Inorganic Chemistry
including bioinorganic chemistry
Inorg. Chem., 1997, 36(21), 4778-4781, DOI:10.1021/ic970683s

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Table S1. Crystallographic Data for $(\mu\text{-H})_2Os_3(CO)_9(\mu\text{-H})_2BH$.

empirical formula	$C_9H_5BO_9Os_3$
formula wt.amu	838.54
space group	$P\bar{1}$
a, Å	9.501(4)
b, Å	9.525(2)
c, Å	10.070(4)
α, deg	87.72(3)
β, deg	88.32(3)
γ, deg	61.45(3)
vol, Å^3	799.8
Z	2
ρ(calcd), g cm^{-3}	3.482
crystal size, mm	0.33 x 0.21 x 0.16
T, °C	25
λ, Å	MoKα (0.71073)
μ, mm^{-1}	23.808
transmission coefficient, %	17.3 - 95.2
scan mode	ω-2θ
2θ limits, deg	4 - 45
±h	0, 11
±k	-11, 11
±l	-12, 12
no. of rflns measd	3057
no. of unique rflns	2810
no. of rflns [I > 2σ(I)]	2387
no. of variables	200
R_1[a] [I > 2σ(I)]	0.047
wR_2[b] (all data)	0.141
R_{int}	0.057
GooF	1.113

[a] $R_1 = \sum||F_o|-|F_c||/\sum|F_o|$
[b] $wR_2 = \{\sum[w(F_o^2-F_c^2)^2]/\sum[w(F_o^2)^2]\}^{1/2}$

Table S2. Atomic coordinates [x 10^4] and equivalent isotropic displacement parameters [$Å^2$ x 10^3] for $(\mu\text{-H})_2Os_3(CO)_9(\mu\text{-H})_2BH$.

Atom	x	y	z	U(eq)[a]
Os(1)	2280(1)	8172(1)	7497(1)	31(1)
Os(2)	3284(1)	10441(1)	7807(1)	31(1)
Os(3)	5693(1)	7081(1)	7608(1)	31(1)
C(11)	1626(20)	8168(18)	9268(18)	38(4)
O(11)	1290(17)	8142(17)	10378(17)	61(4)
C(12)	2109(21)	6326(20)	7003(20)	43(4)
O(12)	2006(20)	5276(16)	6678(17)	66(4)
C(13)	170(21)	9712(22)	6953(18)	42(4)
O(13)	-1083(17)	10625(17)	6618(18)	68(4)
C(21)	4478(19)	11592(19)	7856(21)	43(4)
O(21)	5188(17)	12294(15)	7874(18)	67(4)
C(22)	1324(21)	12221(19)	7260(18)	41(4)
O(22)	151(17)	13291(16)	6925(19)	70(5)
C(23)	2618(19)	10745(18)	9623(17)	34(3)
O(23)	2133(17)	10933(17)	10665(15)	58(3)
C(31)	6956(19)	5999(18)	9164(18)	41(4)
O(31)	7686(20)	5434(17)	10075(17)	76(5)
C(32)	7303(21)	7440(21)	6743(20)	47(4)
O(32)	8223(18)	7721(19)	6178(17)	70(4)
C(33)	6264(20)	5215(21)	6602(21)	45(4)
O(33)	6528(17)	4133(15)	6012(16)	64(4)
B	3983(22)	8650(20)	6046(19)	36(4)

[a] U(eq) is defined as one third of the trace of the orthogonalized U_{ij} tensor.

Table S3. Completed bond lengths [Å] and angles [°] for $(\mu\text{-H})_2Os_3(CO)_9(\mu\text{-H})_2BH$.

	Bond Lengths		
Os(1)-C(11)	1.87(2)	Os(3)-C(33)	1.92(2)
Os(1)-C(13)	1.91(2)	Os(3)-C(31)	1.94(2)
Os(1)-C(12)	1.93(2)	Os(3)-B	2.23(2)
Os(1)-B	2.34(2)	C(11)-O(11)	1.16(2)
Os(1)-Os(2)	2.779(1)	C(12)-O(12)	1.11(2)
Os(1)-Os(3)	2.898(1)	C(13)-O(13)	1.14(2)
Os(2)-C(22)	1.90(2)	C(21)-O(21)	1.16(2)
Os(2)-C(23)	1.91(2)	C(22)-O(22)	1.14(2)
Os(2)-C(21)	1.92(2)	C(23)-O(23)	1.12(2)
Os(2)-B	2.36(2)	C(31)-O(31)	1.12(2)
Os(2)-Os(3)	2.923(2)	C(32)-O(32)	1.16(2)
Os(3)-C(32)	1.90(2)	C(33)-O(33)	1.13(2)
	Angels		
C(11)-Os(1)-C(13)	92.5(7)	C(22)-Os(2)-B	104.1(7)
C(11)-Os(1)-C(12)	96.1(8)	C(23)-Os(2)-B	143.6(6)
C(13)-Os(1)-C(12)	95.7(8)	C(21)-Os(2)-B	115.0(7)
C(11)-Os(1)-B	145.5(7)	C(22)-Os(2)-Os(1)	95.5(5)
C(13)-Os(1)-B	104.4(7)	C(23)-Os(2)-Os(1)	93.0(4)
C(12)-Os(1)-B	111.5(7)	C(21)-Os(2)-Os(1)	165.6(5)
C(11)-Os(1)-Os(2)	95.4(5)	B-Os(2)-Os(1)	53.4(5)
C(13)-Os(1)-Os(2)	94.1(6)	C(22)-Os(2)-Os(3)	150.7(6)
C(12)-Os(1)-Os(2)	164.5(6)	C(23)-Os(2)-Os(3)	106.3(5)
B-Os(1)-Os(2)	54.2(5)	C(21)-Os(2)-Os(3)	105.2(5)
C(11)-Os(1)-Os(3)	105.1(5)	B-Os(2)-Os(3)	48.6(4)
C(13)-Os(1)-Os(3)	151.0(6)	Os(1)-Os(2)-Os(3)	61.05(3)
C(12)-Os(1)-Os(3)	104.9(5)	C(32)-Os(3)-C(33)	91.8(8)
B-Os(1)-Os(3)	49.1(4)	C(32)-Os(3)-C(31)	95.4(8)
Os(2)-Os(1)-Os(3)	61.93(3)	C(33)-Os(3)-C(31)	97.3(7)
C(22)-Os(2)-C(23)	91.3(7)	C(32)-Os(3)-B	88.4(7)
C(22)-Os(2)-C(21)	96.0(7)	C(33)-Os(3)-B	91.3(7)
C(23)-Os(2)-C(21)	95.4(8)	C(31)-Os(3)-B	170.5(6)
C(32)-Os(3)-Os(1)	140.3(5)	Os(1)-Os(3)-Os(2)	57.02(3)
C(33)-Os(3)-Os(1)	94.2(5)	O(11)-C(11)-Os(1)	177(2)
C(31)-Os(3)-Os(1)	122.6(5)	O(12)-C(12)-Os(1)	178(2)
B-Os(3)-Os(1)	52.3(5)	O(13)-C(13)-Os(1)	179(2)
C(32)-Os(3)-Os(2)	96.8(5)	O(21)-C(21)-Os(2)	179(2)
C(33)-Os(3)-Os(2)	142.3(5)	O(22)-C(22)-Os(2)	180(2)
C(31)-Os(3)-Os(2)	118.2(5)	O(23)-C(23)-Os(2)	175(2)
B-Os(3)-Os(2)	52.5(5)	O(31)-C(31)-Os(3)	177(2)

O(32)-C(32)-Os(3)	177(2)	Os(3)-B-Os(2)	78.9(6)
O(33)-C(33)-Os(3)	177(2)	Os(1)-B-Os(2)	72.4(5)
Os(3)-B-Os(1)	78.6(6)		

Table S4. Anisotropic displacement parameters [$Å^2$ x 10^3] for $(\mu\text{-H})_2Os_3(CO)_9(\mu\text{-H})_2BH$.[a]

Atom	U11	U22	U33	U23	U13	U12
Os(1)	31(1)	34(1)	28(1)	-1(1)	3(1)	-17(1)
Os(2)	32(1)	29(1)	31(1)	-1(1)	3(1)	-14(1)
Os(3)	30(1)	31(1)	28(1)	-2(1)	2(1)	-12(1)
C(11)	44(9)	41(8)	31(10)	12(7)	6(7)	-23(7)
O(11)	64(9)	66(8)	51(10)	-9(7)	17(7)	-29(7)
C(12)	54(10)	44(9)	41(11)	1(7)	0(8)	-31(8)
O(12)	101(12)	58(8)	60(10)	-7(7)	-2(9)	-54(8)
C(13)	38(9)	59(10)	26(9)	-5(7)	1(7)	-22(8)
O(13)	50(8)	72(9)	79(12)	4(8)	-12(8)	-26(7)
C(21)	31(8)	40(8)	55(12)	1(8)	5(8)	-15(7)
O(21)	61(8)	60(8)	98(14)	-4(8)	-4(8)	-42(7)
C(22)	38(9)	44(9)	32(10)	2(7)	5(7)	-14(7)
O(22)	51(8)	53(8)	96(14)	7(8)	-7(8)	-16(7)
C(23)	46(9)	40(8)	29(9)	0(6)	12(7)	-31(7)
O(23)	66(9)	83(9)	37(9)	-8(7)	6(7)	-44(8)
C(31)	41(9)	33(7)	34(10)	1(7)	-2(8)	-5(6)
O(31)	93(12)	61(8)	54(10)	14(7)	-29(9)	-21(8)
C(32)	44(9)	55(10)	34(10)	3(8)	5(8)	-19(8)
O(32)	62(9)	106(12)	62(11)	7(9)	16(8)	-58(9)
C(33)	36(8)	49(9)	51(12)	-6(8)	0(8)	-19(7)
O(33)	70(9)	49(7)	62(11)	-22(7)	6(8)	-18(6)
B	39(9)	36(8)	23(9)	-1(7)	6(8)	-10(7)

[a] The anisotropic displacement factor exponent takes the form: $-2\pi^2[(ha^*)^2U_{11} + \ldots + 2hka^*b^*U_{12}]$