C18	-1.2608	0.4464	-0.4099
C19	-0.7514	-0.6701	0.3251
H15	2.5519	0.3451	0.6189
H16	1.6496	2.3033	-0.6726
H17	-0.7785	2.3702	-1.3308
H18	-2.3086	0.4754	-0.6963
H19	-1.4154	-1.4869	0.5926
Rh2	0.5299	-0.4596	-1.6263
C21	0.3235	-2.3043	-2.8384
C20	-0.2005	-1.2123	-3.5795
B2	0.8563	-0.2929	-3.8129
C23	2.0334	-0.8169	-3.2158
C22	1.7041	-2.0600	-2.6137
H23	3.0136	-0.3482	-3.2180
H22	2.3880	-2.7094	-2.0742
C37	0.4137	-0.0484	4.6659
C38	-0.5783	-1.0554	4.8935
C39	-0.2227	-2.2735	5.5559
C34	1.1244	-2.4842	5.9918
C35	2.1163	-1.4775	5.7640
C36	1.7610	-0.2598	5.1003
H38	-1.6010	-0.8952	4.5633
H39	-0.9754	-3.0380	5.7280
H35	3.1390	-1.6378	6.0940
H36	2.5139	0.5040	4.9267
H37	0.1441	0.8763	4.1630
H20	-1.2297	-1.0993	-3.9089
H21	-0.2343	-3.1735	-2.5011
F1	0.1343	3.3344	1.4431
F2	2.2532	3.5651	1.5203
F3	1.0482	4.2797	3.1655
F4	1.3992	2.1397	2.9611
B9	1.2142	3.3450	2.3083
F5	-0.2214	-4.8969	-1.0846
F6	1.7038	-5.2058	-1.9489
F7	1.5456	-4.1917	-0.0473
F8	1.2880	-6.3534	-0.1194
B10	1.1030	-5.1481	-0.7722