Supplementary Material

Cobalt and Iron Cyano Benzene Bis(Dithiolene) Complexes

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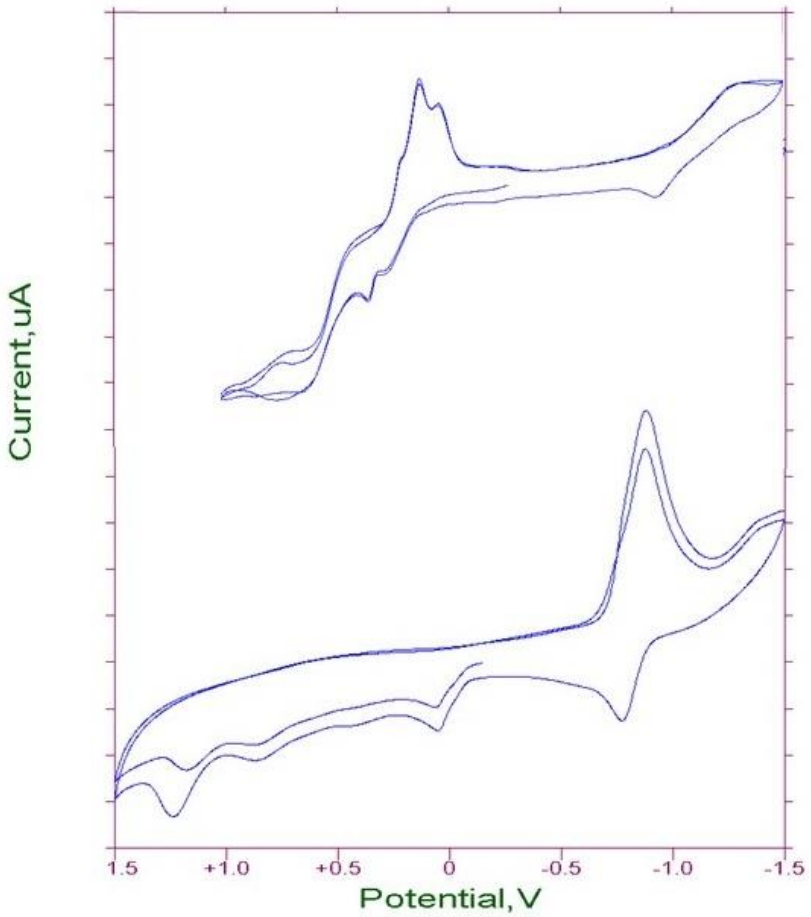

Figure S1: Cyclic voltammograms of $[Ph_4P][Fe(3cbdt)_2]$ (top) and $[Ph_4P][Co(3cbdt)_2]$ (bottom) in CH_3CN with [*n*-Bu_4N][PF_6] 0.1 M as electrolyte, V vs. Ag/Ag^+, scan rate 100 mV s^{-1}.

Table S1: Redox potentials of $[M(L)_2]^{2-}/[M(L)_2]^-$, M= Co, Fe; L=3-cbdt and 4-cbdt in acetonitrile (ref. $Ag/AgNO_3$)

	$[M(L)_2]^-/[M(L]_2]^{2-}$ (V)	**Ref**
$[Co(3cbdt)_2]$ (**1**)	−0.83	This work
$[Co(4cbdt)_2]$	−0.83	[34]
$[Co(dcbdt)_2]$	−0.21	[24]
$[Fe(3cbdt)_2]$ (**2**)	−1.08	This work
$[Fe(4cbdt)_2]$	−0.72	[33]
$[Fe(dcbdt)_2]$	−0.44	[30]

Table S2: Bond lengths [Å] and angles [deg] for compound **1**.

Fe(1)-S(2)	2.215(2)
Fe(1)-S(3)	2.217(2)
Fe(1)-S(1)	2.219(2)
Fe(1)-S(4)	2.221(2)
Fe(1)-S(4)#1	2.461(2)
S(2)-C(2)	1.744(7)
S(1)-C(1)	1.722(7)
S(4)-C(9)	1.757(7)
S(4)-Fe(1)#1	2.461(2)
S(3)-C(8)	1.743(7)
P(1)-C(33)	1.772(7)
P(1)-C(15)	1.782(7)
P(1)-C(21)	1.798(7)
P(1)-C(27)	1.801(8)
Cl(1)-C(39)	1.708(11)
Cl(2)-C(39)	1.725(10)
N(1)-C(7)	1.195(11)
N(2)-C(14)	1.154(10)
C(2)-C(1)	1.414(9)
C(2)-C(3)	1.415(9)
C(3)-C(4)	1.410(10)
C(3)-H(3)	0.9500
C(4)-C(5)	1.365(11)
C(4)-H(4)	0.9500
C(5)-C(6)	1.377(10)
C(5)-H(5)	0.9500
C(6)-C(7)	1.357(12)
C(6)-C(1)	1.393(9)
C(9)-C(10)	1.374(9)
C(9)-C(8)	1.408(9)
C(10)-C(11)	1.386(9)
C(10)-H(10)	0.9500
C(11)-C(12)	1.370(10)
C(11)-H(11)	0.9500
C(12)-C(13)	1.377(10)
C(12)-H(12)	0.9500
C(13)-C(8)	1.421(9)
C(13)-C(14)	1.450(11)
C(15)-C(16)	1.386(9)
C(15)-C(20)	1.395(10)
C(16)-C(17)	1.369(10)
C(16)-H(16)	0.9500
C(17)-C(18)	1.369(11)

C(17)-H(17)	0.9500
C(18)-C(19)	1.334(10)
C(18)-H(18)	0.9500
C(19)-C(20)	1.385(10)
C(19)-H(19)	0.9500
C(20)-H(20)	0.9500
C(21)-C(22)	1.388(10)
C(21)-C(26)	1.403(10)
C(22)-C(23)	1.370(9)
C(22)-H(22)	0.9500
C(23)-C(24)	1.380(10)
C(23)-H(23)	0.9500
C(24)-C(25)	1.398(11)
C(24)-H(24)	0.9500
C(25)-C(26)	1.358(9)
C(25)-H(25)	0.9500
C(26)-H(26)	0.9500
C(27)-C(32)	1.372(10)
C(27)-C(28)	1.405(9)
C(28)-C(29)	1.371(10)
C(28)-H(28)	0.9500
C(29)-C(30)	1.378(10)
C(29)-H(29)	0.9500
C(30)-C(31)	1.363(9)
C(30)-H(30)	0.9500
C(31)-C(32)	1.377(10)
C(31)-H(31)	0.9500
C(32)-H(32)	0.9500
C(33)-C(38)	1.379(9)
C(33)-C(34)	1.410(9)
C(34)-C(35)	1.388(9)
C(34)-H(34)	0.9500
C(35)-C(36)	1.369(9)
C(35)-H(35)	0.9500
C(36)-C(37)	1.363(9)
C(36)-H(36)	0.9500
C(37)-C(38)	1.386(9)
C(37)-H(37)	0.9500
C(38)-H(38)	0.9500
C(39)-H(39A)	0.9900
C(39)-H(39B)	0.9900
S(2)-Fe(1)-S(3)	152.32(9)
S(2)-Fe(1)-S(1)	89.38(8)
S(3)-Fe(1)-S(1)	88.14(8)
S(2)-Fe(1)-S(4)	87.50(8)

S(3)-Fe(1)-S(4)	90.19(7)
S(1)-Fe(1)-S(4)	169.96(9)
S(2)-Fe(1)-S(4)#1	102.91(8)
S(3)-Fe(1)-S(4)#1	104.77(8)
S(1)-Fe(1)-S(4)#1	95.55(7)
S(4)-Fe(1)-S(4)#1	94.45(7)
C(2)-S(2)-Fe(1)	104.5(3)
C(1)-S(1)-Fe(1)	104.1(2)
C(9)-S(4)-Fe(1)	105.7(3)
C(9)-S(4)-Fe(1)#1	103.8(2)
Fe(1)-S(4)-Fe(1)#1	85.55(7)
C(8)-S(3)-Fe(1)	104.5(3)
C(33)-P(1)-C(15)	106.9(3)
C(33)-P(1)-C(21)	113.4(3)
C(15)-P(1)-C(21)	108.7(4)
C(33)-P(1)-C(27)	109.9(3)
C(15)-P(1)-C(27)	109.6(4)
C(21)-P(1)-C(27)	108.3(4)
C(1)-C(2)-C(3)	121.7(7)
C(1)-C(2)-S(2)	118.7(5)
C(3)-C(2)-S(2)	119.5(6)
C(4)-C(3)-C(2)	118.2(8)
C(4)-C(3)-H(3)	120.9
C(2)-C(3)-H(3)	120.9
C(5)-C(4)-C(3)	120.4(8)
C(5)-C(4)-H(4)	119.8
C(3)-C(4)-H(4)	119.8
C(4)-C(5)-C(6)	120.2(7)
C(4)-C(5)-H(5)	119.9
C(6)-C(5)-H(5)	119.9
C(7)-C(6)-C(5)	119.0(8)
C(7)-C(6)-C(1)	117.8(8)
C(5)-C(6)-C(1)	123.2(7)
C(6)-C(1)-C(2)	116.1(7)
C(6)-C(1)-S(1)	123.7(6)
C(2)-C(1)-S(1)	120.2(5)
N(1)-C(7)-C(6)	175.8(10)
C(10)-C(9)-C(8)	120.3(7)
C(10)-C(9)-S(4)	122.0(6)
C(8)-C(9)-S(4)	117.7(5)
C(9)-C(10)-C(11)	120.9(7)
C(9)-C(10)-H(10)	119.5
C(11)-C(10)-H(10)	119.5
C(12)-C(11)-C(10)	120.2(7)
C(12)-C(11)-H(11)	119.9
C(10)-C(11)-H(11)	119.9

C(11)-C(12)-C(13)	119.7(7)
C(11)-C(12)-H(12)	120.1
C(13)-C(12)-H(12)	120.1
C(12)-C(13)-C(8)	121.3(7)
C(12)-C(13)-C(14)	120.2(7)
C(8)-C(13)-C(14)	118.4(7)
C(9)-C(8)-C(13)	117.0(6)
C(9)-C(8)-S(3)	121.8(5)
C(13)-C(8)-S(3)	121.1(6)
N(2)-C(14)-C(13)	177.9(9)
C(16)-C(15)-C(20)	117.4(7)
C(16)-C(15)-P(1)	123.8(6)
C(20)-C(15)-P(1)	118.8(6)
C(17)-C(16)-C(15)	120.1(8)
C(17)-C(16)-H(16)	119.9
C(15)-C(16)-H(16)	119.9
C(18)-C(17)-C(16)	120.5(8)
C(18)-C(17)-H(17)	119.8
C(16)-C(17)-H(17)	119.8
C(19)-C(18)-C(17)	121.5(8)
C(19)-C(18)-H(18)	119.2
C(17)-C(18)-H(18)	119.2
C(18)-C(19)-C(20)	118.7(9)
C(18)-C(19)-H(19)	120.6
C(20)-C(19)-H(19)	120.6
C(19)-C(20)-C(15)	121.7(8)
C(19)-C(20)-H(20)	119.1
C(15)-C(20)-H(20)	119.1
C(22)-C(21)-C(26)	119.8(7)
C(22)-C(21)-P(1)	120.8(6)
C(26)-C(21)-P(1)	119.3(6)
C(23)-C(22)-C(21)	120.2(7)
C(23)-C(22)-H(22)	119.9
C(21)-C(22)-H(22)	119.9
C(22)-C(23)-C(24)	120.5(8)
C(22)-C(23)-H(23)	119.8
C(24)-C(23)-H(23)	119.8
C(23)-C(24)-C(25)	118.9(8)
C(23)-C(24)-H(24)	120.5
C(25)-C(24)-H(24)	120.5
C(26)-C(25)-C(24)	121.5(8)
C(26)-C(25)-H(25)	119.2
C(24)-C(25)-H(25)	119.2
C(25)-C(26)-C(21)	119.0(8)
C(25)-C(26)-H(26)	120.5
C(21)-C(26)-H(26)	120.5

C(32)-C(27)-C(28)	120.1(7)
C(32)-C(27)-P(1)	120.3(6)
C(28)-C(27)-P(1)	119.5(6)
C(29)-C(28)-C(27)	119.1(7)
C(29)-C(28)-H(28)	120.5
C(27)-C(28)-H(28)	120.5
C(28)-C(29)-C(30)	119.7(8)
C(28)-C(29)-H(29)	120.1
C(30)-C(29)-H(29)	120.1
C(31)-C(30)-C(29)	121.4(8)
C(31)-C(30)-H(30)	119.3
C(29)-C(30)-H(30)	119.3
C(30)-C(31)-C(32)	119.6(8)
C(30)-C(31)-H(31)	120.2
C(32)-C(31)-H(31)	120.2
C(27)-C(32)-C(31)	120.1(7)
C(27)-C(32)-H(32)	120.0
C(31)-C(32)-H(32)	120.0
C(38)-C(33)-C(34)	119.3(7)
C(38)-C(33)-P(1)	119.3(6)
C(34)-C(33)-P(1)	121.3(6)
C(35)-C(34)-C(33)	119.1(7)
C(35)-C(34)-H(34)	120.4
C(33)-C(34)-H(34)	120.4
C(36)-C(35)-C(34)	120.5(7)
C(36)-C(35)-H(35)	119.7
C(34)-C(35)-H(35)	119.7
C(37)-C(36)-C(35)	120.5(7)
C(37)-C(36)-H(36)	119.8
C(35)-C(36)-H(36)	119.8
C(36)-C(37)-C(38)	120.4(7)
C(36)-C(37)-H(37)	119.8
C(38)-C(37)-H(37)	119.8
C(33)-C(38)-C(37)	120.2(7)
C(33)-C(38)-H(38)	119.9
C(37)-C(38)-H(38)	119.9
Cl(1)-C(39)-Cl(2)	113.9(5)
Cl(1)-C(39)-H(39A)	108.8
Cl(2)-C(39)-H(39A)	108.8
Cl(1)-C(39)-H(39B)	108.8
Cl(2)-C(39)-H(39B)	108.8
H(39A)-C(39)-H(39B)	107.7

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

Table S3: Bond lengths [Å] and angles [deg] for compound **2**.

Co(1)-S(2)	2.1797(12)
Co(1)-S(4)	2.1878(13)
Co(1)-S(1)	2.2027(13)
Co(1)-S(3)	2.2028(13)
Co(1)-S(4)#1	2.3513(12)
Cl(2)-C(1S)	1.734(10)
Cl(1)-C(1S)	1.648(10)
P(1)-C(21)	1.796(5)
P(1)-C(33)	1.800(5)
P(1)-C(27)	1.801(5)
P(1)-C(15)	1.809(5)
S(1)-C(1)	1.746(4)
S(2)-C(2)	1.744(5)
S(3)-C(8)	1.730(5)
S(4)-C(9)	1.753(5)
S(4)-Co(1)#1	2.3513(12)
N(1)-C(7)	1.153(7)
N(2)-C(14)	1.144(8)
C(1)-C(2)	1.388(7)
C(1)-C(6)	1.403(6)
C(2)-C(3)	1.406(6)
C(3)-C(4)	1.383(8)
C(3)-H(3)	0.9300
C(4)-C(5)	1.359(8)
C(4)-H(4)	0.9300
C(5)-C(6)	1.402(7)
C(5)-H(5)	0.9300
C(6)-C(7)	1.384(7)
C(8)-C(9)	1.382(7)
C(8)-C(13)	1.427(6)
C(9)-C(10)	1.401(7)
C(10)-C(11)	1.383(7)
C(10)-H(10)	0.9300
C(11)-C(12)	1.392(9)
C(11)-H(11)	0.9300
C(12)-C(13)	1.385(8)
C(12)-H(12)	0.9300
C(13)-C(14)	1.430(8)
C(15)-C(20)	1.373(7)
C(15)-C(16)	1.386(7)
C(16)-C(17)	1.384(7)
C(16)-H(16)	0.9300
C(17)-C(18)	1.359(8)
C(17)-H(17)	0.9300

C(18)-C(19)	1.379(8)
C(18)-H(18)	0.9300
C(19)-C(20)	1.378(8)
C(19)-H(19)	0.9300
C(20)-H(20)	0.9300
C(21)-C(26)	1.380(7)
C(21)-C(22)	1.388(7)
C(22)-C(23)	1.369(8)
C(22)-H(22)	0.9300
C(23)-C(24)	1.368(8)
C(23)-H(23)	0.9300
C(24)-C(25)	1.360(8)
C(24)-H(24)	0.9300
C(25)-C(26)	1.380(7)
C(25)-H(25)	0.9300
C(26)-H(26)	0.9300
C(27)-C(28)	1.372(7)
C(27)-C(32)	1.389(7)
C(28)-C(29)	1.390(8)
C(28)-H(28)	0.9300
C(29)-C(30)	1.357(9)
C(29)-H(29)	0.9300
C(30)-C(31)	1.370(9)
C(30)-H(30)	0.9300
C(31)-C(32)	1.376(8)
C(31)-H(31)	0.9300
C(32)-H(32)	0.9300
C(33)-C(38)	1.373(7)
C(33)-C(34)	1.380(7)
C(34)-C(35)	1.382(7)
C(34)-H(34)	0.9300
C(35)-C(36)	1.371(9)
C(35)-H(35)	0.9300
C(36)-C(37)	1.378(9)
C(36)-H(36)	0.9300
C(37)-C(38)	1.382(8)
C(37)-H(37)	0.9300
C(38)-H(38)	0.9300
C(1S)-H(1A)	0.9700
C(1S)-H(1B)	0.9700
S(2)-Co(1)-S(4)	88.50(5)
S(2)-Co(1)-S(1)	90.87(5)
S(4)-Co(1)-S(1)	177.18(5)
S(2)-Co(1)-S(3)	155.41(6)
S(4)-Co(1)-S(3)	91.11(5)

S(1)-Co(1)-S(3)	88.32(5)
S(2)-Co(1)-S(4)#1	103.39(5)
S(4)-Co(1)-S(4)#1	89.57(4)
S(1)-Co(1)-S(4)#1	93.25(5)
S(3)-Co(1)-S(4)#1	101.19(5)
C(21)-P(1)-C(33)	108.1(2)
C(21)-P(1)-C(27)	108.7(2)
C(33)-P(1)-C(27)	109.8(2)
C(21)-P(1)-C(15)	113.2(2)
C(33)-P(1)-C(15)	110.2(2)
C(27)-P(1)-C(15)	106.9(2)
C(1)-S(1)-Co(1)	103.28(16)
C(2)-S(2)-Co(1)	103.69(16)
C(8)-S(3)-Co(1)	103.34(17)
C(9)-S(4)-Co(1)	104.48(17)
C(9)-S(4)-Co(1)#1	106.24(15)
Co(1)-S(4)-Co(1)#1	90.43(4)
C(2)-C(1)-C(6)	119.3(4)
C(2)-C(1)-S(1)	119.5(4)
C(6)-C(1)-S(1)	121.2(4)
C(1)-C(2)-C(3)	119.9(5)
C(1)-C(2)-S(2)	120.1(3)
C(3)-C(2)-S(2)	120.0(4)
C(4)-C(3)-C(2)	119.8(5)
C(4)-C(3)-H(3)	120.1
C(2)-C(3)-H(3)	120.1
C(5)-C(4)-C(3)	121.0(5)
C(5)-C(4)-H(4)	119.5
C(3)-C(4)-H(4)	119.5
C(4)-C(5)-C(6)	120.1(5)
C(4)-C(5)-H(5)	119.9
C(6)-C(5)-H(5)	119.9
C(7)-C(6)-C(5)	119.0(5)
C(7)-C(6)-C(1)	121.1(5)
C(5)-C(6)-C(1)	119.9(5)
N(1)-C(7)-C(6)	177.7(6)
C(9)-C(8)-C(13)	117.8(5)
C(9)-C(8)-S(3)	121.7(4)
C(13)-C(8)-S(3)	120.5(4)
C(8)-C(9)-C(10)	121.0(5)
C(8)-C(9)-S(4)	118.6(4)
C(10)-C(9)-S(4)	120.4(4)
C(11)-C(10)-C(9)	120.6(5)
C(11)-C(10)-H(10)	119.7
C(9)-C(10)-H(10)	119.7
C(10)-C(11)-C(12)	119.5(5)

C(10)-C(11)-H(11)	120.3
C(12)-C(11)-H(11)	120.3
C(13)-C(12)-C(11)	120.2(5)
C(13)-C(12)-H(12)	119.9
C(11)-C(12)-H(12)	119.9
C(12)-C(13)-C(8)	120.9(5)
C(12)-C(13)-C(14)	119.4(5)
C(8)-C(13)-C(14)	119.6(5)
N(2)-C(14)-C(13)	176.9(7)
C(20)-C(15)-C(16)	121.5(5)
C(20)-C(15)-P(1)	118.5(4)
C(16)-C(15)-P(1)	120.0(4)
C(17)-C(16)-C(15)	117.9(5)
C(17)-C(16)-H(16)	121.1
C(15)-C(16)-H(16)	121.1
C(18)-C(17)-C(16)	121.2(5)
C(18)-C(17)-H(17)	119.4
C(16)-C(17)-H(17)	119.4
C(17)-C(18)-C(19)	120.3(6)
C(17)-C(18)-H(18)	119.9
C(19)-C(18)-H(18)	119.9
C(20)-C(19)-C(18)	119.8(6)
C(20)-C(19)-H(19)	120.1
C(18)-C(19)-H(19)	120.1
C(15)-C(20)-C(19)	119.3(5)
C(15)-C(20)-H(20)	120.3
C(19)-C(20)-H(20)	120.3
C(26)-C(21)-C(22)	119.0(5)
C(26)-C(21)-P(1)	121.1(4)
C(22)-C(21)-P(1)	119.9(4)
C(23)-C(22)-C(21)	119.7(5)
C(23)-C(22)-H(22)	120.2
C(21)-C(22)-H(22)	120.2
C(24)-C(23)-C(22)	120.9(5)
C(24)-C(23)-H(23)	119.5
C(22)-C(23)-H(23)	119.5
C(25)-C(24)-C(23)	120.0(6)
C(25)-C(24)-H(24)	120.0
C(23)-C(24)-H(24)	120.0
C(24)-C(25)-C(26)	120.0(5)
C(24)-C(25)-H(25)	120.0
C(26)-C(25)-H(25)	120.0
C(25)-C(26)-C(21)	120.4(5)
C(25)-C(26)-H(26)	119.8
C(21)-C(26)-H(26)	119.8
C(28)-C(27)-C(32)	120.1(5)

C(28)-C(27)-P(1)	122.3(4)
C(32)-C(27)-P(1)	117.6(4)
C(27)-C(28)-C(29)	119.3(5)
C(27)-C(28)-H(28)	120.3
C(29)-C(28)-H(28)	120.3
C(30)-C(29)-C(28)	120.2(6)
C(30)-C(29)-H(29)	119.9
C(28)-C(29)-H(29)	119.9
C(29)-C(30)-C(31)	120.9(6)
C(29)-C(30)-H(30)	119.5
C(31)-C(30)-H(30)	119.5
C(30)-C(31)-C(32)	119.7(6)
C(30)-C(31)-H(31)	120.2
C(32)-C(31)-H(31)	120.2
C(31)-C(32)-C(27)	119.8(5)
C(31)-C(32)-H(32)	120.1
C(27)-C(32)-H(32)	120.1
C(38)-C(33)-C(34)	119.9(5)
C(38)-C(33)-P(1)	120.2(4)
C(34)-C(33)-P(1)	119.9(4)
C(33)-C(34)-C(35)	120.1(5)
C(33)-C(34)-H(34)	120.0
C(35)-C(34)-H(34)	120.0
C(36)-C(35)-C(34)	119.9(6)
C(36)-C(35)-H(35)	120.0
C(34)-C(35)-H(35)	120.0
C(35)-C(36)-C(37)	120.2(5)
C(35)-C(36)-H(36)	119.9
C(37)-C(36)-H(36)	119.9
C(36)-C(37)-C(38)	119.9(6)
C(36)-C(37)-H(37)	120.0
C(38)-C(37)-H(37)	120.0
C(33)-C(38)-C(37)	120.0(6)
C(33)-C(38)-H(38)	120.0
C(37)-C(38)-H(38)	120.0
Cl(1)-C(1S)-Cl(2)	116.0(5)
Cl(1)-C(1S)-H(1A)	108.3
Cl(2)-C(1S)-H(1A)	108.3
Cl(1)-C(1S)-H(1B)	108.3
Cl(2)-C(1S)-H(1B)	108.3
H(1A)-C(1S)-H(1B)	107.4

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

Table S4: Bond lengths [Å] and angles [deg] for compound **3**.

Co(1)-S(1)#1	2.174(2)
Co(1)-S(1)	2.174(2)
Co(1)-S(2)#1	2.185(2)
Co(1)-S(2)	2.185(2)
Co(2)-S(3)#2	2.169(3)
Co(2)-S(3)	2.169(3)
Co(2)-S(4)	2.189(3)
Co(2)-S(4)#2	2.189(3)
Co(3)-S(7)	2.170(3)
Co(3)-S(5)	2.170(3)
Co(3)-S(8)	2.182(3)
Co(3)-S(6)	2.184(3)
Co(4)-S(9)	2.162(3)
Co(4)-S(11)	2.172(3)
Co(4)-S(12)	2.175(3)
Co(4)-S(10)	2.191(4)
P(1)-C(19A)	1.779(8)
P(1)-C(13A)	1.785(10)
P(1)-C(7A)	1.795(8)
P(1)-C(1A)	1.800(10)
P(2)-C(7B)	1.766(8)
P(2)-C(1B)	1.777(8)
P(2)-C(19B)	1.778(9)
P(2)-C(13B)	1.782(8)
P(3)-C(13C)	1.756(10)
P(3)-C(1C)	1.779(8)
P(3)-C(19C)	1.789(9)
P(3)-C(7C)	1.812(9)
P(4)-C(19D)	1.758(11)
P(4)-C(7D)	1.790(10)
P(4)-C(13D)	1.799(10)
P(4)-C(1D)	1.802(9)
P(5)-C(1E)	1.751(9)
P(5)-C(7E)	1.752(8)
P(5)-C(13E)	1.775(8)
P(5)-C(19E)	1.804(9)
P(6)-C(7F)	1.770(10)
P(6)-C(13F)	1.790(10)
P(6)-C(19F)	1.801(8)
P(6)-C(1F)	1.806(10)
S(1)-C(1)	1.726(8)
S(2)-C(2)	1.766(9)
S(3)-C(8)	1.740(12)
S(4)-C(9)	1.767(11)

S(5)-C(15)	1.753(8)
S(6)-C(16)	1.733(10)
S(7)-C(22)	1.746(5)
S(8)-C(23)	1.751(5)
S(9)-C(29)	1.763(6)
S(10)-C(30)	1.724(6)
S(11)-C(37)	1.744(10)
S(12)-C(36)	1.736(9)
N(1)-C(7)	1.140(11)
N(2)-C(14)	1.132(15)
N(3)-C(21)	1.095(13)
N(4)-C(28)	1.172(11)
N(5)-C(35)	1.248(13)
N(6)-C(42)	1.133(11)
C(1)-C(6)	1.391(10)
C(1)-C(2)	1.395(11)
C(2)-C(3)	1.378(11)
C(3)-C(4)	1.397(12)
C(4)-C(5)	1.368(12)
C(5)-C(6)	1.372(11)
C(6)-C(7)	1.452(13)
C(8)-C(9)	1.340(12)
C(8)-C(13)	1.416(15)
C(9)-C(10)	1.415(15)
C(10)-C(11)	1.368(16)
C(11)-C(12)	1.381(16)
C(12)-C(13)	1.358(16)
C(13)-C(14)	1.488(17)
C(15)-C(16)	1.393(10)
C(15)-C(20)	1.410(11)
C(16)-C(17)	1.423(11)
C(17)-C(18)	1.367(12)
C(18)-C(19)	1.362(12)
C(19)-C(20)	1.407(12)
C(20)-C(21)	1.495(14)
C(22)-C(23)	1.3900
C(22)-C(27)	1.3900
C(23)-C(24)	1.3900
C(24)-C(25)	1.3900
C(25)-C(26)	1.3900
C(26)-C(27)	1.3900
C(27)-C(28)	1.365(11)
C(29)-C(30)	1.3900
C(29)-C(34)	1.3900
C(30)-C(31)	1.3900
C(31)-C(32)	1.3900

C(32)-C(33)	1.3900
C(33)-C(34)	1.3900
C(34)-C(35)	1.337(11)
C(36)-C(41)	1.391(11)
C(36)-C(37)	1.400(11)
C(37)-C(38)	1.379(13)
C(38)-C(39)	1.379(13)
C(39)-C(40)	1.382(12)
C(40)-C(41)	1.401(13)
C(41)-C(42)	1.463(13)
C(1A)-C(2A)	1.366(12)
C(1A)-C(6A)	1.390(11)
C(2A)-C(3A)	1.383(14)
C(3A)-C(4A)	1.338(14)
C(4A)-C(5A)	1.347(15)
C(5A)-C(6A)	1.380(16)
C(7A)-C(8A)	1.369(12)
C(7A)-C(12A)	1.393(11)
C(8A)-C(9A)	1.404(11)
C(9A)-C(10A)	1.342(13)
C(10A)-C(11A)	1.327(13)
C(11A)-C(12A)	1.401(11)
C(13A)-C(18A)	1.362(13)
C(13A)-C(14A)	1.404(12)
C(14A)-C(15A)	1.376(14)
C(15A)-C(16A)	1.305(17)
C(16A)-C(17A)	1.360(14)
C(17A)-C(18A)	1.390(13)
C(19A)-C(20A)	1.373(10)
C(19A)-C(24A)	1.406(10)
C(20A)-C(21A)	1.380(11)
C(21A)-C(22A)	1.367(11)
C(22A)-C(23A)	1.327(10)
C(23A)-C(24A)	1.370(11)
C(1B)-C(6B)	1.386(12)
C(1B)-C(2B)	1.390(12)
C(2B)-C(3B)	1.371(12)
C(3B)-C(4B)	1.370(14)
C(4B)-C(5B)	1.350(14)
C(5B)-C(6B)	1.364(12)
C(7B)-C(12B)	1.369(11)
C(7B)-C(8B)	1.373(10)
C(8B)-C(9B)	1.381(11)
C(9B)-C(10B)	1.353(13)
C(10B)-C(11B)	1.359(13)
C(11B)-C(12B)	1.400(11)

C(13B)-C(14B)	1.380(11)
C(13B)-C(18B)	1.403(10)
C(14B)-C(15B)	1.389(12)
C(15B)-C(16B)	1.356(11)
C(16B)-C(17B)	1.362(12)
C(17B)-C(18B)	1.362(11)
C(19B)-C(24B)	1.377(10)
C(19B)-C(20B)	1.398(11)
C(20B)-C(21B)	1.346(12)
C(21B)-C(22B)	1.390(11)
C(22B)-C(23B)	1.369(11)
C(23B)-C(24B)	1.352(12)
C(1C)-C(6C)	1.368(13)
C(1C)-C(2C)	1.391(12)
C(2C)-C(3C)	1.379(12)
C(3C)-C(4C)	1.346(15)
C(4C)-C(5C)	1.360(15)
C(5C)-C(6C)	1.374(12)
C(7C)-C(12C)	1.367(11)
C(7C)-C(8C)	1.393(11)
C(8C)-C(9C)	1.391(12)
C(9C)-C(10C)	1.350(14)
C(10C)-C(11C)	1.353(14)
C(11C)-C(12C)	1.408(13)
C(13C)-C(18C)	1.382(12)
C(13C)-C(14C)	1.391(10)
C(14C)-C(15C)	1.402(14)
C(15C)-C(16C)	1.343(13)
C(16C)-C(17C)	1.403(13)
C(17C)-C(18C)	1.349(14)
C(19C)-C(20C)	1.389(12)
C(19C)-C(24C)	1.403(12)
C(20C)-C(21C)	1.401(14)
C(21C)-C(22C)	1.346(17)
C(22C)-C(23C)	1.301(16)
C(23C)-C(24C)	1.401(13)
C(1D)-C(6D)	1.380(11)
C(1D)-C(2D)	1.393(11)
C(2D)-C(3D)	1.362(11)
C(3D)-C(4D)	1.357(13)
C(4D)-C(5D)	1.352(14)
C(5D)-C(6D)	1.357(12)
C(7D)-C(8D)	1.363(12)
C(7D)-C(12D)	1.380(11)
C(8D)-C(9D)	1.407(13)
C(9D)-C(10D)	1.343(14)

C(10D)-C(11D)	1.371(16)
C(11D)-C(12D)	1.378(15)
C(13D)-C(18D)	1.402(12)
C(13D)-C(14D)	1.405(11)
C(14D)-C(15D)	1.412(13)
C(15D)-C(16D)	1.365(13)
C(16D)-C(17D)	1.348(12)
C(17D)-C(18D)	1.373(13)
C(19D)-C(20D)	1.366(14)
C(19D)-C(24D)	1.408(15)
C(20D)-C(21D)	1.439(14)
C(21D)-C(22D)	1.385(18)
C(22D)-C(23D)	1.360(18)
C(23D)-C(24D)	1.349(15)
C(1E)-C(6E)	1.363(11)
C(1E)-C(2E)	1.381(10)
C(2E)-C(3E)	1.367(12)
C(3E)-C(4E)	1.362(13)
C(4E)-C(5E)	1.376(12)
C(5E)-C(6E)	1.393(12)
C(7E)-C(12E)	1.392(11)
C(7E)-C(8E)	1.409(10)
C(8E)-C(9E)	1.390(11)
C(9E)-C(10E)	1.343(14)
C(10E)-C(11E)	1.317(13)
C(11E)-C(12E)	1.403(12)
C(13E)-C(18E)	1.373(11)
C(13E)-C(14E)	1.411(11)
C(14E)-C(15E)	1.374(11)
C(15E)-C(16E)	1.343(13)
C(16E)-C(71E)	1.369(13)
C(71E)-C(18E)	1.385(10)
C(19E)-C(24E)	1.352(10)
C(19E)-C(20E)	1.386(11)
C(20E)-C(21E)	1.356(13)
C(21E)-C(22E)	1.368(13)
C(22E)-C(23E)	1.348(14)
C(23E)-C(24E)	1.394(13)
C(1F)-C(6F)	1.327(11)
C(1F)-C(2F)	1.379(12)
C(2F)-C(3F)	1.403(14)
C(3F)-C(4F)	1.306(14)
C(4F)-C(5F)	1.351(13)
C(5F)-C(6F)	1.410(12)
C(7F)-C(8F)	1.357(11)
C(7F)-C(12F)	1.419(13)

C(8F)-C(9F)	1.420(14)
C(9F)-C(10F)	1.337(13)
C(10F)-C(11F)	1.332(15)
C(11F)-C(12F)	1.466(16)
C(13F)-C(14F)	1.382(12)
C(13F)-C(18F)	1.414(12)
C(14F)-C(15F)	1.364(15)
C(15F)-C(16F)	1.360(14)
C(16F)-C(17F)	1.363(14)
C(17F)-C(18F)	1.380(14)
C(19F)-C(24F)	1.373(11)
C(19F)-C(20F)	1.381(12)
C(20F)-C(21F)	1.358(12)
C(21F)-C(22F)	1.365(14)
C(22F)-C(23F)	1.374(14)
C(23F)-C(24F)	1.383(11)
S(1)#1-Co(1)-S(1)	180.00(9)
S(1)#1-Co(1)-S(2)#1	90.44(9)
S(1)-Co(1)-S(2)#1	89.56(9)
S(1)#1-Co(1)-S(2)	89.56(9)
S(1)-Co(1)-S(2)	90.44(9)
S(2)#1-Co(1)-S(2)	180.0
S(3)#2-Co(2)-S(3)	180.00(10)
S(3)#2-Co(2)-S(4)	89.73(11)
S(3)-Co(2)-S(4)	90.27(11)
S(3)#2-Co(2)-S(4)#2	90.27(11)
S(3)-Co(2)-S(4)#2	89.73(11)
S(4)-Co(2)-S(4)#2	180.0
S(7)-Co(3)-S(5)	88.31(10)
S(7)-Co(3)-S(8)	90.85(10)
S(5)-Co(3)-S(8)	171.11(13)
S(7)-Co(3)-S(6)	174.15(13)
S(5)-Co(3)-S(6)	91.33(10)
S(8)-Co(3)-S(6)	90.39(11)
S(9)-Co(4)-S(11)	87.79(12)
S(9)-Co(4)-S(12)	174.07(12)
S(11)-Co(4)-S(12)	91.42(11)
S(9)-Co(4)-S(10)	90.74(14)
S(11)-Co(4)-S(10)	176.35(13)
S(12)-Co(4)-S(10)	90.38(12)
C(19A)-P(1)-C(13A)	109.5(5)
C(19A)-P(1)-C(7A)	110.9(4)
C(13A)-P(1)-C(7A)	106.9(4)
C(19A)-P(1)-C(1A)	107.0(5)
C(13A)-P(1)-C(1A)	113.8(5)

C(7A)-P(1)-C(1A)	108.8(5)
C(7B)-P(2)-C(1B)	107.8(4)
C(7B)-P(2)-C(19B)	107.9(4)
C(1B)-P(2)-C(19B)	112.3(5)
C(7B)-P(2)-C(13B)	113.2(4)
C(1B)-P(2)-C(13B)	108.8(4)
C(19B)-P(2)-C(13B)	107.0(4)
C(13C)-P(3)-C(1C)	110.5(5)
C(13C)-P(3)-C(19C)	108.0(5)
C(1C)-P(3)-C(19C)	110.5(4)
C(13C)-P(3)-C(7C)	110.1(4)
C(1C)-P(3)-C(7C)	108.5(4)
C(19C)-P(3)-C(7C)	109.2(5)
C(19D)-P(4)-C(7D)	108.6(6)
C(19D)-P(4)-C(13D)	110.6(5)
C(7D)-P(4)-C(13D)	110.4(4)
C(19D)-P(4)-C(1D)	111.8(5)
C(7D)-P(4)-C(1D)	107.8(5)
C(13D)-P(4)-C(1D)	107.6(5)
C(1E)-P(5)-C(7E)	109.4(4)
C(1E)-P(5)-C(13E)	108.7(4)
C(7E)-P(5)-C(13E)	113.5(4)
C(1E)-P(5)-C(19E)	108.5(4)
C(7E)-P(5)-C(19E)	107.6(5)
C(13E)-P(5)-C(19E)	109.0(4)
C(7F)-P(6)-C(13F)	106.9(5)
C(7F)-P(6)-C(19F)	108.3(4)
C(13F)-P(6)-C(19F)	108.8(4)
C(7F)-P(6)-C(1F)	112.8(5)
C(13F)-P(6)-C(1F)	110.2(5)
C(19F)-P(6)-C(1F)	109.7(4)
C(1)-S(1)-Co(1)	106.2(3)
C(2)-S(2)-Co(1)	105.1(3)
C(8)-S(3)-Co(2)	105.4(5)
C(9)-S(4)-Co(2)	104.4(5)
C(15)-S(5)-Co(3)	104.5(3)
C(16)-S(6)-Co(3)	104.8(3)
C(22)-S(7)-Co(3)	105.8(3)
C(23)-S(8)-Co(3)	104.8(3)
C(29)-S(9)-Co(4)	104.0(3)
C(30)-S(10)-Co(4)	106.3(3)
C(37)-S(11)-Co(4)	105.1(4)
C(36)-S(12)-Co(4)	104.5(4)
C(6)-C(1)-C(2)	116.3(8)
C(6)-C(1)-S(1)	123.9(8)
C(2)-C(1)-S(1)	119.6(7)

C(3)-C(2)-C(1)	120.6(8)
C(3)-C(2)-S(2)	120.7(8)
C(1)-C(2)-S(2)	118.6(7)
C(2)-C(3)-C(4)	120.5(9)
C(5)-C(4)-C(3)	120.1(9)
C(4)-C(5)-C(6)	118.1(10)
C(5)-C(6)-C(1)	124.2(9)
C(5)-C(6)-C(7)	119.6(9)
C(1)-C(6)-C(7)	116.0(9)
N(1)-C(7)-C(6)	177.5(14)
C(9)-C(8)-C(13)	117.7(12)
C(9)-C(8)-S(3)	120.4(12)
C(13)-C(8)-S(3)	121.9(12)
C(8)-C(9)-C(10)	122.0(12)
C(8)-C(9)-S(4)	119.4(12)
C(10)-C(9)-S(4)	118.5(12)
C(11)-C(10)-C(9)	119.9(14)
C(10)-C(11)-C(12)	118.0(17)
C(13)-C(12)-C(11)	122.2(16)
C(12)-C(13)-C(8)	120.2(14)
C(12)-C(13)-C(14)	122.5(16)
C(8)-C(13)-C(14)	117.4(14)
N(2)-C(14)-C(13)	177.9(17)
C(16)-C(15)-C(20)	119.3(8)
C(16)-C(15)-S(5)	119.6(7)
C(20)-C(15)-S(5)	121.1(8)
C(15)-C(16)-C(17)	118.3(9)
C(15)-C(16)-S(6)	119.6(7)
C(17)-C(16)-S(6)	122.1(8)
C(18)-C(17)-C(16)	119.6(10)
C(19)-C(18)-C(17)	124.3(11)
C(18)-C(19)-C(20)	116.2(10)
C(19)-C(20)-C(15)	122.2(9)
C(19)-C(20)-C(21)	119.1(10)
C(15)-C(20)-C(21)	118.7(10)
N(3)-C(21)-C(20)	174.8(15)
C(23)-C(22)-C(27)	120.0
C(23)-C(22)-S(7)	118.8(4)
C(27)-C(22)-S(7)	121.2(4)
C(24)-C(23)-C(22)	120.0
C(24)-C(23)-S(8)	120.3(4)
C(22)-C(23)-S(8)	119.7(4)
C(23)-C(24)-C(25)	120.0
C(24)-C(25)-C(26)	120.0
C(27)-C(26)-C(25)	120.0
C(28)-C(27)-C(26)	118.4(7)

C(28)-C(27)-C(22)	121.6(7)
C(26)-C(27)-C(22)	120.0
N(4)-C(28)-C(27)	177.0(12)
C(30)-C(29)-C(34)	120.0
C(30)-C(29)-S(9)	121.4(5)
C(34)-C(29)-S(9)	118.6(5)
C(29)-C(30)-C(31)	120.0
C(29)-C(30)-S(10)	117.2(5)
C(31)-C(30)-S(10)	122.8(5)
C(32)-C(31)-C(30)	120.0
C(33)-C(32)-C(31)	120.0
C(32)-C(33)-C(34)	120.0
C(35)-C(34)-C(33)	116.3(8)
C(35)-C(34)-C(29)	123.4(8)
C(33)-C(34)-C(29)	120.0
N(5)-C(35)-C(34)	168.2(13)
C(41)-C(36)-C(37)	118.0(9)
C(41)-C(36)-S(12)	121.6(8)
C(37)-C(36)-S(12)	120.4(8)
C(38)-C(37)-C(36)	120.8(10)
C(38)-C(37)-S(11)	120.7(9)
C(36)-C(37)-S(11)	118.5(9)
C(37)-C(38)-C(39)	120.6(11)
C(38)-C(39)-C(40)	120.0(11)
C(39)-C(40)-C(41)	119.3(10)
C(36)-C(41)-C(40)	121.2(10)
C(36)-C(41)-C(42)	121.4(10)
C(40)-C(41)-C(42)	117.4(10)
N(6)-C(42)-C(41)	178.8(12)
C(2A)-C(1A)-C(6A)	119.7(10)
C(2A)-C(1A)-P(1)	121.0(8)
C(6A)-C(1A)-P(1)	119.2(9)
C(1A)-C(2A)-C(3A)	121.4(11)
C(4A)-C(3A)-C(2A)	118.8(13)
C(3A)-C(4A)-C(5A)	120.3(15)
C(4A)-C(5A)-C(6A)	123.0(14)
C(5A)-C(6A)-C(1A)	116.6(11)
C(8A)-C(7A)-C(12A)	118.7(8)
C(8A)-C(7A)-P(1)	120.1(8)
C(12A)-C(7A)-P(1)	121.2(8)
C(7A)-C(8A)-C(9A)	121.0(10)
C(10A)-C(9A)-C(8A)	118.9(11)
C(11A)-C(10A)-C(9A)	121.6(11)
C(10A)-C(11A)-C(12A)	121.4(10)
C(7A)-C(12A)-C(11A)	118.4(10)
C(18A)-C(13A)-C(14A)	117.9(10)

C(18A)-C(13A)-P(1)	123.0(9)
C(14A)-C(13A)-P(1)	119.1(9)
C(15A)-C(14A)-C(13A)	120.0(12)
C(16A)-C(15A)-C(14A)	120.5(14)
C(15A)-C(16A)-C(17A)	121.7(14)
C(16A)-C(17A)-C(18A)	119.5(13)
C(13A)-C(18A)-C(17A)	120.2(11)
C(20A)-C(19A)-C(24A)	116.8(8)
C(20A)-C(19A)-P(1)	122.5(7)
C(24A)-C(19A)-P(1)	120.7(7)
C(19A)-C(20A)-C(21A)	120.4(9)
C(22A)-C(21A)-C(20A)	121.2(9)
C(23A)-C(22A)-C(21A)	119.3(10)
C(22A)-C(23A)-C(24A)	121.3(9)
C(23A)-C(24A)-C(19A)	120.9(8)
C(6B)-C(1B)-C(2B)	118.6(9)
C(6B)-C(1B)-P(2)	118.6(8)
C(2B)-C(1B)-P(2)	122.7(9)
C(3B)-C(2B)-C(1B)	119.2(10)
C(4B)-C(3B)-C(2B)	121.1(12)
C(5B)-C(4B)-C(3B)	119.9(11)
C(4B)-C(5B)-C(6B)	120.3(12)
C(5B)-C(6B)-C(1B)	120.9(10)
C(12B)-C(7B)-C(8B)	118.1(8)
C(12B)-C(7B)-P(2)	122.4(7)
C(8B)-C(7B)-P(2)	119.3(7)
C(7B)-C(8B)-C(9B)	121.9(9)
C(10B)-C(9B)-C(8B)	119.2(10)
C(9B)-C(10B)-C(11B)	120.6(10)
C(10B)-C(11B)-C(12B)	120.1(10)
C(7B)-C(12B)-C(11B)	120.1(9)
C(14B)-C(13B)-C(18B)	119.1(8)
C(14B)-C(13B)-P(2)	122.3(7)
C(18B)-C(13B)-P(2)	118.6(7)
C(13B)-C(14B)-C(15B)	119.0(8)
C(16B)-C(15B)-C(14B)	120.3(10)
C(15B)-C(16B)-C(17B)	121.5(10)
C(16B)-C(17B)-C(18B)	119.3(9)
C(17B)-C(18B)-C(13B)	120.7(9)
C(24B)-C(19B)-C(20B)	116.9(9)
C(24B)-C(19B)-P(2)	122.7(8)
C(20B)-C(19B)-P(2)	120.4(7)
C(21B)-C(20B)-C(19B)	121.3(8)
C(20B)-C(21B)-C(22B)	120.7(9)
C(23B)-C(22B)-C(21B)	118.2(10)
C(24B)-C(23B)-C(22B)	120.9(9)

C(23B)-C(24B)-C(19B)	121.8(9)
C(6C)-C(1C)-C(2C)	119.7(9)
C(6C)-C(1C)-P(3)	120.3(8)
C(2C)-C(1C)-P(3)	120.0(8)
C(3C)-C(2C)-C(1C)	118.3(10)
C(4C)-C(3C)-C(2C)	121.3(12)
C(3C)-C(4C)-C(5C)	120.5(12)
C(4C)-C(5C)-C(6C)	119.5(12)
C(1C)-C(6C)-C(5C)	120.5(11)
C(12C)-C(7C)-C(8C)	120.7(9)
C(12C)-C(7C)-P(3)	120.3(8)
C(8C)-C(7C)-P(3)	118.9(8)
C(9C)-C(8C)-C(7C)	119.4(10)
C(10C)-C(9C)-C(8C)	118.8(12)
C(9C)-C(10C)-C(11C)	123.3(13)
C(10C)-C(11C)-C(12C)	118.7(12)
C(7C)-C(12C)-C(11C)	119.2(11)
C(18C)-C(13C)-C(14C)	116.9(9)
C(18C)-C(13C)-P(3)	120.4(8)
C(14C)-C(13C)-P(3)	122.8(8)
C(13C)-C(14C)-C(15C)	119.8(10)
C(16C)-C(15C)-C(14C)	120.8(11)
C(15C)-C(16C)-C(17C)	120.3(12)
C(18C)-C(17C)-C(16C)	117.9(11)
C(17C)-C(18C)-C(13C)	124.2(10)
C(20C)-C(19C)-C(24C)	118.0(10)
C(20C)-C(19C)-P(3)	120.5(9)
C(24C)-C(19C)-P(3)	121.4(9)
C(19C)-C(20C)-C(21C)	119.7(11)
C(22C)-C(21C)-C(20C)	118.1(14)
C(23C)-C(22C)-C(21C)	125.4(17)
C(22C)-C(23C)-C(24C)	118.0(14)
C(23C)-C(24C)-C(19C)	120.5(11)
C(6D)-C(1D)-C(2D)	119.3(9)
C(6D)-C(1D)-P(4)	120.6(8)
C(2D)-C(1D)-P(4)	120.0(8)
C(3D)-C(2D)-C(1D)	119.6(11)
C(4D)-C(3D)-C(2D)	120.0(11)
C(5D)-C(4D)-C(3D)	120.8(12)
C(4D)-C(5D)-C(6D)	120.7(12)
C(5D)-C(6D)-C(1D)	119.4(10)
C(8D)-C(7D)-C(12D)	118.7(10)
C(8D)-C(7D)-P(4)	121.0(8)
C(12D)-C(7D)-P(4)	120.3(9)
C(7D)-C(8D)-C(9D)	118.0(10)
C(10D)-C(9D)-C(8D)	121.0(12)

C(9D)-C(10D)-C(11D)	122.8(14)
C(10D)-C(11D)-C(12D)	115.1(13)
C(11D)-C(12D)-C(7D)	124.3(13)
C(18D)-C(13D)-C(14D)	120.8(10)
C(18D)-C(13D)-P(4)	115.7(8)
C(14D)-C(13D)-P(4)	123.6(8)
C(13D)-C(14D)-C(15D)	118.0(10)
C(16D)-C(15D)-C(14D)	119.9(11)
C(17D)-C(16D)-C(15D)	121.0(12)
C(16D)-C(17D)-C(18D)	122.2(11)
C(17D)-C(18D)-C(13D)	118.1(10)
C(20D)-C(19D)-C(24D)	118.8(11)
C(20D)-C(19D)-P(4)	122.0(11)
C(24D)-C(19D)-P(4)	119.2(11)
C(19D)-C(20D)-C(21D)	119.9(13)
C(22D)-C(21D)-C(20D)	120.5(15)
C(23D)-C(22D)-C(21D)	116.4(17)
C(24D)-C(23D)-C(22D)	125.3(17)
C(23D)-C(24D)-C(19D)	119.1(14)
C(6E)-C(1E)-C(2E)	116.8(9)
C(6E)-C(1E)-P(5)	121.8(7)
C(2E)-C(1E)-P(5)	121.4(8)
C(3E)-C(2E)-C(1E)	121.3(10)
C(4E)-C(3E)-C(2E)	120.9(11)
C(3E)-C(4E)-C(5E)	119.4(10)
C(4E)-C(5E)-C(6E)	118.5(10)
C(1E)-C(6E)-C(5E)	122.7(9)
C(12E)-C(7E)-C(8E)	117.8(8)
C(12E)-C(7E)-P(5)	120.5(7)
C(8E)-C(7E)-P(5)	121.5(7)
C(9E)-C(8E)-C(7E)	120.5(9)
C(10E)-C(9E)-C(8E)	118.3(10)
C(11E)-C(10E)-C(9E)	124.3(12)
C(10E)-C(11E)-C(12E)	119.3(11)
C(7E)-C(12E)-C(11E)	119.8(9)
C(18E)-C(13E)-C(14E)	118.5(8)
C(18E)-C(13E)-P(5)	122.5(7)
C(14E)-C(13E)-P(5)	119.0(7)
C(15E)-C(14E)-C(13E)	118.2(9)
C(16E)-C(15E)-C(14E)	123.4(9)
C(15E)-C(16E)-C(71E)	118.4(9)
C(16E)-C(71E)-C(18E)	120.8(10)
C(13E)-C(18E)-C(71E)	120.5(9)
C(24E)-C(19E)-C(20E)	118.7(9)
C(24E)-C(19E)-P(5)	123.3(8)
C(20E)-C(19E)-P(5)	117.9(8)

C(21E)-C(20E)-C(19E)	121.1(10)
C(20E)-C(21E)-C(22E)	120.1(12)
C(23E)-C(22E)-C(21E)	119.4(12)
C(22E)-C(23E)-C(24E)	120.8(11)
C(19E)-C(24E)-C(23E)	119.8(10)
C(6F)-C(1F)-C(2F)	116.1(10)
C(6F)-C(1F)-P(6)	124.2(8)
C(2F)-C(1F)-P(6)	119.6(9)
C(1F)-C(2F)-C(3F)	122.1(11)
C(4F)-C(3F)-C(2F)	119.0(14)
C(3F)-C(4F)-C(5F)	121.6(14)
C(4F)-C(5F)-C(6F)	118.5(11)
C(1F)-C(6F)-C(5F)	122.6(10)
C(8F)-C(7F)-C(12F)	117.7(11)
C(8F)-C(7F)-P(6)	123.6(8)
C(12F)-C(7F)-P(6)	118.3(9)
C(7F)-C(8F)-C(9F)	124.2(11)
C(10F)-C(9F)-C(8F)	114.8(12)
C(11F)-C(10F)-C(9F)	126.1(14)
C(10F)-C(11F)-C(12F)	117.9(14)
C(7F)-C(12F)-C(11F)	117.5(13)
C(14F)-C(13F)-C(18F)	118.8(10)
C(14F)-C(13F)-P(6)	120.7(9)
C(18F)-C(13F)-P(6)	120.3(9)
C(15F)-C(14F)-C(13F)	120.4(12)
C(16F)-C(15F)-C(14F)	120.4(13)
C(15F)-C(16F)-C(17F)	121.0(13)
C(16F)-C(17F)-C(18F)	120.0(12)
C(17F)-C(18F)-C(13F)	119.2(11)
C(24F)-C(19F)-C(20F)	119.5(9)
C(24F)-C(19F)-P(6)	119.4(7)
C(20F)-C(19F)-P(6)	121.1(8)
C(21F)-C(20F)-C(19F)	120.0(10)
C(20F)-C(21F)-C(22F)	120.4(11)
C(21F)-C(22F)-C(23F)	120.9(10)
C(22F)-C(23F)-C(24F)	118.5(11)
C(19F)-C(24F)-C(23F)	120.7(10)

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

Electrical Transport Measurements

The electrical conductivity of the bisdithiolene complexes was measured only at room temperature because they are all insulating. In the case of the $(Ph_4P)_2[Fe(III)(3cbdt)_2]_2$ (**1**) due to the very small dimensions of the polycrystalline samples it was measured as a compressed pellet and the conductivity is of the order of 10^{-8}S/cm. The sample $(Ph_4P)_2[Co(III)(3cbdt)_2]_2$ (**2**) was measured by a two point method with a Keithley 197 Electrometer and we could only estimate an upper limit for the conductivity as $4x10^{-8}$ S/cm. Finally, the electrical conductivity of the Co dimer long single crystals $(Ph_4P)_2[Co(II)(3cbdt)_2]$ (**3**) was measured by a four point method with a Keithley 224 current source and a Keithley 197 Electrometer and a value of $3x10^{-7}$ S/cm was obtained. The dimeric complexes (**1** and **2**) were insulators as expected. The dianionic Co compound (**3**), due to the absence of short anion-anion interactions and with anionic complexes being surrounded by bulky Ph_4P cations, is not surprising that is also insulator.