Coordination Chemistry Reviews
Elsevier Publishing Company, Amsterdam – Printed in The Netherlands

X-RAY BIBLIOGRAPHY

M. KEETON
125, Kendal Ave., Toronto, Ontario (Canada)
(Received October 1st, 1971)

$[Ni(N_3P)Br]B(C_6H_5)_4$
($P2_1/c$) $R = 8.2\%$ for 4424 measured reflexions. The cation $Ni(N_3P)Br^+$ is square planar. The third nitrogen atom of the ligand is non-bonding. Ni–Br is 2.298(6), Ni–P 2.141(11) Ni–N 1.951(25) and 2.024(28) Å, respectively.
I. Bertini, P. Dapporto, G. Fallini and L. Sacconi, *Inorg. Chem.*, 10 (1971) 1703.

Octaselenium (2+) tetrachloroaluminate, $Se_8^{2+}(AlCl_4^-)_2$
($Pca2_1$) $R = 7.7\%$ on 721 significant reflexions. The structure is composed of individual $AlCl_4^-$ and Se_8^{2+} ions. The Se_8^{2+} ion is bicyclic with one weak Se–Se band at 2.84 Å.
R.K. McMullen, D.J. Prince and J.D. Corbett, *Inorg. Chem.*, 10 (1971) 1749.

$GeCd_4S_6$
(Cc) $R = 7.15\%$ for 275 non-zero reflexions. Two interpenetrating body centred sulfur icosahedra make up the structure with the Cd^{2+} and Ge^{4+} in tetrahedral coordination.
K. Susa and H. Steinfink, *Inorg. Chem.*, 10 (1971) 1755.

Potassium heptafluorodiantimonate, KSb_2F_7
($P2_1/c$) $R = 2.5\%$ for 1856 observed reflexions. The structure has SbF_4^- trigonal–bipyramidal ions and pyramidal SbF_3 molecules (including lone pairs). Axial fluorines of SbF_4^- ions form a distorted octahedral coordination sphere around the SbF_3 molecule. The structure does *not* contain $Sb_2F_7^-$ ions.
S.H. Mastin and R.R. Ryan, *Inorg. Chem.*, 10 (1971) 1757.

$W_2Cl_6(C_5H_5N)_4 \cdot x(CH_3)_2CO$
($P3_121(-D_3^4)$) $R = 4.1\%$ for 1017 above background reflexions. The symmetry of the molecule is 2-C_2 with a twofold axis passing through the bridged tungsten atoms. Two octahedra share a common edge. W–W is 2.737(3) Å. The acetone of crystallisation was not located.
R.B. Jackson and W.E. Streib, *Inorg. Chem.*, 10 (1971) 1760.

Tetrakis(5-bromo-8-quinolinato) tungsten (IV) benzine, $W(C_9H_5NOBr)_4 \cdot C_6H_6$
($P\bar{1}$) $R = 6.4\%$ for 2954 unique reflexions. The complex contains dodacahedrally

coordinated tungsten and is close to D_{2d} symmetry. The Orgel postulate concerning eight coordinate d^2 MA_4B_4 stereochemistry is evaluated.
W.D. Bonds, R.D. Archer and W.C. Hamilton, *Inorg. Chem.*, 10 (1971) 1764.

Manganese(II) hexacyanoruthenate(II) octahydrate, $Mn_2[Ru(CN)_6]\cdot 8H_2O$
($P2_1n$) R = 5.4% for 1476 reflexions. Ruthenium is in a slightly distorted octahedral environment. Ru–C is 2.028(6) and C–N 1.160(8) Å. Each manganese atom is coordinated by three nitrogen atoms and three water molecules.
M. Rüegg, A. Ludi and K. Rieder, *Inorg. Chem.*, 10 (1971) 1773.

Bis(imidotetramethyldithiodiphosphino-S,S) iron(II), $[SP(CH_3)_2NP(CH_3)_2]_2Fe^{II}$
($P2_1/c$) R = 5.98% for 1811 independent, non-zero reflections. Discrete units of the complex are separated by normal Van der Waals distances. The central iron is tetrahedrally coordinated by four sulfur atoms.
M.R. Churchill and J. Wormald, *Inorg. Chem.*, 10 (1971) 1778.

Racemic (4-(2-aminoethyl)-1, 4, 7, 10-tetraazadecane)azidocobalt(III) nitrate hydrate
($P2_1/c$) R = 6.8% for 2030 independent non-zero reflexions. The structure consists of of *sym*-Co(trenen)N_3^{2+} cations and NO_3^- anions and water. The metal is octahedrally coordinated with a quinquedentate polyamine ligand. The azide occupies the remaining position.
I.E. Maxwell, *Inorg. Chem.*, 10 (1971) 1782.

μ-Amido-μ-hydroxo-bis[bis(ethylenediamine)cobalt(III)] tetranitrate hydrate,
$[(en)_2Co\text{-}\mu\text{-}(NH_2\cdot OH)\text{-}Co(en)_2](NO_3)_4\cdot H_2O$
($P2_1/n$) R = 5.5% for 1794 reflexions. The cobalt atoms are 2.98 Å apart and are in slightly distorted octahedral coordination.
U. Thewalt and R.E. Marsh, *Inorg. Chem.*, 10 (1971) 1789.

cis-Dichlorobis(dimethylphenylphosphine)palladium(II)
($P4_2/n$) R = 5.8% for 1722 independent reflexions. A strong *trans* effect is evident in the almost *cis* square planar structure. Pd–P is 2.260(2) and Pd–Cl 2.362(3) Å.
L.L. Martin and R.A. Jacobson, *Inorg. Chem.*, 10 (1971) 1795.

Bromotris(3-aminopropyl)aminecobalt(II) bromide hemiethanolate,
$[Co(trpn)Br]Br\cdot 0.5\ C_2H_5OH$
R = 6.5% for 578 reflexions. Co(trpn)Br^+ cations with trigonal bipyramidal structure have axial and equatorial Co–N 2.194(9) and 2.055(10) Å. A Co–Br bond (2.658(3) Å) is long.
J.L. Shafer and K.N. Raymond, *Inorg. Chem.*, 10 (1971) 1799.

4-Methylpyridinium triphenylphosphine tribromozincate, $[4\text{-}CH_3C_5H_4NH][ZnBr_3(C_6H_5)_3P]$
($P2_1/c$) $R = 6.3\%$ for 1533 independent non-zero reflexions. The zinc atom is in slightly distorted tetrahedral coordination, with one bromine atom strongly hydrogen bonded to the N–H proton of the 4-methylpyridinium cation.
R.E. DeSimone and G.D. Stucky, *Inorg. Chem.*, 8 (1971) 1808.

Zinc nitrate-2-mercury(II)cyanide heptahydrate $Zn(NO_3)_2 \cdot 2Hg(CN)_2 \cdot 7H_2O$
($C2/c$) $R = 6.0\%$ for 954 significant reflexions. The zinc atom is octahedrally coordinated by four water molecules two almost linear $Hg(CN)_2$ groups.
C. Mahon, *Inorg. Chem.*, 10 (1971) 1813.

$[(B_9C_2H_{10})_2S_2CH]Co^{III}$
($P2_12_12_1$) $R = 7.88\%$ for 1558 independent non-zero relfexions. $[(B_9C_2H_{10})_2S_2CH]Co^{III}$ units are separated by normal Van der Waals distances. The cobalt atom is sandwiched between two mutually staggered 1,2-dicarbollide ligands and is symmetrically linked to the five atoms of each basal pentagonal face.
M.R. Churchill and K. Gold, *Inorg. Chem.*, 10 (1971) 1928.

Diiodotetraphosphorus trisulphide, β - $P_4S_3I_2$
($Pnma_1$) $R = 3.7\%$ for 259 observed reflexions. The molecules lie on a crystallographic mirror plane, with one sulfur and two phosphorus atoms on the mirror. P–S is 2.091(16) to 2.145(10), P–P 2.221(10) and P–I 2.471(8) Å, respectively.
G.A. Hunt and A.W. Cordes, *Inorg. Chem.*, 10 (1971) 1935.

Bisdicyanide and trimethyltin(IV) dicyanamide, (a) $(CH_3)_2Sn[N(CN)_2]_2$ and (b) $(CH_3)_3Sn[N(CN)_2]$
(a) ($P2_1/c$) $R = 3.6\%$ for 924 significant reflexions, (b) $(Pnam)_1$ $R = 2.9\%$ for 617 significant reflexions. Planar $N(CN)_2$ groups are symmetrically placed on either side of the organotin groups. (a) Consists of an infinite two-dimension net of tin atoms and bridging dicyanamide groups with methyl groups above and below completing the octahedral coordination of the tin. In (b) the tin is in trigonalbipyramidal environment with methyl groups in the equatorial plane.
Yeh Mei Chow, *Inorg. Chem.*, 10 (1971) 1938.

Di-μ-oxo-bis(pentaamineruthenium)bis(ethylenediamine)ruthenium hexachloride, $Ru_3O_2(en)_2(NH_3)_{10}Cl_6$
($P2_1/c$) $R = 5.4\%$ for 2559 independent reflexions. The cation is a centrosymmetric linear trimeric ion containing three ruthenium atoms linked by oxygen bridges. Ru–N is 2.12 – 2.21 Å. The central ruthenium atom is coordinated to two ethylenediamine molecules.
P.M. Smith, T. Fealey, J.E. Earley and J.V. Silverton, *Inorg. Chem.*, 10 (1971) 1943.

Azidonitrosylbis(triphenylphosphine)nickel, $Ni(N_3)(NO)(P(C_6H_5)_3)_2$

($P2_1/c$) $R = 5.2\%$ for 2126 statistically significant reflexions. Discrete $Ni(N_3)(NO)$–$(P(C_6H_5)_3)_2$ molecules compose the structure with the nickel atom in pseudotetrahedral coordination.

J.E. Enemark, *Inorg. Chem.*, 10 (1971) 1952.

Iridium trisilicate, $IrSi_3$

($P6_3mc$) $R = 7.2\%$ for 57 independent reflexions. The structure consists of infinite planar, four connected layers of silicon atoms perpendicular to the *c* axis with each iridium spaced at unequal distances between the two silicon layers. Each iridium makes nine almost equal contacts with silicon atoms, 2.44(5) – 2.49(4) Å.

J.G. White and E.F. Hockings, *Inorg. Chem.*, 10 (1971) 1934.

$(As(CH_3)_2)\overline{C{=}CF_2C}F_2$ $\{(As(CH_3)_2Fe_3(CO)_9\}$(ffars $Fe_3(CO)_9$)

($P2_1/n$) $R = 5.9\%$ for 1364 observed reflexions. Three $Fe(CO)_3$ groups and an $(As(CH_3)_2$ are linked at the corners of a tetrahedrally distorted square plane. One Fe–Fe bond involves iron bonded to two arsenic atoms, 2.917(5) Å, and one shorter, 2.667(5) Å, involves one Fe–As bond.

F.W.B. Einstein, A. Pilotte and R. Restivo, *Inorg. Chem.*, 10 (1971) 1947.

$Cs_3Cr_2Br_9$, $Cs_3Mo_2Cl_9$ and $Cs_3Mo_2Br_9$

Each crystallises in $P6_3/mmc$. R factors are 4.8%, 10.9% and 7.5% for 152, 192 and 213 unique reflexions respectively. Within the bioctahedral anions, metal–metal bonding is indicated in the molybdenum compounds in agreement with magnetic data.

R. Saillant, R.B. Jackson, W.E. Streib, K. Folling and R.A.D. Wentworth, *Inorg. Chem.*, 10 (1971) 1453.

Strontium dibromide

($P4/n$) $R = 9.9\%$ for 406 observed independent reflexions. The structure consists of seven- and eight-coordinated Sr atoms and trigonally and tetrahedrally coordinated bromine atoms. Sr–Br is 3.106 – 3.593 Å.

J.G. Smeggil and H.A. Eick, *Inorg. Chem.*, 10 (1971) 1458.

$H_2[Ta_6Cl_{18}]\cdot 6H_2)$

($Fd3m$) $R = 5.3\%$ for 214 significant reflexions. Discrete $Ta_6Cl_{18}^{2-}$ anion clusters occur. Ta–Ta is 2.962(2) and Ta–Cl 2.507(9) – 2.414(5) Å, respectively.

C.B. Thaxton and R.A. Jacobson, *Inorg. Chem.*, 10 (1971) 1460.

Chloropentaaquoterpyridylpraesodymium(III) ion, $Pr(C_{15}H_{11}N_3)Cl_3(H_2O)_8$

(Cn) $R = 2.2\%$ for 2005 reflexions. The Pr^{III} ion is in a mono-capped square antiprismic polyhedral coordination sphere made up of three nitrogens from terpyridyl, one chloride

ion and five water oxygen atoms.
L.J. Radonovich and M.D. Glick, *Inorg. Chem.*, 10 (1971) 1463.

Tris(glycinato)chromium(III) monohydrate, $Cr(C_2H_4NO_2)_3 \cdot H_2O$
(*P*2$_1$/*c*) *R* = 2.66% for 2631 independent significant reflexions. All hydrogen atoms were located. The chromium atom is octahedrally coordinated by three glycinato ligands; the three nitrogens are mutually *cis*.
R.F. Bryan, P.T. Greene, P.F. Stokely and E.W. Wilson, Jr., *Inorg. Chem.*, 10 (1971) 1468.

Bis(*N*-*N*-diethyldithiocarbamato)[*cis*-1, 2-bis(trifluoromethyl)-ethylene-1-2-dithiolato]iron
(*C*2/*c*) *R* = 6.4% for 1376 observed reflexions. Two discrete molecules with the iron atom surrounded by a 1,2-dithiolene and two dithiocarbamate ligands occur. The formal octahedral iron coordination is distorted towards a trigonal prismatic geometry.
D.L. Johnston, W.L. Rohrbaugh and W. DeW. Horrocks, Jr., *Inorg. Chem.*, 10 (1971) 1474.

Hydridonitrosyltris(triphenylphosphine)iridium(I) perchlorate, $[IrH(NO)(P(C_6H_5)_3][ClO_4]$
(*Pbc*2$_1$) *R* 4.7% for 1342 significant reflexions. The iridium forms a distorted trigonal bipyramid with axial hydrido and nitrosyl and triphenylphosphine equatorial ligands. The hydrogen atom was not located. The bond angle Ir—N—O = 175 (3)° suggests formulation of the complex as an NO^+ complex of iridium(I).
D.M.P. Mingos and J.A. Ibers, *Inorg. Chem.*, 10 (1971) 1479.

Tris(ethylenediamine)cobalt(III) monohydrogen phosphate nonahydrate,
$[Co(en)_3]_2[HPO_4]_3 \cdot 9H_2O$
(*Pnma*) *R* = 5.0% for 2423 independent reflexions. The structure consists of waters of hydration and $Co(en)_3^{3+}$ and HPO_4^{2-} ions hydrogen bonded. An enantiomorphic pair of $Co(en)_3^{3+}$ cations is linked to one HPO_4^{2-} unit which fixes them in the $\Lambda\delta\delta\delta$ and $\Delta\lambda\lambda\lambda$ conformations respectively.
E.N. Duesler and K.N. Raymond, *Inorg. Chem.*, 10 (1971) 1486.

Pentacyanocobalt(III)-μ-cyano-pentaamminecobalt(III) monohydrate,
$(NH_3)_5CoNCCo(CN)_5 \cdot H_2O$
(*Pbca*) *R* = 4.4% for 1791 reflexions. The cobalt atoms are in near octahedral coordination and there is no scrambling of ligands between the metal atoms. The cyanide bridge has the carbon bonded to the cobalt having all cyanide ligands.
Bi-Cheng Wang, W.P. Schaeffer and R.E. March, *Inorg. Chem.*, 10 (1971) 1492.

Bis(salicylaldehyde)ethylenediamine cobalt(II), $[Co(C_7H_5O)_2(C_2H_4N_2)]$
(*C*2/*c*) *R* = 4.9% for 1616 non-zero reflexions. The cobalt is five-coordinate square pyramidal with molecules in the dimeric form. Bridge Co—O is 2.259(4) Å.
R. Delasi, S.L. Holt and B. Post, *Inorg. Chem.*, 10 (1971) 1498.

Bis(salicyclidene-γ-iminopropyl)aminenickel(II), $[NiC_{20}H_{23}N_3O_2]$

($P2_1/c$) $R = 4.6$ for 1742 independent reflexions. The nickel atom is trigonal bipyramidal. The geometry is compared with that determined from optical data.

M. Seleberg, S.L. Holt and B. Post, *Inorg. Chem.*, 10 (1971) 1501.

π-Cyclopentadienyl-π-triphenylcyclopropenylnickel, $(\pi\text{-}C_5H_5)Ni(\pi\text{-}C_3(C_6H_5)_3)$

($Pna2_1$) $R = 5.6\%$ for 1751 significant reflexions. The nickel is sandwiched between the parallel cyclopentadienyl and triphenylcyclopropenyl rings; Ni—C distances average 2.100(6) and 1.961(4) Å respectively.

R.M. Tuggle and D.L. Weaver, *Inorg. Chem.*, 10 (1971) 1504.

Distannous ethylenediamine tetraacetate dihydrate

($P1$) $R = 4.7\%$ for 1649 significant reflexions. The compound may be represented as $Sn^{II}[Sn^{II}H_4Y\cdot H_2O]\cdot H_2O$ where H_4Y = ethylenediamine tetraacetate. One Sn^{II} is in seven coordination in which ethylenediamine nitrogens and the tin lone pair occupy equatorial positions. The remaining sites are occupied by one oxygen atom from each carbonylate group. Each $Sn^{II}Y$ unit is bonded to four Sn^{II} atoms of the second type via carboxylate oxygens.

F.P. Van Remoortere, J.J. Flynn and P.P. North, *Inorg. Chem.*, 10 (1971) 1511.

Tris-[*cis*-1-2-di(trifluoromethyl)-ethylene-1,2-diselenato] molybdenum, $Mo[Se_2C_2(CF_3)_2]_3$

($P6_3/m$) $R = 4.1\%$ for 457 independent non-zero reflexions. Six selenium atoms surround the molybdenum in a trigonal prismatic coordination with Mo—Se 2.492(2) Å. Se—Se inter ligand is 3.222(3) Å, which is short compared with 3.317(5) Å intra ligand Se—Se.

C.G. Pierpont and R. Eisenberg, *J. Chem. Soc. A*, (1971) 2285.

Dibromine hexadecafluorotriantimonate(V), $[Br_2]^+[Sb_3F_{16}]^-$

($C2/c$) $R = 11.4\%$ for 609 reflexions. Br—Br is 2.15 Å. The anion has a *trans*-bridged arrangement at the central antimony atom, with asymmetric fluorine bridges to the outer antimony atoms.

A.J. Edwards and G.R. Jones, *J. Chem. Soc. A.*, (1971) 2318.

Di-μ-iodo-bis[(σ-dimethylamino-phenyl)dimethylarsine-As,N]-dicopper(I)

($Pbca$) $R = 8.5\%$ for 1915 independent reflexions. The molecules are dimeric with each copper being surrounded by four ligand atoms in near tetrahedral array. Two iodine bridges link the copper atoms which are linked at 2.727 Å.

R. Graziani, G. Bombieri and E. Forsellini, *J. Chem. Soc. A.*, (1971) 2331.

Potassium tetramolybdate, $K_2Mo_4O_{13}$

($P\bar{1}$) $R = 12.0\%$ for 1324 independent reflexions. Subunits of eight distorted MoO_6 octahedral share edges are joined to form infinite chains. The structure is compared with other anydrous polymolybdate(VI) structures.

B.M. Gatehouse and P. Leverett, *J. Chem. Soc. A.*, (1971) 2107.

Nitrosyl pentaamine cobalt(III) dichloride, $[Co(NO)(NH_3)_5Cl_2]$, a redetermination (*Cmcm*) $R = 4.2\%$ for 587 independent significant reflexions. The Co–N–O bond angle of 119.0(9)° indicates the coordination Co^{III}–NO. The long distance Co–NO of 1.871(6) Å and Co–NH_3 (*trans*) 2.220(4) Å support this interpretation.
C.S. Pratt, B.A. Coyle and J.A. Ibers, *J. Chem. Soc. A.*, (1971) 2146.

Dichlorotetra-μ-adenine-dicopper(II) chloride hexahydrate, $[Cu_2(ade)_4Cl_2]Cl_2 \cdot 6H_2O$ (*Cmca*) $R = 9.8\%$ for 870 visually estimated reflexions. The complex ion is dimeric with four bridging adenines coordinating via nitrogen between the square pyramidally coordinated copper atoms. Chlorine atoms occupy the apical positions.
P. deMeester and A.C. Skapski, *J. Chem. Soc. A.*, (1971) 2167.

Tri-μ-carbonyl-pentacarbonylbis-(π-cyclopentadienylrhodio)di-iron, (Rh–Rh)(Fe–Fe)(4Rh–Fe), $(\pi\text{-}C_5H_5)_2Rh_2Fe_2(CO)_8$
(*Pnma*) $R = 7.90\%$ for 627 unique reflexions. The molecule has C_s symmetry with the four metal atoms defining an irregular tetrahedron with Rh–Rh 2.648(3), Rh–Fe 2.570(5)–2.598(5) and Fe–Fe 2.539(7) Å. The π-C_5H_5 ligands and a bridging carbonyl group are attached to the two rhodium atoms while three terminal CO are attached to Fe(1) and two to Fe(2). Two asymmetric CO bridges are an usual feature of the structure.
M.R. Churchill and M.V. Veidis, *J. Chem. Soc. A.*, (1971) 2170.

(a) Methyltriphenylarsonium and (b) methyltriphenylphosphenium bis-(αα$\alpha'\alpha'$-tetracyanoquinodimethanides)
(a) ($P\bar{1}$) $R = 10.4\%$ for 6134 independent reflexions, (b) ($P\bar{1}$) $R = 8.8\%$ for 5590 independent reflexions. The crystals contain columns of αα$\alpha'\alpha'$-tetracyanoquinodimethane molecules with bond lengths intermediate between those of formally 0 and −1 charged species.
A.T. McPhail, G.M. Semeniuk and D.B. Chesnut, *J. Chem. Soc. A.*, (1971) 2174.

(a) Difluorobis and (b) di-iodobis(π-cyclopentadienyl)zirconium(IV)
(a) (*F2mm*) $R = 3.0\%$ for 373 independent reflexions, (b) (*C2/c*) $R = 5.7\%$ for 749 indepent reflexions. I–Zr–I and πCp–Zr–πCp angles are 96.2 and 126.3°. F–Zr–F and πCp–Zr–πCp angles are 96.2 and 127.8°. The mean zirconium carbon distances in the two compounds are not significantly different.
M.A. Bush and G.A. Sim, *J. Chem. Soc. A.*, (1971) 2225.

cis - (Hydroxydiphenylgermyl)phenyl-bis(triethylphosphine)platinum(II)
(*Pnma*) $R = 4.0\%$ for 1121 significant reflexions. Pt–Ge is 2.433 Å. The platinum forms a distorted square plane. The compound was originally formulated as $(Et_3P)_2$–(OH)$PtGePh_3$.
R.J.D. Gee and H.M. Powell, *J. Chem. Soc. A.*, (1971) 1956.

(Tetraphenylbutatriene)tetracarbonyliron

($P2_1/c$) $R = 7.1\%$ for 1395 reflexions. The iron atom is trigonal tripyramidal with the butatriene chain in the equatorial plane. The four chain carbon atoms are not co-linear. The three C—C distances are equal (mean 1.34 Å).

D. Bright and O.S. Mills, *J. Chem. Soc. A.*, (1971) 1979.

Tricarbonyl(bicyclo[4,4,1]undeca-1,3,5-triene)chromium

(*Pnma*) $R = 7.0\%$ for 950 reflexions. The ligand contains a six π-electron homoaromatic ring in which the C(1)—C(6) separation is 1.72 (2) Å.

M.J. Barrow and O.S. Mills, *J. Chem. Soc. A.*, (1971) 1982.

Sodium phenoxyacetate hemihydrate

($A2/a$) $R = 9.6\%$ for 1018 observed reflexions. The sodium ions are surrounded by distorted octahedra of oxygen atoms, five from four phenoxyacetate ions and the sixth from a water molecule.

C.K. Prout, R.M. Dunn, O.J.R. Hodder and F.J.C. Rossotti, *J. Chem. Soc. A.*, (1971) 1986.

exo-Tricyclo[3,2,1,0]oct-6-ene-silver nitrate

($P2_12_12_1$) $R = 10.5\%$ for 322 observed reflexions. The silver ion is coordinated almost tetrahedrally to the double bond of the hydrocarbon, which is in the *exo*-position. Ag—C is 2.4 Å, and to three nitrate groups, Ag—O 2.45 — 3.03 Å. The structure of silver nitrate was also refined.

C.S. Gibbons and J. Trotter, *J. Chem. Soc. A.*, (1971) 2058.

(a) Tetracarbonyl(triphenyl-phosphineaurio)cobalt and (b) tetracarbonyl {[bis-(*o*-dimethylarsino-phenyl)methylarsine] argentio}cobalt

(a) ($P\bar{1}$) $R = 12.4\%$ for 1600 non-zero independent reflexions, (b) ($P2_1/n$) $R = 10.2\%$ for 1451 non-zero independent reflexions. In both compounds the cobalt atom is trigonal bipyramidal having gold or silver in an apical position. Distortion occurs by the bonding of the three equatorial carbonyl groups towards the metal atom at the apex. Au—Co is 2.50 (1) and Ag—Co 2.66 (1) Å.

T.L. Blundell and H.M. Powell, *J. Chem. Soc. A.*, (1971) 1685.

Erratum

Coordination Chemistry Reviews, Vol. 7, No. 2 (December 1971), p. 162, line 3: the formula for 1,2-diaminopropane (propylenediamine) should read $NH_2CH(CH_3)CH_2NH_2$.