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Supporting Information

Table 1.

Crystal data and structure refinement for 3

Empirical formula:	$C_{25}H_{32}INiOP_3$
Formula weight:	627.03 g/mol
Temperature:	293(2) K
Wavelenght:	71.070 pm
Crystal appearance:	black Prisms
Crystal size:	0,64 mm x 0,21 mm x 0,36 mm
Crystal system:	monoklin
Space group:	$P2_1/n$
Unit cell dimensions:	
	a = 869.29(12) pm α = 90°
	b = 2005.0(2) pm β = 92.704(13)°
	c = 1570.78(11)pm γ = 90°
Volume:	2.7347(5) nm^3
Z:	4
Density (calculated):	1.523 g/cm^3
Absorption coefficient:	2.029 mm^{-1}
F(000):	1264
Theta range for data collection:	2.03 bis 24.99°
Index ranges:	$-10 < h < 1$, $-23 < k < 1$, $-18 < l < 18$
Reflections collected:	6198
Independent Reflections:	4812 (R(int) = 0.0353)
Refinement method:	Full-matrix Least-Squares an F^2
Data / Restraints / Parameters:	4812 / 0 / 282
Goodness-of-Fit on F^2:	1.053
Final R indices [$I>2\sigma(I)$] :	R_1 = 0.0412, wR_2 = 0.1057
R indices (all data) :	R_1 = 0.0506, wR_2 = 0.1113
Largest diff. peak and hole :	1274 and -1081 $e.nm^{-3}$

Table 2.

Atomic coordinates (x 10^4) and equivalent isotropic displacement parameters (pm^2 x 10^{-1}) for 3.

U(eq) is defined as one third of the trace of the orthogonalized (U(ij)) tensor.

	x	y	z	U(eq)
I(1)	302(1)	3796(1)	5981(1)	79(1)
Ni(1)	-1080(1)	4145(1)	7392(1)	44(1)
P(1)	-1850(1)	3113(1)	7664(1)	42(1)
P(2)	-2405(1)	4920(1)	6637(1)	64(1)
P(3)	1180(1)	4350(1)	8103(1)	52(1)
O(1)	-1968(5)	4989(2)	8660(3)	84(1)
C(1)	-2044(5)	4424(2)	8386(3)	55(1)
C(2)	-2938(4)	3913(2)	8868(3)	47(1)
C(3)	-3741(5)	4103(2)	9582(3)	60(1)
C(4)	-4587(6)	3639(3)	9997(3)	68(1)
C(5)	-4651(6)	2985(3)	9723(3)	67(1)
C(6)	-3850(5)	2790(2)	9021(3)	60(1)
C(7)	-2980(4)	3255(2)	8596(2)	46(1)
C(8)	-3172(5)	2623(2)	6971(2)	46(1)
C(9)	-4469(5)	2950(2)	6636(3)	56(1)
C(10)	-5580(6)	2611(3)	6142(3)	66(1)
C(11)	-5369(6)	1942(2)	5963(3)	63(1)
C(12)	-4083(6)	1622(2)	6270(3)	67(1)
C(13)	-2986(6)	1957(2)	6783(3)	60(1)
C(14)	-356(5)	2521(2)	8026(2)	46(1)
C(15)	-73(6)	2373(3)	8873(3)	67(1)
C(16)	1168(7)	1977(3)	9141(4)	81(2)
C(17)	2157(6)	1736(3)	8576(4)	75(1)
C(18)	1896(6)	1875(2)	7731(4)	74(1)
C(19)	661(6)	2268(2)	7455(3)	63(1)
C(20)	-4108(8)	5282(4)	7083(6)	136(3)
C(21)	-3153(10)	4716(4)	5574(5)	134(3)
C(22)	-1304(8)	5657(3)	6431(4)	85(2)
C(23)	2821(6)	3845(3)	7868(4)	87(2)
C(24)	1231(8)	4261(4)	9263(4)	111(2)
C(25)	1904(7)	5188(3)	7988(5)	95(2)

Table 3.

Bond lenths [pm] and angles [°] for 3.

I(1)-Ni(1)	266.33(6)	C(7)-P(1)-C(14)	104.7(2)
Ni(1)-C(1)	189.2(4)	C(8)-P(1)-C(14)	104.7(2)
Ni(1)-P(1)	222.28(11)	C(7)-P(1)-Ni(1)	100.79(13)
Ni(1)-P(2)	224.00(13)	C(8)-P(1)-Ni(1)	124.86(13)
Ni(1)-P(3)	225.17(12)	C(14)-P(1)-Ni(1)	116.56(13)
P(1)-C(7)	182.3(4)	C(22)-P(2)-C(21)	101.0(4)
P(1)-C(8)	183.0(4)	C(22)-P(2)-C(20)	101.0(3)
P(1)-C(14)	182.9(4)	C(21)-P(2)-C(20)	100.5(4)
P(2)-C(22)	179.9(5)	C(22)-P(2)-Ni(1)	113.6(2)
P(2)-C(21)	181.0(7)	C(21)-P(2)-Ni(1)	119.0(2)
P(2)-C(20)	181.9(7)	C(20)-P(2)-Ni(1)	118.7(3)
P(3)-C(23)	180.2(5)	C(23)-P(3)-C(25)	102.7(3)
P(3)-C(25)	180.6(5)	C(23)-P(3)-C(24)	99.6(4)
P(3)-C(24)	182.8(6)	C(25)-P(3)-C(24)	101.5(4)
O(1)-C(1)	121.2(5)	C(23)-P(3)-Ni(1)	118.4(2)
C(1)-C(2)	151.0(6)	C(25)-P(3)-Ni(1)	114.9(2)
C(2)-C(7)	138.6(6)	C(24)-P(3)-Ni(1)	117.1(2)
C(2)-C(3)	140.3(6)	O(1)-C(1)-C(2)	118.5(4)
C(3)-C(4)	137.0(7)	O(1)-C(1)-Ni(1)	123.4(3)
C(4)-C(5)	137.9(7)	C(2)-C(1)-Ni(1)	118.1(3)
C(5)-C(6)	138.8(7)	C(7)-C(2)-C(3)	119.9(4)
C(6)-C(7)	139.0(6)	C(7)-C(2)-C(1)	119.9(4)
C(8)-C(9)	138.6(6)	C(3)-C(2)-C(1)	120.2(4)
C(8)-C(13)	137.8(6)	C(4)-C(3)-C(2)	119.6(4)
C(9)-C(10)	138.7(6)	C(5)-C(4)-C(3)	120.8(4)
C(10)-C(11)	138.5(7)	C(4)-C(5)-C(6)	120.1(4)
C(11)-C(12)	135.7(7)	C(7)-C(6)-C(5)	119.8(4)
C(12)-C(13)	139.1(6)	C(2)-C(7)-C(6)	119.8(4)
C(14)-C(19)	138.5(6)	C(2)-C(7)-P(1)	112.9(3)
C(14)-C(15)	137.4(6)	C(6)-C(7)-P(1)	127.3(3)
C(15)-C(16)	138.9(7)	C(9)-C(8)-C(13)	118.5(4)
C(16)-C(17)	135.5(8)	C(9)-C(8)-P(1)	116.6(3)
C(17)-C(18)	136.5(8)	C(13)-C(8)-P(1)	124.8(3)
C(18)-C(19)	138.4(7)	C(8)-C(9)-C(10)	120.9(4)
		C(11)-C(10)-C(9)	119.5(5)
		C(12)-C(11)-C(10)	120.0(4)
C(1)-Ni(1)-P(1)	88.15(13)	C(11)-C(12)-C(13)	120.5(4)
C(1)-Ni(1)-P(2)	89.70(14)	C(12)-C(13)-C(8)	120.5(4)
P(1)-Ni(1)-P(2)	126.54(5)	C(19)-C(14)-C(15)	117.2(4)
C(1)-Ni(1)-P(3)	86.93(14)	C(19)-C(14)-P(1)	120.1(3)
P(1)-Ni(1)-P(3)	109.81(4)	C(15)-C(14)-P(1)	122.3(3)
P(2)-Ni(1)-P(3)	123.39(5)	C(14)-C(15)-C(16)	121.3(5)
C(1)-Ni(1)-I(1)	177.98(13)	C(17)-C(16)-C(15)	120.9(5)
P(1)-Ni(1)-I(1)	93.87(3)	C(16)-C(17)-C(18)	118.9(5)
P(2)-Ni(1)-I(1)	89.00(4)	C(17)-C(18)-C(19)	120.8(5)
P(3)-Ni(1)-I(1)	92.50(3)	C(14)-C(19)-C(18)	121.0(5)
C(7)-P(1)-C(8)	102.4(2)		

Symmetry transformations used to generate equivalent atoms:

Table 4.

Anisotropic displacement parameters [$pm^2 \times 10^{-1}$] for 3.

The anisotropic displacement factor exponent takes the form: $-2\pi^2 [h^2 a^2 U11 + ... + 2hk a b U12]$

	U11	U22	U33	U23	U13	U12
I(1)	115(1)	77(1)	46(1)	4(1)	21(1)	23(1)
Ni(1)	52(1)	36(1)	46(1)	-1(1)	5(1)	1(1)
P(1)	51(1)	34(1)	43(1)	-2(1)	5(1)	1(1)
P(2)	61(1)	48(1)	82(1)	13(1)	-3(1)	5(1)
P(3)	51(1)	50(1)	56(1)	-7(1)	5(1)	-5(1)
O(1)	107(3)	46(2)	103(3)	-30(2)	43(2)	-13(2)
C(1)	56(2)	46(2)	64(3)	-10(2)	14(2)	-1(2)
C(2)	47(2)	49(2)	45(2)	-5(2)	3(2)	4(2)
C(3)	61(3)	65(3)	53(2)	-13(2)	8(2)	11(2)
C(4)	65(3)	91(4)	50(2)	-7(2)	14(2)	9(3)
C(5)	67(3)	77(3)	56(3)	14(2)	12(2)	-5(2)
C(6)	66(3)	56(2)	57(2)	4(2)	10(2)	0(2)
C(7)	47(2)	46(2)	44(2)	-1(2)	1(2)	4(2)
C(8)	56(2)	41(2)	41(2)	-3(2)	7(2)	-2(2)
C(9)	56(2)	55(2)	58(2)	-10(2)	4(2)	4(2)
C(10)	60(3)	77(3)	60(3)	-8(2)	-3(2)	1(2)
C(11)	75(3)	66(3)	49(2)	-9(2)	1(2)	-20(2)
C(12)	96(4)	44(2)	60(3)	-9(2)	-5(3)	-10(2)
C(13)	79(3)	42(2)	59(3)	-1(2)	-8(2)	-1(2)
C(14)	56(2)	34(2)	47(2)	1(2)	2(2)	2(2)
C(15)	73(3)	72(3)	57(3)	-4(2)	3(2)	20(2)
C(16)	89(4)	88(4)	67(3)	7(3)	-4(3)	36(3)
C(17)	69(3)	62(3)	94(4)	12(3)	4(3)	21(2)
C(18)	72(3)	54(3)	99(4)	12(3)	32(3)	17(2)
C(19)	77(3)	50(2)	64(3)	10(2)	22(2)	14(2)
C(20)	93(5)	115(6)	204(9)	66(6)	51(5)	50(4)
C(21)	153(7)	98(5)	140(7)	3(5)	-90(6)	18(5)
C(22)	113(4)	58(3)	85(4)	21(3)	5(3)	-7(3)
C(23)	64(3)	83(4)	113(5)	-20(3)	-16(3)	16(3)
C(24)	102(5)	170(7)	60(3)	-13(4)	-11(3)	-30(5)
C(25)	70(3)	56(3)	157(6)	-3(3)	-4(4)	-16(3)

Table 5.

Hydrogen coordinates (x 10^4) and istropic displacement parameters (pm^2 x 10^{-1}) for 3.

	x	y	z	U(eq)
H(3)	-3700(5)	4542(2)	9773(3)	78(4)
H(4)	-5124(6)	3766(3)	10469(3)	78(4)
H(5)	-5231(6)	2675(3)	10009(3)	78(4)
H(6)	-3896(5)	2350(2)	8835(3)	78(4)
H(9)	-4596(5)	3402(2)	6744(3)	78(4)
H(10)	-6459(6)	2832(3)	5932(3)	78(4)
H(11)	-6109(6)	1711(2)	5633(3)	78(4)
H(12)	-3933(6)	1176(2)	6137(3)	78(4)
H(13)	-2122(6)	1730(2)	7000(3)	78(4)
H(15)	-725(6)	2540(3)	9274(3)	78(4)
H(16)	1321(7)	1876(3)	9717(4)	78(4)
H(17)	3001(6)	1479(3)	8760(4)	78(4)
H(18)	2555(6)	1704(2)	7336(4)	78(4)
H(19)	513(6)	2364(2)	6878(3)	78(4)
H(20A)	-4807(8)	4932(4)	7224(6)	138(7)
H(20B)	-4604(8)	5575(4)	6672(6)	138(7)
H(20C)	-3812(8)	5529(4)	7588(6)	138(7)
H(21A)	-3780(10)	4323(4)	5595(5)	138(7)
H(21B)	-2313(10)	4637(4)	5212(5)	138(7)
H(21C)	-3764(10)	5081(4)	5351(5)	138(7)
H(22A)	-829(8)	5819(3)	6955(4)	138(7)
H(22B)	-1973(8)	5994(3)	6187(4)	138(7)
H(22C)	-522(8)	5552(3)	6041(4)	138(7)
H(23A)	2556(6)	3382(3)	7913(4)	138(7)
H(23B)	3661(6)	3946(3)	8266(4)	138(7)
H(23C)	3120(6)	3938(3)	7299(4)	138(7)
H(24A)	398(8)	4509(4)	9488(4)	138(7)
H(24B)	2192(8)	4428(4)	9501(4)	138(7)
H(24C)	1129(8)	3798(4)	9408(4)	138(7)
H(25A)	1106(7)	5503(3)	8101(5)	138(7)
H(25B)	2226(7)	5251(3)	7417(5)	138(7)
H(25C)	2765(7)	5257(3)	8383(5)	138(7)

Table 1.

Crystal data and structure refinement for 5

Empirical formula:	$C_{28}\ H_{41}\ Co\ O\ P_4$
Formula weight:	576.42 g/mol
Temperature:	293(2) K
Wavelength:	71.070 pm
Crystal appearance:	black Prisms
Crystal size:	0,19 mm x 0,34 mm x 0,31 mm
Crystal system:	triklinic
Space group:	$P\bar{1}$
Unit cell dimentsions:	
	a = 934.72(6) pm α = 104.127(8)°
	b = 1079.34(7) pm β = 91.399(7)°
	c = 1530.66(14) pm γ = 102.123(11)°
Volume:	1.4595(2) nm^3
Z:	2
Density (calculated):	1.312 g/cm^3
Absorption coefficient:	0.826 mm^{-1}
F(000):	608
Theta range for data collection:	2.00 to 30.00°
Index ranges:	-13 < h < 1, -14 < k < 14, -21 < l < 21
Reflections collected:	9866
Independent reflections:	8469 (R(int) = 0.0258)
Refinement method:	Full-matrix Least-Squares an F^2
Data / Restraints / Parameters:	8448 / 0 / 309
Goodness-of-Fit on F^2:	1.036
Final R indices [I>2sigma(I)] :	R_1 = 0.0479, wR_2 = 0.1137
R indices (all data) :	R_1 = 0.0729, wR_2 = 0.1467
Largest diff. peak and hole :	544 and -393 $e.nm^{-3}$

Table 2.

Atomic coordinates (x 10^4) and equivalent isotropic displacement parameters (pm^2 x 10^{-1}) for 5.

U(eq) is defined as one third of the trace of the orthogonalized (U(ij)) tensor.

	x	y	z	U(eq)
Co(1)	1357(1)	1636(1)	2694(1)	34(1)
P(1)	2152(1)	3132(1)	2000(1)	34(1)
P(2)	3525(1)	1814(1)	3398(1)	42(1)
P(3)	212(1)	2186(1)	3911(1)	46(1)
P(4)	1014(1)	-489(1)	2019(1)	41(1)
O(1)	-1673(2)	657(2)	2089(2)	54(1)
C(1)	-556(3)	1498(3)	2095(2)	38(1)
C(2)	-742(3)	2557(3)	1629(2)	38(1)
C(3)	-2105(3)	2598(3)	1266(2)	47(1)
C(4)	-2248(4)	3629(4)	909(2)	56(1)
C(5)	-1045(4)	4626(4)	922(2)	56(1)
C(6)	322(4)	4581(3)	1263(2)	48(1)
C(7)	480(3)	3523(3)	1604(2)	39(1)
C(8)	3311(3)	4767(3)	2538(2)	41(1)
C(9)	4801(4)	5087(3)	2423(2)	53(1)
C(10)	5666(4)	6317(4)	2876(3)	68(1)
C(11)	5050(5)	7205(4)	3440(3)	75(1)
C(12)	3589(5)	6903(3)	3575(2)	69(1)
C(13)	2715(4)	5689(3)	3132(2)	54(1)
C(14)	3032(3)	2790(3)	915(2)	37(1)
C(15)	3310(3)	3681(3)	384(2)	44(1)
C(16)	3823(4)	3351(3)	-459(2)	51(1)
C(17)	4100(4)	2129(4)	-787(2)	54(1)
C(18)	3871(4)	1236(3)	-260(2)	51(1)
C(19)	3333(3)	1565(3)	580(2)	43(1)
C(20)	5078(4)	1571(4)	2699(3)	66(1)
C(21)	4448(4)	3383(4)	4199(2)	63(1)
C(22)	3640(5)	687(4)	4115(2)	61(1)
C(23)	-1232(5)	897(4)	4155(3)	79(1)
C(24)	-859(4)	3442(4)	3939(3)	62(1)
C(25)	1110(5)	2877(5)	5068(2)	80(1)
C(26)	2514(4)	-1368(3)	1802(3)	60(1)
C(27)	-177(5)	-1618(3)	2554(3)	73(1)
C(28)	132(4)	-1061(3)	865(2)	58(1)

Table 3.

Bond lenths [pm] and angles [°] for 5.

Co(1)-C(1)	195,0(3)	C(14)-P(1)-Co(1)	122.64(9)
Co(1)-P(1)	215,88(7)	C(22)-P(2)-C(21)	99.3(2)
Co(1)-P(3)	218,98(9)	C(22)-P(2)-C(20)	100.3(2)
Co(1)-P(2)	222,15(8)	C(21)-P(2)-C(20)	97.9(2)
Co(1)-P(4)	222,38(8)	C(22)-P(2)-Co(1)	117.50(13)
P(1)-C(7)	182,8(3)	C(21)-P(2)-Co(1)	119.92(13)
P(1)-C(8)	184,6(3)	C(20)-P(2)-Co(1)	117.95(12)
P(1)-C(14)	186,2(3)	C(23)-P(3)-C(24)	98.9(2)
P(2)-C(22)	184,3(3)	C(23)-P(3)-C(25)	97.9(2)
P(2)-C(21)	185,4(4)	C(24)-P(3)-C(25)	96.5(2)
P(2)-C(20)	184,9(4)	C(23)-P(3)-Co(1)	116.84(14)
P(3)-C(23)	184,0(4)	C(24)-P(3)-Co(1)	116.70(12)
P(3)-C(24)	183,9(4)	C(25)-P(3)-Co(1)	125.0(2)
P(3)-C(25)	184,9(4)	C(27)-P(4)-C(28)	99.7(2)
P(4)-C(27)	183,2(4)	C(27)-P(4)-C(26)	98.3(2)
P(4)-C(28)	183,3(3)	C(28)-P(4)-C(26)	96.3(2)
P(4)-C(26)	184,5(3)	C(27)-P(4)-Co(1)	116.45(13)
O(1)-C(1)	123,0(3)	C(28)-P(4)-Co(1)	117.59(12)
C(1)-C(2)	152,3(4)	C(26)-P(4)-Co(1)	123.90(12)
C(2)-C(7)	138,4(4)	O(1)-C(1)-C(2)	115.5(2)
C(2)-C(3)	139,1(4)	O(1)-C(1)-Co(1)	126.0(2)
C(3)-C(4)	138,2(5)	C(2)-C(1)-Co(1)	118.4(2)
C(4)-C(5)	138,0(5)	C(7)-C(2)-C(3)	120.1(3)
C(5)-C(6)	138,4(5)	C(7)-C(2)-C(1)	118.2(2)
C(6)-C(7)	140,0(4)	C(3)-C(2)-C(1)	121.7(3)
C(8)-C(9)	138,9(4)	C(4)-C(3)-C(2)	120.0(3)
C(8)-C(13)	139,4(5)	C(5)-C(4)-C(3)	120.1(3)
C(9)-C(10)	140,4(5)	C(4)-C(5)-C(6)	120.4(3)
C(10)-C(11)	136,0(6)	C(5)-C(6)-C(7)	119.7(3)
C(11)-C(12)	136,9(6)	C(2)-C(7)-C(6)	119.6(3)
C(12)-C(13)	139,1(5)	C(2)-C(7)-P(1)	111.1(2)
C(14)-C(15)	139,3(4)	C(6)-C(7)-P(1)	129.2(2)
C(14)-C(19)	138,6(4)	C(9)-C(8)-C(13)	118.1(3)
C(15)-C(16)	137,8(4)	C(9)-C(8)-P(1)	122.0(2)
C(16)-C(17)	137,3(5)	C(13)-C(8)-P(1)	119.7(2)
C(17)-C(18)	138,8(5)	C(8)-C(9)-C(10)	120.6(4)
C(18)-C(19)	138,5(4)	C(11)-C(10)-C(9)	120.0(4)
		C(10)-C(11)-C(12)	120.4(3)
		C(11)-C(12)-C(13)	120.4(4)
C(1)-Co(1)-P(1)	85.56(8)	C(12)-C(13)-C(8)	120.5(4)
C(1)-Co(1)-P(3)	82.39(8)	C(15)-C(14)-C(19)	117.8(3)
P(1)-Co(1)-P(3)	117.54(3)	C(15)-C(14)-P(1)	122.8(2)
C(1)-Co(1)-P(2)	179.01(9)	C(19)-C(14)-P(1)	119.2(2)
P(1)-Co(1)-P(2)	94.61(3)	C(16)-C(15)-C(14)	121.5(3)
P(3)-Co(1)-P(2)	96.67(3)	C(17)-C(16)-C(15)	120.1(3)
C(1)-Co(1)-P(4)	84.88(8)	C(16)-C(17)-C(18)	119.5(3)
P(1)-Co(1)-P(4)	122.14(3)	C(19)-C(18)-C(17)	120.2(3)
P(3)-Co(1)-P(4)	117.39(3)	C(18)-C(19)-C(14)	121.0(3)
P(2)-Co(1)-P(4)	95.85(3)		
C(7)-P(1)-C(8)	102.69(13)		
C(7)-P(1)-C(14)	99.53(12)		
C(8)-P(1)-C(14)	98.91(12)		
C(7)-P(1)-Co(1)	103.85(9)		
C(8)-P(1)-Co(1)	124.97(9)		

Symmetry transformations used to generate equivalent atoms:

Table 4.

Anisotropic displacement parameters [$pm^2 \times 10^{-1}$] for 5.

The anisotropic displacement factor exponent takes the form: $-2\pi^2 [h^2 a^2 U11 + ... + 2hk a b U12]$

	U11	U22	U33	U23	U13	U12
Co(1)	34(1)	34(1)	34(1)	11(1)	4(1)	6(1)
P(1)	34(1)	33(1)	35(1)	12(1)	3(1)	5(1)
P(2)	40(1)	47(1)	41(1)	16(1)	-1(1)	7(1)
P(3)	53(1)	49(1)	41(1)	14(1)	14(1)	15(1)
P(4)	44(1)	35(1)	44(1)	11(1)	5(1)	7(1)
O(1)	37(1)	48(1)	77(2)	25(1)	2(1)	1(1)
C(1)	35(1)	39(1)	41(1)	10(1)	6(1)	7(1)
C(2)	36(1)	41(1)	37(1)	10(1)	5(1)	11(1)
C(3)	38(2)	55(2)	48(2)	12(1)	2(1	12(1)
C(4)	49(2)	73(2)	53(2)	19(2)	-1(1)	26(2)
C(5)	61(2)	62(2)	57(2)	27(2)	1(2)	25(2)
C(6)	50(2)	47(2)	54(2)	23(1)	3(1)	13(1)
C(7)	40(1)	41(1)	36(1)	12(1)	2(1)	11(1)
C(8)	47(2)	37(1)	37(1)	14(1)	-1(1)	2(1)
C(9)	48(2)	56(2)	48(2)	17(1)	-1(1)	-5(1)
C(10)	59(2)	72(2)	58(2)	26(2)	-12(2)	-24(2)
C(11)	101(3)	49(2)	55(2)	11(2)	-23(2)	-20(2)
C(12)	106(3)	42(2)	50(2)	5(2)	-5(2)	9(2)
C(13)	67(2)	44(2)	51(2)	12(1)	1(2)	9(2)
C(14)	34(1)	40(1)	36(1)	13(1)	1(1)	2(1)
C(15)	48(2)	45(2)	43(2)	16(1)	8(1)	10(1)
C(16)	52(2)	64(2)	44(2)	26(2)	8(1)	12(2)
C(17)	51(2)	74(2)	40(2)	12(2)	8(1)	18(2)
C(18)	51(2)	51(2)	51(2)	6(1)	8(1)	17(1)
C(19)	43(2)	40(1)	46(2)	11(1)	3(1)	8(1)
C(20)	36(2)	100(3)	68(2)	26(2)	8(2)	18(2)
C(21)	67(2)	57(2)	55(2)	11(2)	-16(2)	-4(2)
C(22)	76(2)	59(2)	54(2)	24(2)	-4(2)	20(2)
C(23)	93(3)	69(2)	83(3)	31(2)	49(3)	17(2)
C(24)	69(2)	61(2)	61(2)	10(2)	21(2)	28(2)
C(25)	96(3)	109(3)	39(2)	8(2)	7(2)	41(3)
C(26)	69(2)	47(2)	66(2)	10(2)	7(2)	25(2)
C(27)	92(3)	43(2)	80(3)	17(2)	32(2)	0(2)
C(28)	55(2)	55(2)	53(2)	0(2)	-2(2)	6(2)

Table 5.

Hydrogen coordinates (x 10^4) and istropic displacement parameters (pm^2 x 10^{-1}) for 5.

	x	y	z	U(eq)
H(3)	-2919(3)	1932(3)	1264(2)	65(3)
H(4)	-3158(4)	3650(4)	660(2)	65(3)
H(5)	-1154(4)	5333(4)	700(2)	65(3)
H(6)	1132(4)	5251(3)	1266(2)	65(3)
H(9)	5229(4)	4480(3)	2041(2)	65(3)
H(10)	6661(4)	6524(4)	2791(3)	65(3)
H(11)	5624(5)	8022(4)	3736(3)	65(3)
H(12)	3178(5)	7514(3)	3966(2)	65(3)
H(13)	1725(4)	5490(3)	3232(2)	65(3)
H(15)	3146(3)	4518(3)	603(2)	65(3)
H(16)	3982(4)	3957(3)	-806(2)	65(3)
H(17)	4438(4)	1901(4)	-1358(2)	65(3)
H(18)	4080(4)	414(3)	-472(2)	65(3)
H(19)	3172(3)	956(3)	925(2)	65(3)
H(22A)	3193(5)	-194(4)	3786(2)	104(4)
H(22B)	3134(5)	926(4)	4648(2)	104(4)
H(22C)	4651(5)	743(4)	4286(2)	104(4)
H(23A)	-839(5)	147(4)	4164(3)	104(4)
H(23B)	-2030(5)	652(4)	3696(3)	104(4)
H(23C)	-1581(5)	1221(4)	4733(3)	104(4)
H(24A)	-244(4)	4204(4)	3819(3)	104(4)
H(24B)	-1220(4)	3674(4)	4525(3)	104(4)
H(24C)	-1671(4)	3102(4)	3488(3)	104(4)
H(25A)	1920(5)	3590(5)	5069(2)	104(4)
H(25B)	1460(5)	2210(5)	5268(2)	104(4)
H(25C)	415(5)	3189(5)	5468(2)	104(4)
H(26A)	3262(4)	-894(3)	1512(3)	104(4)
H(26B)	2135(4)	-2229(3)	1416(3)	104(4)
H(26C)	2925(4)	-1438(3)	2364(3)	104(4)
H(27A)	157(5)	-1433(3)	3180(3)	104(4)
H(27B)	-146(5)	-2503(3)	2257(3)	104(4)
H(27C)	-1166(5)	-1508(3)	2506(3)	104(4)
H(28A)	650(4)	-548(3)	493(2)	104(4)
H(28B)	-867(4)	-969(3)	874(2)	104(4)
H(28C)	152(4)	-1966(3)	626(2)	104(4)

Supporting Information

Table 1.

Crystal data and structure refinement for 6

Empirical formula:	$C_{25}\ H_{33}\ Cl\ Co\ O\ P_3$
Formula weight:	536.80 g/mol
Temperature:	293(2) K
Wavelength:	71.073 pm
Crystal appearance:	dark yellow Prisms
Crystal system:	monoklinic
Space group:	$P2_1/n$
Unit cell dimensions:	
	a = 856.89(14) pm α = 90°
	b = 2005.7(3) pm β = 94.714(14)°
	c = 1531.2(2) pm γ = 90°
Volume:	2.6226(7) nm^3
Z:	4
Density (calculated):	1.360 g/cm^3
Absorption coefficient:	0.955 mm^{-1}
F(000):	1120
Crystal size:	0,45 x 0,30 x 0,14 mm
Theta range for data collecion:	2.03 to 25.00°
Index ranges:	$-10 < h < 1, -23 < k < 23, -18 < l < 18$
Reflections collected:	11020
Independent reflections:	4620 (R(int) = 0.0376)
Refinement method:	Full-matrix Least-Squares an F^2
Data / Restraints / Parameters:	4620 / 0 / 280
Goodness-of-Fit on F^2:	1.036
Final R indices [$I>2\sigma(I)$] :	R1 = 0.0481, wR2 = 0.1219
R indices (all data):	R1 = 0.0667, wR2 = 0.1340
Largest diff. peak and hole :	1109 and -446 $e.nm^{-3}$

Table 2.

Atomic coordinates (x 10^4) and equivalent isotropic displacement parameters (pm^2 x 10^{-1}) for 6.

U(eq) is defined as one third of the trace of the orthogonalized (U(ij)) tensor.

	x	y	z	U(eq)
Co(1)	1430(1)	876(1)	2767(1)	42(1)
P(1)	1948(1)	1878(1)	2332(1)	39(1)
P(2)	2240(1)	-10(1)	3551(1)	58(1)
P(3)	-952(1)	655(1)	2092(1)	54(1)
Cl	328(1)	1365(1)	4013(1)	64(1)
O(1)	2229(4)	-31(1)	1503(2)	72(1)
C(1)	2288(4)	550(2)	1751(3)	47(1)
C(2)	3108(4)	1040(2)	1184(2)	43(1)
C(3)	3908(5)	832(2)	472(3)	53(1)
C(4)	4684(5)	1293(2)	7(3)	60(1)
C(5)	4697(5)	1958(2)	237(3)	60(1)
C(6)	3898(5)	2174(2)	930(2)	51(1)
C(7)	3081(4)	1713(2)	1404(2)	41(1)
C(8)	3270(4)	2398(2)	3038(2)	43(1)
C(9)	4706(5)	2133(2)	3339(3)	54(1)
C(10)	5812(5)	2509(2)	3832(3)	62(1)
C(11)	5469(6)	3156(2)	4051(3)	64(1)
C(12)	4051(7)	3421(2)	3775(3)	71(1)
C(13)	2954(5)	3048(2)	3267(3)	57(1)
C(14)	390(4)	2452(2)	1923(2)	43(1)
C(15)	-661(5)	2692(2)	2489(3)	63(1)
C(16)	-1922(6)	3086(2)	2167(4)	72(1)
C(17)	-2169(5)	3221(2)	1291(3)	66(1)
C(18)	-1154(5)	2983(2)	727(3)	65(1)
C(19)	141(5)	2605(2)	1047(3)	57(1)
C(20)	1055(8)	-747(3)	3631(4)	105(2)
C(21)	2716(9)	174(3)	4696(4)	106(2)
C(22)	4063(7)	-386(3)	3253(4)	108(2)
C(23)	-1697(7)	-181(3)	2087(6)	123(3)
C(24)	-1121(8)	782(4)	905(4)	124(3)
C(25)	-2580(6)	1123(4)	2408(6)	135(3)

Table 3.

Bond lenths [pm] and angles [°] for 6.

Co(1)-C(1)	189.1(4)
Co(1)-P(1)	217.50(10)
Co(1)-P(2)	222.30(11)
Co(1)-P(3)	225.49(12)
Co(1)-Cl	240.61(11)
P(1)-C(7)	181.8(3)
P(1)-C(8)	182.6(4)
P(1)-C(14)	183.3(3)
P(2)-C(20)	180.4(5)
P(2)-C(21)	180.5(5)
P(2)-C(22)	182.6(5)
P(3)-C(25)	178.2(5)
P(3)-C(23)	179.3(5)
P(3)-C(24)	182.9(6)
O(1)-C(1)	122.6(4)
C(1)-C(2)	152.1(5)
C(2)-C(7)	139.2(5)
C(2)-C(3)	139.9(5)
C(3)-C(4)	137.2(6)
C(4)-C(5)	137.8(6)
C(5)-C(6)	137.9(6)
C(6)-C(7)	139.8(5)
C(8)-C(13)	138.2(5)
C(8)-C(9)	138.5(5)
C(9)-C(10)	138.6(6)
C(10)-C(11)	137.7(6)
C(11)-C(12)	136.1(7)
C(12)-C(13)	138.8(6)
C(14)-C(19)	137.5(5)
C(14)-C(15)	138.6(5)
C(15)-C(16)	139.6(6)
C(16)-C(17)	136.9(7)
C(17)-C(18)	136.1(6)
C(18)-C(19)	140.0(6)

C(1)-Co(1)-P(1)	88.01(11)
C(1)-Co(1)-P(2)	92.42(12)
P(1)-Co(1)-P(2)	147.29(5)
C(1)-Co(1)-P(3)	87.30(12)
P(1)-Co(1)-P(3)	103.96(4)
P(2)-Co(1)-P(3)	108.73(5)
C(1)-Co(1)-Cl	176.08(12)
P(1)-Co(1)-Cl	88.23(4)
P(2)-Co(1)-Cl	91.33(4)
P(3)-Co(1)-Cl	92.56(5)

C(7)-P(1)-C(8)	102.8(2)
C(7)-P(1)-C(14)	105.5(2)
C(8)-P(1)-C(14)	104.1(2)
C(7)-P(1)-Co(1)	101.91(11)
C(8)-P(1)-Co(1)	118.59(12)
C(14)-P(1)-Co(1)	121.57(12)
C(20)-P(2)-C(21)	100.6(3)
C(20)-P(2)-C(22)	100.2(3)
C(21)-P(2)-C(22)	101.4(3)
C(20)-P(2)-Co(1)	122.6(2)
C(21)-P(2)-Co(1)	113.4(2)
C(22)-P(2)-Co(1)	115.5(2)
C(25)-P(3)-C(23)	102.0(3)
C(25)-P(3)-C(24)	101.3(4)
C(23)-P(3)-C(24)	97.3(4)
C(25)-P(3)-Co(1)	118.1(2)
C(23)-P(3)-Co(1)	119.6(2)
C(24)-P(3)-Co(1)	115.0(2)
O(1)-C(1)-C(2)	116.5(3)
O(1)-C(1)-Co(1)	125.1(3)
C(2)-C(1)-Co(1)	118.3(2)
C(7)-C(2)-C(3)	119.7(3)
C(7)-C(2)-C(1)	118.2(3)
C(3)-C(2)-C(1)	122.1(3)
C(4)-C(3)-C(2)	119.5(4)
C(3)-C(4)-C(5)	120.9(4)
C(4)-C(5)-C(6)	120.4(4)
C(5)-C(6)-C(7)	119.5(4)
C(2)-C(7)-C(6)	119.8(3)
C(2)-C(7)-P(1)	112.7(3)
C(6)-C(7)-P(1)	127.4(3)
C(13)-C(8)-C(9)	117.7(4)
C(13)-C(8)-P(1)	124.3(3)
C(9)-C(8)-P(1)	118.0(3)
C(8)-C(9)-C(10)	121.4(4)
C(11)-C(10)-C(9)	119.7(4)
C(12)-C(11)-C(10)	119.7(4)
C(11)-C(12)-C(13)	120.7(4)
C(8)-C(13)-C(12)	120.8(4)
C(19)-C(14)-C(15)	118.4(4)
C(19)-C(14)-P(1)	121.6(3)
C(15)-C(14)-P(1)	119.8(3)
C(14)-C(15)-C(16)	120.0(4)
C(17)-C(16)-C(15)	120.7(4)
C(18)-C(17)-C(16)	119.8(4)
C(17)-C(18)-C(19)	119.8(4)
C(14)-C(19)-C(18)	121.2(4)

Symmetry transformations used to generate equivalent atoms:

Table 4.

Anisotropic displacement parameters [$pm^2 \times 10^{-1}$] for 6.

The anisotropic displacement factor exponent takes the form: $-2\pi^2 [h^2 \cdot a^2 \cdot U11 + ... + 2hk \cdot a \cdot b \cdot U12]$

	U11	U22	U33	U23	U13	U12
Co(1)	43(1)	34(1)	51(1)	1(1)	6(1)	2(1)
P(1)	39(1)	34(1)	45(1)	-3(1)	5(1)	2(1)
P(2)	63(1)	46(1)	64(1)	7(1)	3(1)	5(1)
P(3)	41(1)	44(1)	78(1)	-4(1)	5(1)	-2(1)
Cl	79(1)	63(1)	53(1)	-2(1)	16(1)	14(1)
O(1)	89(2)	41(2)	88(2)	-16(1)	28(2)	-6(2)
C(1)	42(2)	39(2)	61(2)	-7(2)	6(2)	3(2)
C(2)	37(2)	44(2)	46(2)	-3(2)	0(2)	6(2)
C(3)	49(2)	55(2)	56(2)	-12(2)	5(2)	8(2)
C(4)	51(2)	78(3)	54(2)	-4(2)	14(2)	7(2)
C(5)	50(2)	72(3)	60(2)	8(2)	10(2)	-5(2)
C(6)	52(2)	47(2)	56(2)	5(2)	7(2)	0(2)
C(7)	36(2)	43(2)	45(2)	-4(2)	3(2)	1(2)
C(8)	48(2)	37(2)	45(2)	1(1)	7(2)	-6(2)
C(9)	49(2)	55(2)	58(2)	-11(2)	7(2)	-3(2)
C(10)	49(2)	77(3)	61(2)	-4(2)	4(2)	-11(2)
C(11)	82(3)	59(3)	50(2)	-2(2)	-4(2)	-28(2)
C(12)	109(4)	41(2)	61(3)	-3(2)	-13(3)	-13(2)
C(13)	69(3)	40(2)	60(2)	0(2)	-9(2)	2(2)
C(14)	42(2)	33(2)	55(2)	-3(2)	5(2)	5(2)
C(15)	70(3)	54(2)	68(3)	12(2)	24(2)	17(2)
C(16)	63(3)	61(3)	99(4)	17(2)	37(3)	27(2)
C(17)	49(2)	55(2)	94(3)	17(2)	6(2)	16(2)
C(18)	65(3)	65(3)	63(3)	1(2)	-3(2)	18(2)
C(19)	56(2)	60(2)	54(2)	-9(2)	0(2)	17(2)
C(20)	125(5)	70(3)	117(5)	29(3)	0(4)	-22(3)
C(21)	147(6)	90(4)	76(4)	3(3)	-27(4)	31(4)
C(22)	105(5)	99(4)	120(5)	28(4)	20(4)	54(4)
C(23)	76(4)	60(3)	225(8)	-7(4)	-27(5)	-19(3)
C(24)	82(4)	190(8)	96(4)	15(5)	-21(3)	-31(5)
C(25)	45(3)	131(5)	227(9)	-85(6)	1(4)	22(3)

Table 5.

Hydrogen coordinates (x 10^4) and istropic displacement parameters (pm^2 x 10^{-1}) for 6.

	x	y	z	U(eq)
H(3)	3913(5)	384(2)	314(3)	64
H(4	5208(5)	1156(2)	-470(3)	73
H(5)	5249(5)	2262(2)	-77(3)	72
H(6)	3901(5)	2624(2)	1080(2)	62
H(9)	4933(5)	1692(2)	3208(3)	65
H(10)	6782(5)	2326(2)	4014(3)	75
H(11)	6202(6)	3410(2)	4386(3)	77
H(12)	3815(7)	3856(2)	3927(3)	86
H(13)	1995(5)	3238(2)	3079(3)	68
H(15)	-525(5)	2590(2)	3083(3)	76
H(16)	-2603(6)	3258(2)	2553(4)	87
H(17)	-3027(5)	3475(2)	1081(3)	79
H(18)	-1321(5)	3072(2)	131(3)	78
H(19)	846(5)	2454(2)	661(3)	68
H(20A)	714(8)	-902(3)	3053(4)	157
H(20B)	159(8)	-643(3)	3943(4)	157
H(20C)	1661(8)	-1088(3)	3939(4)	157
H(21A)	3361(9)	565(3)	4750(4)	160
H(21B)	3272(9)	-196(3)	4971(4)	160
H(21C)	1769(9)	250(3)	4975(4)	160
H(22A)	4825(7)	-42(3)	3186(4)	161
H(22B)	3872(7)	-624(3)	2711(4)	161
H(22C)	4450(7)	-689(3)	3705(4)	161
H(23A)	-905(7)	-484(3)	1922(6)	184
H(23B)	-2600(7)	-213(3)	1674(6)	184
H(23C)	-1985(7)	-293(3)	2661(6)	184
H(24A)	-290(8)	550(4)	651(4)	186
H(24B)	-1050(8)	1250(4)	780(4)	186
H(24C)	-2112(8)	615(4)	660(4)	186
H(25A)	-2313(6)	1588(4)	2434(6)	202
H(25B)	-2845(6)	977(4)	2975(6)	202
H(25C)	-3460(6)	1057(4)	1987(6)	202

Table 1.

Crystal data and structure refinement for 10

Empirical formula:	$C_{25}H_{32}CoIOP_3$	
Formula weight:	627.25 g/mol	
Temperature:	293(2) K	
Wavelength:	71.073 pm	
Crystal appearance:	black Prisms	
Crystal system:	monoclinic	
Space group:	$P2_1/c$	
Unit cell dimensions:		
	a = 904.5(3) pm	α = 90.00°
	b = 3334.7(7) pm	β = 98.83(4)°
	c = 915.0(3) pm	γ = 90.00°
Volume:	2.7269(14) nm^3	
Z:	4	
Density (calculated):	1.528 g/cm^3	
Absorption coefficient:	1.952 mm^{-1}	
F(000):	1260	
Crystal size:	0,60 x 0,50 x 0,53 mm	
Theta range for data collection:	2.28 to 30.96°	
Index range:	$-10 < h < 1$, $-1 < k < 39$, $-10 < l < 10$	
Reflections collected:	6916	
Indepentent reflections:	4788 ($R_{(int)}$ = 0.0330)	
Refinement method:	Full-matrix Least-Squares an F^2	
Data / Restraints / Parameters:	4788 / 0 / 280	
Goodness-of-Fit on F^2:	1.066	
Final R indices [$I>2\sigma(I)$] :	R_1 = 0.0359, wR_2 = 0.0822	
R indices (sämtliche Daten) :	R_1 = 0.0483, wR_2 = 0.0969	
Largest diff. peak and hole :	681 and -405 $e.nm^{-3}$	

Table 2.

Atomic coordinates (x 10^4) and equivalent isotropic displacement parameters (pm^2 x 10^{-1}) for 10.

U(eq) is defined as one third of the trace of the orthogonalized (U(ij)) tensor.

	x	y	z	U(eq)
I(1)	4611(1)	6202(1)	422(1)	73(1)
Co(1)	2420(1)	5934(1)	-1625(1)	41(1)
P(1)	1420(1)	6486(1)	-2703(1)	40(1)
P(2)	976(1)	5821(1)	114(1)	47(1)
P(3)	4107(1)	5748(1)	-3049(1)	55(1)
O(1)	974(4)	5262(1)	-2868(4)	69(1)
C(1)	1033(5)	5633(1)	-2920(4)	48(1)
C(2)	-33(4)	5852(1)	-4078(4)	47(1)
C(3)	-1040(5)	5644(2)	-5115(5)	58(1)
C(4)	-2017(5)	5855(2)	-6140(5)	62(1)
C(5)	-2026(5)	6264(2)	-6152(5)	66(1)
C(6)	-1031(5)	6474(2)	-5140(5)	58(1)
C(7)	-15(4)	6266(1)	-4099(4)	46(1)
C(8)	2578(4)	6793(1)	-3737(4)	45(1)
C(9)	3744(5)	7018(2)	-2980(5)	65(1)
C(10)	4762(6)	7207(2)	-3715(6)	75(2)
C(11)	4666(6)	7175(2)	-5207(6)	71(1)
C(12)	3535(6)	6961(2)	-5981(5)	74(1)
C(13)	2488(6)	6772(2)	-5255(5)	62(1)
C(14)	403(5)	6830(1)	-1642(4)	47(1)
C(15)	-1131(5)	6806(2)	-1703(5)	61(1)
C(16)	-1865(6)	7014(2)	-729(6)	77(2)
C(17)	-1085(7)	7258(2)	314(7)	80(2)
C(18)	446(7)	7285(2)	407(7)	81(2)
C(19)	1181(6)	7073(2)	-555(6)	68(1)
C(20)	1589(6)	5359(2)	1030(6)	73(1)
C(21)	958(6)	6173(2)	1622(5)	66(1)
C(22)	-1019(5)	5737(2)	-431(6)	67(1)
C(23)	5664(6)	6077(2)	-3250(7)	77(2)
C(24)	5014(7)	5292(2)	-2297(7)	91(2)
C(25)	3489(7)	5613(2)	-4973(6)	87(2)

Table 3.

Bond lenths [pm] and angles [°] for 10.

I(1)-Co(1)	266.29(12)	C(7)-P(1)-C(14)	105.0(2)
Co(1)-C(1)	187.8(4)	C(8)-P(1)-C(14)	107.2(2)
Co(1)-P(1)	221.49(12)	C(7)-P(1)-Co(1)	100.16(14)
Co(1)-P(2)	224.02(14)	C(8)-P(1)-Co(1)	117.99(13)
Co(1)-P(3)	224.09(14)	C(14)-P(1)-Co(1)	119.12(14)
P(1)-C(7)	182.8(4)	C(20)-P(2)-C(21)	103.8(3)
P(1)-C(8)	183.0(4)	C(20)-P(2)-C(22)	102.6(3)
P(1)-C(14)	183.9(4)	C(21)-P(2)-C(22)	100.6(2)
P(2)-C(20)	180.0(5)	C(20)-P(2)-Co(1)	107.6(2)
P(2)-C(21)	181.3(5)	C(21)-P(2)-Co(1)	120.3(2)
P(2)-C(22)	181.9(5)	C(22)-P(2)-Co(1)	119.6(2)
P(3)-C(24)	181.3(6)	C(24)-P(3)-C(23)	103.5(3)
P(3)-C(23)	181.8(5)	C(24)-P(3)-C(25)	102.3(3)
P(3)-C(25)	182.0(5)	C(23)-P(3)-C(25)	100.3(3)
O(1)-C(1)	123.8(5)	C(24)-P(3)-Co(1)	108.7(2)
C(1)-C(2)	150.8(6)	C(23)-P(3)-Co(1)	119.9(2)
C(2)-C(7)	138.1(6)	C(25)-P(3)-Co(1)	119.7(2)
C(2)-C(3)	139.5(6)	O(1)-C(1)-C(2)	119.0(4)
C(3)-C(4)	137.8(7)	O(1)-C(1)-Co(1)	122.5(3)
C(4)-C(5)	136.4(7)	C(2)-C(1)-Co(1)	118.5(3)
C(5)-C(6)	137.9(7)	C(7)-C(2)-C(3)	119.7(4)
C(6)-C(7)	140.0(6)	C(7)-C(2)-C(1)	119.1(3)
C(8)-C(13)	138.0(6)	C(3)-C(2)-C(1)	121.1(4)
C(8)-C(9)	138.8(6)	C(4)-C(3)-C(2)	119.5(5)
C(9)-C(10)	137.5(6)	C(5)-C(4)-C(3)	121.2(4)
C(10)-C(11)	135.8(7)	C(4)-C(5)-C(6)	119.9(5)
C(11)-C(12)	135.4(7)	C(5)-C(6)-C(7)	120.0(5)
C(12)-C(13)	139.0(7)	C(2)-C(7)-C(6)	119.7(4)
C(14)-C(15)	138.2(6)	C(2)-C(7)-P(1)	113.5(3)
C(14)-C(19)	138.7(6)	C(6)-C(7)-P(1)	126.8(3)
C(15)-C(16)	137.7(7)	C(13)-C(8)-C(9)	116.9(4)
C(16)-C(17)	136.5(8)	C(13)-C(8)-P(1)	122.7(3)
C(17)-C(18)	137.7(8)	C(9)-C(8)-P(1)	119.7(3)
C(18)-C(19)	137.7(7)	C(10)-C(9)-C(8)	121.2(4)
		C(11)-C(10)-C(9)	120.7(5)
		C(12)-C(11)-C(10)	119.6(5)
C(1)-Co(1)-P(1)	88.58(14)	C(11)-C(12)-C(13)	120.3(5)
C(1)-Co(1)-P(2)	87.26(13)	C(8)-C(13)-C(12)	121.2(4)
P(1)-Co(1)-P(2)	102.33(5)	C(15)-C(14)-C(19)	117.3(4)
C(1)-Co(1)-P(3)	86.20(13)	C(15)-C(14)-P(1)	121.5(3)
P(1)-Co(1)-P(3)	103.81(5)	C(19)-C(14)-P(1)	120.2(3)
P(2)-Co(1)-P(3)	152.85(5)	C(16)-C(15)-C(14)	121.7(5)
C(1)-Co(1)-I(1)	167.32(14)	C(17)-C(16)-C(15)	120.2(5)
P(1)-Co(1)-I(1)	104.09(4)	C(16)-C(17)-C(18)	119.3(5)
P(2)-Co(1)-I(1)	90.53(4)	C(19)-C(18)-C(17)	120.4(5)
P(3)-Co(1)-I(1)	90.13(4)	C(18)-C(19)-C(14)	121.1(5)
C(7)-P(1)-C(8)	105.3(2)		

Symmetry transformations used to generate equivalent atoms:

Table 4.

Anisotropic displacement parameters [$pm^2 \times 10^{-1}$] for 10.

The anisotropic displacement factor exponent takes the form: $-2\pi^2 [h^2 a^2 U11 + ... + 2hk a b U12]$

	U11	U22	U33	U23	U13	U12
I(1)	47(1)	114(1)	53(1)	-12(1)	-4(1)	-9(1)
Co(1)	37(1)	47(1)	39(1)	-1(1)	4(1)	2(1)
P(1)	37(1)	44(1)	39(1)	-3(1)	2(1)	-2(1)
P(2)	47(1)	49(1)	46(1)	2(1)	9(1)	-2(1)
P(3)	48(1)	65(1)	52(1)	-4(1)	10(1)	14(1)
O(1)	81(2)	50(2)	74(2)	-11(2)	5(2)	-8(2)
C(1)	48(2)	52(2)	44(2)	-10(2)	8(2)	-3(2)
C(2)	39(2)	59(3)	44(2)	-15(2)	9(2)	-6(2)
C(3)	55(3)	67(3)	53(2)	-22(2)	12(2)	-15(2)
C(4)	51(3)	92(4)	43(2)	-17(2)	2(2)	-13(2)
C(5)	44(2)	104(4)	48(3)	-8(3)	-2(2)	3(2)
C(6)	49(2)	67(3)	54(2)	3(2)	-2(2)	8(2)
C(7)	40(2)	54(2)	42(2)	-8(2)	5(2)	0(2)
C(8)	43(2)	43(2)	50(2)	1(2)	7(2)	1(2)
C(9)	61(3)	87(4)	47(2)	-5(2)	10(2)	-20(3)
C(10)	72(3)	88(4)	65(3)	-8(3)	17(3)	-34(3)
C(11)	69(3)	74(3)	72(3)	13(3)	21(3)	-16(3)
C(12)	89(4)	88(4)	46(3)	6(2)	21(2)	-12(3)
C(13)	70(3)	71(3)	44(2)	-4(2)	9(2)	-15(2)
C(14)	50(2)	41(2)	49(2)	-2(2)	10(2)	0(2)
C(15)	47(2)	74(3)	61(3)	-14(2)	4(2)	1(2)
C(16)	55(3)	91(4)	88(4)	-16(3)	18(3)	16(3)
C(17)	85(4)	64(3)	98(4)	-20(3)	39(3)	6(3)
C(18)	92(4)	72(3)	86(4)	-31(3)	30(3)	-19(3)
C(19)	59(3)	75(3)	73(3)	-28(3)	21(2)	-21(2)
C(20)	84(4)	65(3)	68(3)	18(2)	4(3)	0(3)
C(21)	75(3)	76(3)	53(3)	-6(2)	25(2)	-9(3)
C(22)	51(3)	75(3)	77(3)	8(3)	15(2)	-8(2)
C(23)	54(3)	103(4)	81(4)	-2(3)	29(3)	3(3)
C(24)	97(4)	83(4)	93(4)	0(3)	15(3)	41(3)
C(25)	91(4)	116(5)	57(3)	-24(3)	20(3)	9(4)

Table 5.

Hydrogen coordinates (x 10^4) and istropic displacement parameters (pm^2 x 10^{-1}) for 10.

	x	y	z	U(eq)
H(3)	-1053(5)	5365(2)	-5114(5)	70
H(4)	-2681(5)	5715(2)	-6836(5)	75
H(5)	-2703(5)	6401(2)	-6842(5)	80
H(6)	-1034(5)	6752(2)	-5149(5)	69
H(9)	3838(5)	7040(2)	-1957(5)	78
H(10)	5525(6)	7359(2)	-3186(6)	90
H(11)	5373(6)	7299(2)	-5693(6)	85
H(12)	3459(6)	6941(2)	-7003(5)	88
H(13)	1712(6)	6628(2)	-5801(5)	74
H(15)	-1681(5)	6646(2)	-2420(5)	74
H(16)	-2896(6)	6988(2)	-781(6)	93
H(17)	-1582(7)	7404(2)	954(7)	96
H(18)	987(7)	7447(2)	1124(7)	98
H(19)	2216(6)	7092(2)	-474(6)	82
H(20A)	1631(6)	5152(2)	306(6)	110
H(20B)	898(6)	5282(2)	1678(6)	110
H(20C)	2565(6)	5396(2)	1596(6)	110
H(21A)	640(6)	6431(2)	1229(5)	99
H(21B)	1946(6)	6194(2)	2176(5)	99
H(21C)	280(6)	6080(2)	2258(5)	99
H(22A)	-1465(5)	5969(2)	-938(6)	101
H(22B)	-1475(5)	5688(2)	434(6)	101
H(22C)	-1172(5)	5508(2)	-1076(6)	101
H(23A)	5286(6)	6330(2)	-3648(7)	116
H(23B)	6266(6)	5957(2)	-3908(7)	116
H(23C)	6261(6)	6119(2)	-2301(7)	116
H(24A)	4269(7)	5097(2)	-2151(7)	137
H(24B)	5625(7)	5349(2)	-1368(7)	137
H(24C)	5630(7)	5187(2)	-2975(7)	137
H(25A)	2983(7)	5836(2)	-5486(6)	131
H(25B)	2817(7)	5388(2)	-5018(6)	131
H(25C)	4340(7)	5541(2)	-5428(6)	131