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X-RAY BIBLIOGRAPHY

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The structures of the following compounds appeared in:
Inorg. Chem., Vol. 14, No. 1, January 1975

(i) Dicarbonyl(η^5-cyclopentadienyl)triphenylphosphine(1-η-1,1,2,2-tetracyanopropyl) molybdenum, the product of insertion of tetracyanoethylene into a molybdenum—methyl linkage, (π-C_5H_5)Mo-$(CO)_2(PPh_3)[C(CN)_2C(CN)_2CH_3]$

(ii) Bis[dichloro(*N*,*N*,*N'*,*N'*-tetramethylethylenediamine copper(II)], $[Cu(tmen)Cl_2]_2$

(iii) Solvated tris(4-morpholinecarbodithioato-*S*,*S'*) complexes of iron(III) and cobalt(III), $[M(S_2CNC_4H_8O)_3][CH_2Cl_2]$, M = Co, Fe

(iv) Reactivity of diiron nonacarbonyl tetrahydrofuran, III. A new iron carbonyl complex of acenaphthylene, $(C_{12}H_8)Fe(CO)_4$

(v) The polysulfides Ba_2S_3 and BaS_3

Inorg. Chem. Vol. 14, No. 2, February 1975

(i) Ion radical molecular complexes of *cis*-bis(trifluoromethylethylene-1,2-dithiolato)nickel with phenothiazine (PTZ) and phenoxazine (POZ), PTZ-Ni$(tfd)_2$ and POZ-Ni$(tfd)_2$

(ii) μ-Oxido-bis[chlorotriphenylphosphinenitrosyliridium(I)], $[IrCl(NO)PPh_3]_2O$

(iii) 1,1,4,4-Tetramethyl-1,4-diazonia-2,5-diboratacyclohexane

(iv) Copper(II) complexes of amino alcohols; chloro(2-diethylaminoethanolato)copper(II) and bromo(2-dibutylaminoethanolato)copper(II)

(v) Hexakis(pyridine *N*-oxide)cobalt(II) perchlorate, $Co(C_5H_5NO)_6(ClO_4)_2$

(vi) Oxidative addition product of tetrachloro-1,2-benzoquinone to tris(triphenylphosphine)palladium(0), $Pd(P(C_6H_5)_3)_2(O_2C_6Cl_4)$

(vii) Tetramethylammonium tetrachloroferrate(II), $[N(CH_3)_4]_2[FeCl_4]$

(viii) Coordination of the aryldiazo ligand to transition metals. Structure of chloro(bis(3-diphenylphosphinopropyl)phenylphosphine)phenyldiazorhodium hexafluorophosphate methylene chloride solvate, $[Rh(C_6H_5P((CH_2)_3P(C_6H_5)_2)_2)Cl(N_2C_6H_5)][PF_6].CH_2Cl_2$

(ix) Magnetic and electrochemical properties of transition metal complexes with multiple metal-to-metal bonds, III. Tetrapotassium and tripotassium tetrasulfatodimolybdates, $K_4Mo_2(SO_4)_4.2H_2O$ and $K_3Mo_2(SO_4)_4.3.5H_2O$

Inorg. Chem., Vol. 14, No. 3, March 1975.

(i) P_2F_4 and $P_2(CF_3)_4$ by gas-phase electron diffraction

(ii) Di-μ-azido-bis(2,2',2''-triaminotriethylamine)dinickel(II) tetraphenylborate, $[Ni_2(tren)_2(N_3)_2](BPh_4)_2$ where tren = 2,2',2''-triaminotriethylamine

(iii) The dioxygen ligand as a bridging group. Structure of potassium decacyano-μ-superoxo-dicobaltate(III) monohydrate, $K_5[(CN)_5CoO_2\text{-}Co(CN)_5].H_2O$

(iv) Molecules with an M_4X_4 core, IV. Crystallographic detection of a "Step" configuration for the Cu_4I_4 core in tetrameric triphenylphosphine-copper(I) iodide, $[PPh_3CuI]_4$

(v) Stereochemical control of valence, IV. Comparison of the structures and chemical reactivities of five and six-coordinate diarsine complexes of the $\{CoNO\}^8$ group, $[Co(NO)(das)_2][ClO_4]_2$ and $[Co(NO)(das)_2\text{-}NCS][NCS]$

(vi) Tetrakis(trimethylphosphite)-di-μ-nitrato-disilver(I), $[Ag(P(OMe)_3)_2\text{-}NO_3]_2$. A case of symmetric nitrate—oxygen bridging

(vii) *trans*-Chlorobis(triethylphosphine)(*p*-fluorophenylhydrazine)platinum-(II) tetrafluoroborate, $[Pt(P(C_2H_5)_3)_2(H_2NNHC_6H_4F)Cl][BF_4]$

(viii) Synthesis of diiminosuccinonitrile complexes. Preparation and structure of bis(diiminosuccinonitrilo)platinum(II) *trans*-dichlorobis-(benzonitrile)platinum(II), $[Pt(DISN)_2][PtCl_2(C_6H_5CN)_2]$ where DISN = diiminosuccinonitrile

(ix) The chloroform adduct of pentakis(phenylisocyanide)cobalt(I) perchlorate, $[Co(CNC_6H_5)_5]ClO_4.HCCl_3$

(x) Sodium tetra-μ-sulfato-dirhenate(III) octahydrate, $Na_2Re_2(SO_4)_4.8H_2O$

J. Amer. Chem. Soc., Vol. 97, No. 1, January 8, 1975

(i) Nitrosylmethalloporphyrins, II. Molecular stereochemistry of nitrosyl-$\alpha,\beta,\gamma,\delta$-tetraphenylporphinatoiron(II), ONFeTPP

(ii) A caged polycyclic tetraoxycarbphosphorane, $(PO_4C)(C_6H_5CN)\text{-}(CF_3)_2(C_6H_9)$

(iii) A square pyrimidal pentacoordinate complex of Ni(N-tetramethylcyclam)$^{2+}$, $[Ni(TMC)N_3]ClO_4$. A kinetically determined ligand stereochemistry

(iv) Dinuclear niobium and tantalum complexes containing an unusual bridging ligand derived from acetonitrile, $\{[(C_6H_5)_3P]_2N\}_2[Nb_2Cl_8\text{-}(CH_3CN)_2(C_4H_6N_2)].2C_6H_5Cl$

J. Amer. Chem. Soc., Vol. 97, No. 2, January 22, 1975

(i) Structures of metallocarboranes, V. *closo*-20-Electron bimetallocarborane 1,6-bis(η-cyclopentadienyl)-1,6-diferra-2,3-dicarba-*closo*-decaborane(8), 1,6-(η-C_5H_5)$_2$-1,6,2,3-$Fe_2C_2B_6H_8$

J. Amer. Chem. Soc., Vol. 97, No. 3, February 5, 1975

(i) Oxidation of 1,1-dimethylhydrazine by cupric halides. Isolation and structure of a salt containing the 1,1,5,5-tetramethylformazanium ion, $[(CH_3)_2N_2CHN_2(CH_3)_2][Cu_2Br_3]$

(ii) A dimeric quinoline adduct of copper(II) trifluoroacetate, $[Cu(O_2CCF_3)_2(Quinoline)]_2$

(iii) An ethylene sorption complex of partially cobalt(II)-exchanged zeolite A, $Co_4Na_4Al_{12}Si_{12}O_{48}\cdot 4C_2H_4$

(iv) A platinum(II) complex containing a metallodithiocarboxylate ligand, $[Cl(Ph_3P)_2Pt(CS_2)Pt(PPh_3)_2]BF_4\cdot 0.2CH_2Cl_2$

J. Amer. Chem. Soc., Vol. 97, No. 4, February 19, 1975

(i) Ferric porphyrin thiolates. Possible relationship to cytochrome P-450 enzymes and the structure of (*p*-nitrobenzenethiolato)iron(III) protoporphyrin IX dimethyl ester, Fe(PPIXDME)($SC_6H_4NO_2$)

(ii) $(NbCl_5)_2(C_{10}H_{20}S_4)$, an adduct of $NbCl_5$ with an "inside out" bridging macrocyclic ligand

(iii) Unsaturated compounds of the main group elements. Indenyllithium tetramethylethylenediamine, $C_9H_7Li(N_2C_6H_{16})$

J. Amer. Chem. Soc., Vol. 97, No. 5, March 5, 1975

(i) Synthetic analogs of the active sites of iron—sulfur proteins, XI. Synthesis and properties of complexes containing the Fe_2S_2 core and the structures of bis[*o*-xylyl-α,α'-dithiolato-μ-sulfido-ferrate(III)] and bis[*p*-tolylthiolato-μ-sulfido-ferrate(III)] dianions

(ii) Stable platinum(0) complexes of cyclohexyne (C_6H_8) and cycloheptyne (C_7H_{10}), of the form [(cycloalkyne)Pt{$P(C_6H_5)_3$}$_2$]

(iii) Steric vs. electronic effects in palladium—thiocyanate complexes. Structures of dithiocyanato[bis(diphenylphosphino)methane]palladium(II), isothiocyanatothiocyanato[1,2-bis(diphenylphosphino)-ethane]palladium(II), and diisothiocyanato[1,3-bis(diphenylphosphino)-propane]palladium(II)

(iv) π-Interactions in the structures of 1- and 2-methylpentaborane and 1- and 2-silylpentaborane. An electron diffraction study

(v) Hexakis(dimethylamido)ditungsten, $W_2(NMe_2)_6$. The first structurally characterized molecule with an unbridged triple bond between tungsten atoms

(vi) Tetrameric triphenylphosphine silver halide cluster systems. Evidence of dictation of stereochemistries by Van der Waals interactions, $(Ph_3P)_4Ag_4X_4$, X = Cl, Br, I

(vii) A definitive example of *cis*-chloropalladation. Structure of chloro-(2,5-dithiahexane){1-(1,4-di-*tert*-butyl-4-chloro)butadienyl}palladium

J. Amer. Chem. Soc., Vol. 97, No. 6, March 19, 1975

(i) A new homoporphyrin system. Structure of the nickel(II) complex of the 21-ethoxycarbonyl-5,10,15,20-tetraphenyl-21H-21-homoporphine

(ii) The structure of an adduct of a chiral lanthanide nuclear magnetic resonance shift reagent, $(facam)_3Pr(DMF)_3Pr(facam)_3$ dimer, where Hfacam = 3-trifluoroacetyl-*d*-camphor

(iii) Alkylation and structural rearrangement of the bridging carbonyl ligand in $HFe_3(CO)_{11}^-$. Synthesis and structure of $HFe_3(CO)_{10}(COCH_3)$

(iv) Reactions of bisoxinato complexes of $[Mo_2O_4]^{2+}$, I. The preparation and structure of the novel coordination compound μ-(2-mercapto-ethanolato-*S*:*O*)-μ-oxo-bis[oxo-8-hydroxyquinolinatomolybdenum(V)], $Mo_2O_3(oxine)_2(SCH_2CH_2O)$

(v) A new boron hydride. Tetradecarborane(20)

(vi) Reactions of transition metal—nitrogen σ-bonds, II. Structure of pentakis(*N*,*N*-dimethylcarbamato)niobium(V), $Nb(O_2CNMe_2)_5$, and its facile exchange reactions with carbon dioxide

J. Chem. Soc. Chem. Commun., No. 1, 1975

(i) Tris-μ(*t*-butylisocyanide)-tris-(*t*-butylisocyanide)-*triangulo*-triplatinum, $[Pt_3(Bu^tNC)_6]$

J. Chem. Soc. Chem. Commun., No. 2, 1975

(i) Two isomers of dicyclohexyl-18-crown-6

(ii) A novel dithiocarbamato-complex of ruthenium(III) containing a metal—metal bond, $[Ru_2(Et_2dtc)_5]^+BF_4^-$, Et_2dtc = *NN*-diethyldithiocarbamate

J. Chem. Soc. Chem. Commun., No. 3, 1975

(i) Cycloaddition of alkynes to the complexed *cis*-azo group. Formation and crystal structure of the diphenylacetylene adduct of μ-1,2-[3,3-bis(methoxycarbonyl)-4-phenyl-1-pyrazoline]-hexacarbonyldi-iron

(ii) Pentagonal bipyramidal complexes of cobalt(II) and zinc(II). The X-ray crystal structure of the novel deprotonated zinc dimer, Diaqua-(2,6-diacetylpyridine bis-2-pyridylhydrazone)cobalt(II) chloride, $[Co(H_2dapp)(H_2O)_2]Cl_2$, and $[Zn_2(dapp)_2]$, $2HCCl_3$, $2H_2O$

(iii) $[Pd\{H(C_3(CO_2Me)_8)\}Cl(pyridine)_2]$, unusual five-coordinate palladium(II) complex

(iv) A hydridotetrahydroborato complex of cobalt: hydridotetrahydroboratobis (tricyclohexylphosphine)cobalt, $[CoH(BH_4)\{P(C_6H_{11})_3\}_2]$

(v) Three cyclic thioethers. 1,4,7-trithio-(12-crown-4), $C_8H_{16}OS_3$; 1,4-dithio-(15-crown-5), $C_{10}H_{20}O_3S_2$ and 1,10-dithio-(18-crown-6), $C_{12}H_{24}O_4S_2$

(vi) Trimethyltin glycinate, a polymeric, trigonal bipyramidal tin compound, $Me_2Sn(O_2CCH_2NH_2)$

(vii) The silver salt of lysocellin, a new polyether antibiotic, $C_{34}H_{59}O_{10}Ag.\frac{1}{2}H_2O$

J. Chem. Soc. Chem. Commun., No. 4, 1975

(i) Bis-(2-mercapto-4'-methylazobenzene)nickel(II) and bis-(2-hydroxy-4'-methylazobenzene)nickel(II): five-membered metallocycle in the former complex

(ii) Organic synthesis at coordinated ligands. Stabilisation of a pyrroline ring system. Structure of (tetra-ammine)-4,5-dihydroxy-4,5-dimethyl-Δ^1-pyrroline-2-carboxylatocobalt(III) perchlorate hydrate

(iii) Tricarbonyl-(1-5,α-η-diphenylfulvene)chromium, $[(\eta\text{-}C_5H_4CPh_2)Cr(CO)_3]$

(iv) Bis(perfluorophenyl)tetramethyltetrazenezinc(II)

J. Chem. Soc. Chem. Commun., No. 5, 1975

(i) Diphenyl ketimine derivatives as a probe for group IV $p\pi$—$d\pi$ bonding. Structures of $M(NCPh_2)_4$ (M = Si, Ge, Sn)

J. Chem. Soc. Chem. Commun., No. 7, 1975

(i) Addition of hexafluorobut-2-yne to coordinated 1,3-Dienes; crystal structures of the adducts $[Ru(CO)_2\{P(OCH_2)_3CMe\}(C_6H_8)(C_4F_6)_2]$ and $[Fe(CO)_2\{P(OCH_2)_3CMe\}(C_7H_8)(C_4F_6)_2]$

(ii) $[Co(C_{10}H_{14}N_8)(Me)(NH_2NHMe)]$, an organo-cobalt(III) macrocycle with a thermally accessible paramagnetic state

J. Chem. Soc. Dalton, No. 1, 1975

(i) Di-μ-carbonyl-(tricarbonylcobaltio)carbonyl(π-cyclopentadienyl)iron

(ii) Bis-[2-(2-aminoethyl)pyridine]-di-isothiocyanatocopper(II)

(iii) μ-Trimethylsilylcycloheptatrienylpentacarbonyltrimethylsilyldiruthenium-(Ru—Ru): A binuclear metal complex with a bridging cycloheptatrienyl ligand, $[Ru_2(CO)_5(SiMe_3)(C_7H_6SiMe_3)]$

J. Chem. Soc. Dalton, No. 2, 1975

(i) Transition-metal chemistry of quinuclidinone-containing ligands, V. Structure of dichloro[*trans*-2-(2-quinolyl)methylenequinuclidin-3-one]cobalt(II), $[Co(qnqn)Cl_2]$

(ii) Acetylenes and noble metal compounds, XII. Reactions of dimethyl acetylenedicarboxylate with palladium(II) chloride and the structure of {[chloro(methoxycarbonyl)(1,2,3,4,5-pentakismethoxycarbonylcyclopenta-2,4-dienyl)-2-MeOCO]methyl}(pentane-2,4-dionato)palladium(II). X-ray structure of [PdL(acac)], [L = —$CCl(CO_2Me).C_5(CO_2Me)_4C(OMe):O$—]

(iii) Triaquazinc(II) thiodiglycolate monohydrate

(iv) Novel cleavage product of the reaction of a ditertiary arsine with decacarbonyldimanganese: crystal structure of μ-(dimethylarsino)-μ-{1-3-η-[2,3-bis(dimethylarsino)-1,1-difluoro-3-trifluoromethylallyl](As,As',C,C',C'')}bis[tricarbonylmaganese(1)], $[Mn_2(CO)_6As_3Me_6F_5C_3]$

(v) Bis[dimethylbis(pyrazol-1-yl)gallato]nickel(II), $[Ni^{II}\{Me_2Ga(N_2C_3H_3)_2\}_2]$

(vi) Metalloborane chemistry, I. Crystal structure of 1,1-L_2-2,4-Me_2-1,2,4-$MC_2B_9H_9$, M = Pt, L = PMe_2Ph, obtained from an oxidative-insertion reaction

J. Chem. Soc. Dalton, No. 3, 1975

(i) μ_3-Oxo-hexakis(μ-trimethylacetato)-trismethanoltri-iron(III) chloride, $[Fe_3O(piv)_6(MeOH)_3]^+Cl^-$ (piv = $CMe_3.CO_2$), a trinuclear basic iron(III) carboxylate

(ii) π-Cyclopentadienyl-[1-hydroxy-2,3,4,5-tetrakis(trifluoromethyl)-phosphole-1-oxide]cobalt, $[Co(\pi\text{-}C_5H_5)(C_4F_6)_2PO(OH)]$, and tricarbonyl-$\eta^4$-[1-pentafluorophenyl-2,3,4,5-tetrakis(trifluoromethyl)-thiophen]manganese, $[Mn(CO)_3(C_4F_6)_2SC_6F_5]$

(iii) Di-μ-carbonyl-(carbonyl-π-norbornadienecobaltio)carbonyl-π-cyclopentadienyliron, $[(\pi\text{-dienyl})FeCo(CO)_4(\pi\text{-diene})]$

(iv) μ-Dichlorostannio-bis(tricarbonyl-π-cyclopentadienylchromium), $[(\pi\text{-}C_5H_5)Cr(CO)_3SnCl_3]$

(v) Stereochemistry of phosphorus compounds, II. Crystal structure of 1,3-di-*t*-butyl-2,4-dichlorodiazadiphosphetidine, $[Bu^tNPCl]_2$

(vi) Hexakis(imidazole)copper(II) nitrate

(vii) Compounds containing platinum—carbon bonds, V. Crystal structure of a carbenoid complex of platinum(IV), $[PtCl_2\{C(Cl.C_6H_3NH)(NHMe)\}(PEt_3)_2]ClO_4$

J. Chem. Soc. Dalton, No. 4, 1975

(i) Tris(dimethyl sulphoxide)trinitratoytterbium, $[Yb(NO_3)_3(dmso)_3]$

(ii) Metal—carbonyl and metal—nitrosyl complexes, XVI. Comparison of the molecular structures of $[(\pi\text{-}C_5H_5)Fe(CO)_2P(CF_3)_2]$ and its oxidation product $[(\pi\text{-}C_5H_5)Fe(CO)_2P(:O)(CF_3)_2]$

(iii) Bis(*N*-picolinylidene-*N'*-salicyloylhydrazinato)nickel(II)

(iv) New carbide clusters in the cobalt subgroup, II. Crystal structure of di-μ_3-carbonyl-hexa-μ-carbonyl-carbido-undecacarbonylpolyhedro-octarhodium, $Rh_8(CO)_{19}C$

(v) Aqua(2,2':6',2'':6'',2'''-quaterpyridyl)sulphitocobalt(III) nitrate monohydrate, $[Co(quaterpy)(SO_3)(H_2O)]NO_3, H_2O$

(vi) *trans*-Aquabis(ethylenediamine)sulphitocobalt(III) perchlorate monohydrate, *trans*-$[Co(en)_2(SO_3)(H_2O)]ClO_4, H_2O$

(vii) Di-μ-carbonyl-dicarbonyl[cyclohexyl(diphenyl)phosphine] (π-methylcyclopentadienylnickelio)cobalt, $(MeC_5H_4)NiCo(CO)_4[PPh_2(C_6H_{11})]$

(viii) Di-μ-carbonyl-dicarbonyl(π-cyclopentadienylnickelio)(tris-*p*-fluorophenylphosphine)cobalt, $[(\pi\text{-}MeC_5H_4)NiCo(CO)_4\{PPh_2(C_6H_{11})\}]$

J. Chem. Soc. Dalton, No. 5, 1975

(i) A flavin—metal complex, bis(10-methylisoalloxazine)lead(II) perchlorate tetrahydrate, $[Pb(ClO_4)_2]C_{11}H_8N_4O_2, 2H_2O$
(ii) *catena*-Di-μ-acetylacetonato-cadmium(II)
(iii) [*NN'*-Tetramethylenebis(thioacetylacetoniminato)(2-)]zinc
(iv) L-Cysteinato(methyl)mercury(II) monohydrate.
(v) 1,8-Bis(trimethylsilyl)octatetrayne
(vi) Dichlorobis-(*O*-ethylthiocarbamate)mercury(II)

Acta Crystallogr. Sect. B, Vol. 31, February 15, 1975

(i) $CaCO_3$(II), a high-pressure metastable phase of calcium carbonate
(ii) Acetylene d_2, C_2D_2, a neutron powder diffraction study
(iii) Calcium potassium $(+)_{589}$-tris(dithiooxalato)cobaltate(III) tetrahydrate; $CaK(+)_{589}[Co(S_2C_2O_2)_3]4H_2O$
(iv) The nitrate positions in phase III of thallous nitrate, $TlNO_3$
(v) Ethylenediammonium bis-{*cis*-[ethylenediaminedisulphitoaurate(III)]}, $(C_2H_{10}N_2)^{2+}[Au(SO_3)_2en]_2^-$
(vi) Intermetallic $CoIn_2$, a representative of the $CuMg_2$ structure type
(vii) The structures of fluorides, IX. The orthorhombic form of molybdenum hexafluoride, MoF_6 at 193 K
(viii) $[(C_6H_5)_4P]_2[Hg(SCN)_4]$
(ix) Calcium dichromate bis(hexamethylenetetramine) heptahydrate, $Cr_2O_7Ca.2[(CH_2)_6N_4].7H_2O$
(x) Ca_2Sb
(xi) The pyrene-d_8-tetracyanoethylene charge-transfer complex
(xii) $Ca_{10+x}Si_{12-2x}As_{16}$ and $Ca_{10+x}Si_{12-2x}P_{16}$
(xiii) Structure and conformation of amino acids containing sulfur, III. The crystal structure and absolute configuration of 3,3,3',3'-tetramethyl-D-cystine(D-penicillamine disulfide)dihydrochloride, $(C_{10}H_{20}N_2O_4S_2.2HCl)$
(xiv) β-Aminomethylphosphonic acid, $(H_3\overset{+}{N}—CH_2—PO_3H^-)$
(xv) Fe_3Ga_4 and Cr_3Ga_4
(xvi) K_4SnO_4
(xvii) *cis*-Dioxobis-(2-hydroxyethyl-1-oxo)molybdenum(VI), $MoO_2(OC_2H_4OH)_2$
(xviii) 'Mn_8Si_2C' phase
(xix) The synthetic feldspars $SrGa_2Si_2O_8$ and $BaGa_2Si_2O_8$
(xx) High-pressure MnP_4, a polyphosphide with Mn—Mn Pairs
(xxi) *trans*-(Dithiocyanato)(bispyridine)platinum(II), *trans*-$[Pt(II)(py)_2(SCN)_2]$
(xxii) 1,5-Cyclooctadieneacetylacetonatorhodium(I)
(xxiii) Potassium barium hexanitrocuprate(II) at 295 K, $K_2BaCu(NO_2)_6$

(xxiv) 1,2-Diphenylethanesilver(I) perchlorate, $[(C_6H_5)_2(CH_2)_2]Ag^{I}ClO_4$
(xxv) α-Cupric divanadate, $\alpha Cu_2V_2O_7$
(xxvi) Tetra-(4-methylphenyl)tin, $(4\text{-}CH_3C_6H_4)_4Sn$
(xxvii) Potassium tetrakis(isothiocyanato)cobaltate(II) trihydrate; a redetermination, $K_2Co(NCS)_4.3H_2O$
(xxviii) $MS_2O_6.6H_2O$, (M = Mg, Ni, Zn)
(xxix) Bis-(η-cyclopentadienyl)bis-(3,5-dimethylbenzyl)tungsten, $(C_5H_5)_2W[CH_2C_6H_3(CH_3)_2]_2$
(xxx) Silver iodide-piperazinium-4 dimethylformanide, $Ag_{10}I_{12}.C_4H_{12}N_2.4C_3H_7NO$
(xxxi) Bromo(triphenylarsino)gold(I), $(AsPh_3)AuBr$
(xxxii) $(acac)_2Fe^{II}.2H_2O$
(xxxiii) Dichloro and dibromobis(pyridine)copper(II)

Acta Crystallogr., Sect. B, Vol. 31, March 15, 1975

(i) A powder neutron diffraction investigation of the nuclear and magnetic structure of $Sr_2Fe_2O_5$
(ii) $BaSrFe_4O_8$
(iii) $Ca(BF_4)_2$
(iv) *T*-Nb_2O_5
(v) Tetrakis(trimethylsilyl)tetrazene, $[(CH_3)_3Si]_2N{-}N{=}N{-}N[Si(CH_3)_3]_2$
(vi) Tricalcium aluminate, $Ca_3Al_2O_6$
(vii) $Cu_4Bi_5S_{10}$
(viii) Strontium ethanoate thioethanoate, $Sr(CH_3COO)(CH_3COS).4H_2O$
(ix) $CdCl_2.2.5H_2O$
(x) The orthorhombic structure of Y_3Co_2, a shift structure variation of the monoclinic Dy_3Ni_2 type
(xi) Structure and binding in molecular complexes of cyclic polyethers, I. 1,4,7,10,13,16-Hexaoxacyclooctadecane (18-crown-6)-dimethyl acetylenedicarboxylate at −160°C
(xii) Structural and EPR search for exchange striction in pyrazine copper acetate, $(Cu_2Ac_4.pyrazine)$
(xiii) Na_6MnCl_8 and $Na_2Mn_3Cl_8$
(xiv) ζ-$Cu_{20}Sn_6$
(xv) Structure and conformation of amino acids containing sulfur, IV. The structure of L-cystine dihydrobromide dihydrate: a novel conformation, $(C_6H_{12}N_2O_4S_2.2HBr.2H_2O)$
(xvi) Bis-(L-asparaginato)copper(II), $[Cu(OOCCHNH_2CH_2CONH_2)_2]_n$
(xvii) The cyclohexyl and isopropyl derivatives of bis-μ-[bis-(η-cyclopentadienyl)hydridomolybdenum]-bis{di-μ-bromo-[alkylmagnesium]-[(diethylether)magnesium]}, $\{(C_5H_5)_2Mo(H)[MgO(C_2H_5)_2][MgC_6H_{11}]Br_2\}.(C_2H_5)_2O$
(xviii) *O*-(β-D-Xylopyranosyl)-L-serine and its copper(II) complex
(xix) Uranium(III) triiodide, a neutron diffraction study
(xx) $Na_2CO_3.H_2O$, a neutron diffraction study

(xxi) $[(CH_3)_2S]_2N^+Br^-.H_2O$
(xxii) Tetrasulphur tetranitride-bis(norbornadiene)
(xxiii) Dinitrosylbis(triphenylphosphine)ruthenium, $Ru(NO)_2[P(C_6H_5)_3]_2$
(xxiv) Dicarbonyl(η-cyclopentadienyl)(3-aminopropionyl)molybdenum(II), $(\eta\text{-}C_5H_5)Mo(CO)_2(COCH_2CH_2NH_2)$
(xxv) The adduct $XeF_2.WOF_4$
(xxvi) Calcium tetratantalate, $CaTa_4O_{11}$
(xxvii) μ-Amido-μ-nitrito-bis[tetraamminecobalt(III)] tetrachloride dihydrate, $[Co_2(NH_3)_8(NH_2)(NO_2)]Cl_4.2H_2O$
(xxviii) Tris-(1,3-propanedionato)chromium(III)
(xxix) (—)-β-Isoparteine copper(II) chloride, $C_{15}H_{26}N_2.CuCl_2$
(xxx) $(-)_{589}$-Tris-(*R*-propylenediamine)cobalt(III) bromide, $(-)_{589}$-[Co-(*R*-pn)$_3$]Br_3
(xxxi) C_2D_2, a further refinement at 4.2 K

Acta Crystallogr., Sect. B, Vol. 31, April 15, 1975

(i) Pr_7O_{12} by powder neutron diffraction
(ii) Cyclic silane compounds
(iii) The mixed-valence hexaamminocobalt(III) chlorocuprates(I, II), II
(iv) Crystallographic studies on metal—nucleotide base complexes, V. Tetraaquo-bis-(9-methyladenine)copper(II) dichloride dihydrate, $[(C_6H_7N_5)_2Cu.4H_2O]Cl_2.2H_2O$
(v) Zinc lactate trihydrate, $Zn(CH_3CHOHCOO)_2.3H_2O$
(vi) L-Cystine dimethyl ester dihydrochloride monohydrate, $C_8H_{16}N_2O_4S_2.2HCl.H_2O$
(vii) The copper(II) chelate of L-leucyl-L-tyrosine, $[Cu(C_{15}H_{20}N_2O_4)(H_2O)].2H_2O.C_2H_5OH$
(viii) Pyridine-2,6-dicarboxylatodioxouranium(VI) monohydrate, UO_2-PDC where H_2PDC = pyridine-2,6-dicarboxylic acid
(ix) X-ray crystallography of the $Cl_3[N(CH_3)_2]_3P_3N_3$ compounds, III. *trans*-Nongeminal-2,4,6-trichloro-2,4,6-trisdimethylaminocyclotriphosphazatriene, $Cl_3[N(CH_3)_2]_3P_3N_3$
(x) $NaClO_2.3H_2O$
(xi) $K_3RhCl_6.H_2O$; a comparison of two independent X-ray structure determinations
(xii) Pyroxene-type $ZnSiO_3$ and $ZnMgSi_2O_6$
(xiii) The structures of fluorides, XI. Kubic harmonic analysis of the neutron diffraction pattern of the body-centered cubic phase of MoF_6 at 266 K
(xiv) The crystal structure of lithium hydrogen phthalate dihydrate, containing a very short hydrogen bond, $LiH(C_8H_4O_4).2H_2O$
(xv) $Bi_6O_7FCl_3$
(xvi) Methylmonoaqua(dimethylglyoximato)cobalt(III), $CH_3.Co(C_4N_2O_2H_7)_2.H_2O$
(xvii) $Hf_{18}O_{10}(OH)_{26}(SO_4)_{13}(H_2O)_{33}$

(xviii) Hypoxanthine gold(III) tetrachloride dihydrate, $(C_5H_5N_4O)^+(AuCl_4)^- 2H_2O$

(xix) The trimethylphosphine—boron trihalide complexes: $(CH_3)_3PBCl_3$, $(CH_3)_3PBBr_3$ and $(CH_3)_3PBI_3$

(xx) Coordination of uranium with the germanate ion, I. Copper uranyl germanate $[Cu(H_2O)_4](UO_2HGeO_4)_2.2H_2O$

(xxi) Coordination of uranium with the germanate ion, II. Uranyl germanate, $(UO_2)_2GeO_4(H_2O)_2$

(xxii) $Zn_2KH(PO_4)_2.\frac{5}{2}H_2O$

(xxiii) $Ba_2Cu(PO_3)_6$

(xxiv) High temperature crystal chemistry of V_2O_3 and 1% chromium-doped V_2O_3

(xxv) Potassium monoaquamono(nitrilotriacetato)cobaltate(II) dihydrate, $K[Co(C_6H_6NO_6)(OH_2)].2H_2O$

(xxvi) Bis-(2,4-pentanedionato)beryllium, $Be(CH_3COCHCOCH_3)_2$

(xxvii) The Al_6O_{18} rings of tetrahedra in the structure of $Ca_{8.5}NaAl_6O_{18}$

(xxviii) Chloro-(2-diethylaminoethanolato)zinc(II), $(C_2H_5)_2NCH_2CH_2OZnCl$

(xxix) A high-temperature X-ray study of the displacive phase transition in MnCoGe — with Ni_2In type

(xxx) Dimeric iodo[bis(diphenylphosphinoethyl)sulphido]silver, $(AgIP_2SC_{28}H_{28})_2$

(xxxi) *trans*-Bis(dinitrogen)-bis-[1,2-bis(diphenylphosphino)ethane]molybdenum(0), $Mo(N_2)_2[(C_6H_5)_2PCH_2CH_2P(C_6H_5)_2]_2$

(xxxii) Disodium ditungstate

(xxxiii) $[(Cl_3C)F_2PNCH_3]_2$

(xxxiv) Crystal structures of acid hydrates and oxonium salts, VII. Bis-(methanesulphonyl)imide monohydrate, $(CH_3SO_2)_2NH.H_2O$

(xxxv) Octamethylbicyclopentasiloxane

(xxxvi) Three new rhombohedral polytypes of lead iodide

The structures of the following compounds appeared in *Acta Chem. Scand.*, Vol. A29, No. 1, 1975

(i) Magnesium tetrametaphosphate, $Mg_2P_4O_{12}$

(ii) Thallium diisobutyldithiocarbamate, $Tl(I)S_2CN(C_4H_9)_2$

(iii) Tellurium di(methylxanthate), $Te(CH_3OCS_2)_2$

(iv) Thallium(I) diethyldithiocarbamate, $Tl(I)S_2CN(C_2H_5)_2$

(v) $[Ni_2Cl_2(C_2H_6O_2)_4]Cl_2$ and $[Co_2Cl_2(C_2H_6O_2)_4]Cl_2$, two isostructural compounds containing {di-μ-chlorobis[di(1,2-ethanediol)metal(II)]} cations

(vi) The isomorphous methylxanthates of divalent sulfur and selenium, $S(MeOCS_2)_2$ and $Se(MeOCS_2)_2$

(vii) The high-temperature forms of strontium and barium carbonate

(viii) The monoclinic form of *trans*-tetrachlorobis(tetramethylthiourea)-tellurium(IV). An example of structural change in the solid state

Acta Chem. Scand., Vol. A28, No. 7, 1974

(i) $Sb_4O_5(OH)ClO_4 \cdot \frac{1}{2}H_2O$
(ii) The adduct between quinuclidine and the NMR shift reagent $Eu(DPM)_3$
(iii) Bis(acetophenonethioacethydrazonate)nickel, $NiS_2C_{20}N_4H_{22}$
(iv) 3-hydroxybiuret potassium salt (2 : 1), $KH(C_2H_4N_3O_3)_2$
(v) Pd_6P
(vi) $V_{1-t}Fe_tAs$

Acta Chem. Scand., Vol. A28, No. 9, 1974

(i) Compounds with the marcasite type crystal structure, IX. $FeAs_2$, $FeSe_2$, $NiAs_2$, $NiSb_2$ and $CuSe_2$
(ii) Diethyldithiophosphinatothallium(1), $[Tl(Et_2PS_2)]$
(iii) Dodecahydroxohexabismuth(III) perchlorate, $Bi_2O_3 : Cl_2O_7 : XH_2O$. $X \simeq 2$, $(Bi(OH)_2ClO_4)$

Acta Chem. Scand., Vol. A28, No. 10, 1974

(i) α-Tetrakis(acetonylacetonato)cerium(IV)

5-Methyl-2-[(dimethylamino)methyl]phenylcopper(II)
($C2/c$) $Z = 4$. The bonding in this tetranuclear cluster (Cu—Cu = 2.38 Å, Cu—N = 2.21 Å (mean), multicentre bonded aryl groups) is discussed.
G. Van Koten and J.G. Noltes, *J. Organometal. Chem.*, 84 (1975) 129.

π-$C_5H_5NiFe(CO)_3Ph_3PC{\equiv}CH$
($P2_1/c$) $Z = 4$, $R = 9.4\%$ for 1961 reflections. This mixed metal complex contains the ethynyltriphenylphosphonium group as the bridging ligand. Ni—Fe = 2.420(4), Ni—C(acetylene) = 1.93(2), Fe—C(acetylene) = 1.98(2), 1.94(2) Å. The environment of the tetra-substituted phosphorus atom is discussed.
K. Yasufuku, K. Aoki and H. Yamazaki, *J. Organometal. Chem.*, 84 (1975) C 28.

cis-$[PtPh_2(Ph_2PCH_2PPh_2)]$, molecular structure and NMR
($P2_1/c$) $Z = 4$, $R = 6.8\%$ using 4299 independent reflections. The structure contains discrete molecules of *cis*-$[PtPh_2(Ph_2PCH_2PPh_2)]$ in which dpm acts as a bidentate ligand. The Pt atom and the carbon and phosphorus atoms directly bonded to it are coplanar to within 0.03 Å. The restrictive geometry of the chelate ring does not affect the lengths of the metal—ligand bonds. Pt—P = 2.30(1), Pt—C = 2.05(1) Å.
P.S. Braterman, R.J. Cross, L Manojlovic-Muir, K.W. Muir and G. Brent Young, *J. Organometal. Chem.*, 84 (1975) C 40.

Silyl and germyl-manganese pentacarbonyl-electron diffraction in the gas phase
The Si—Mn and Ge—Mn bond lengths are 240.7 ± 0.5 and 248.7 ± 0.2 pm respectively and the C—Mn—C angles in the silyl and germyl cases are 94.5

± 2° and 97 ± 2° respectively. Extent of $d \rightarrow d\pi$-bonding in the Si—Mn or Ge—Mn bonds is discussed.
D.W.H. Rankin and A. Robertson, *J. Organometal. Chem.*, 85 (1975) 225.

Dicyclopentadienylmagnesium, $(C_5H_5)_2Mg$ gas phase electron diffraction
The best agreement between calculated and experimental intensity curves is obtained for a model with eclipsed (C_5H_5) rings D_{5h} but a model with staggered rings (D_{5d}) cannot be ruled out. Mg—C = 2.339(4), C—C = 1.423(2) Å. $(C_5H_5)_2Mg$ is best regarded as a covalent rather than an ionic compound.
A. Haarland, J. Lusztyk, J. Brunvoll and K.B. Starowieyski, *J. Organometal. Chem.*, 85 (1975) 279.

Tetrakis(methyldiphenylphosphine)iridium(1) tetrafluoroborate with cyclohexane of solvation: $Ir[P(C_6H_5)_2CH_3]_4BF_4.C_6H_{12}$
($C2/c$) $Z = 12$, $R = 6.0\%$ for 7905 reflections. The phosphine ligands around the Ir are in a very distorted square planar arrangement. The reactions of the cation are discussed in terms of this structure. Ir—P = 2.314 Å (mean).
G.R. Clark, B.W. Skelton and T.N. Waters, *J. Organometal. Chem.*, 85 (1975) 375.

Nitratotriphenylstannyltin(II): a compound with a tin(IV)—tin(II) bond, $[Sn^{II}(NO_3)\{(C_6H_5)_3Sn^{IV}\}]$
($P2_1/c$) $Z = 4$, $R = 10.4\%$ using 2686 independent reflections. This is the first example of a compound which contains a Sn^{IV}—Sn^{II} (2.475 Å) bond. The environment of Sn^{IV} is approximately tetrahedral, involving the three phenyl rings at 1.90, 1.93, 1.97 Å, and Sn^{II}. The nitrate bridges two tin(II) atoms through two bidentate contacts with all the oxygen atoms involved in coordination. Sn^{II}—O = 2.38—2.84 Å.
M. Nardelli, C. Pelizzi and G. Pelizzi, *J. Organometal. Chem.*, 85 (1975) C 43.

An ω-carbon bonded complex, *cis*-chloro(benzylacetoacetate)dipyridinepalladium(II), $[PdCl_2(CH_2COCH_2C_6H_5).(C_5H_5N)_2]$
($P\bar{1}$) $Z = 2$, $R = 4.4\%$ for 2689 non-zero reflections. The geometry around the palladium atom is square-planar: coordinated by the terminal carbon atom of the benzylacetoacetate[Pd—C = 2.051(8) Å] a chloride atom [Pd—Cl = 2.300(2) Å] and two pyridine molecules [Pd—N = 2.027(6) and 2.121(6) Å (*trans* to the C)]. The acetoacetate moiety in the benzylacetoacetate ligand is bent perpendicular to the coordination plane and the terminal benzyl group is again bent and its phenyl ring is roughly parallel to the coordination plane.
M. Horike, Y. Kai, N. Yasuoka and N. Kasai, *J. Organometal. Chem.*, 86 (1975) 269.

cis-Dichlorobis(trifluorophosphine)bis(triphenylphosphine)ruthenium(II), *cis*-$RuCl_2(PF_3)_2(PPh_3)_2$, A and dichloro(2,7-dimethylocta-2,6-diene-1,8-diyl)

(trifluorophosphine)ruthenium(IV), $RuCl_2(PF_3)(C_{10}H_{16})$, B
A. ($P2_1/n$) R = 3.4% based on 2310 significant reflections. B. ($C2/c$) R = 3.9% based on 1112 significant reflections. The structures of A and B are the first structures of PF_3 complexes of transition metals in an oxidation state greater than +1. A has a slightly distorted octahedral structure with the *cis* arrangement of PF_3 ligands. The metal—PF_3 bond distances, 2.180(2), 2.160(2) Å are much shorter than the metal—PPh_3 bond lengths, 2.471(2) and 2.456(2) Å. B has trigonal bipyramidal geometry with axial Cl atoms. Ru—PF_3 = 2.237(3) Å.
P.B. Hitchcock, J.F. Nixon and J. Sinclair, *J. Organometal. Chem.*, 86 (1975) C 34.

The 2 : 1 derivatives of copper(I) bromide and iodide with bis(diphenylphosphino)methane, $(CuBr)_2DPM$, A and $(CuI)_2DPM$, B, where DPM = bis(diphenylphosphino)methane
A. ($P2_1/c$) Z = 8, R = 7.4% based on 2489 non-zero independent reflections. B. ($Pbca$) Z = 8, R = 5.4% for 1336 non-zero independent reflections. Both A and B have similar structures with a centrosymmetric $(CuX)_4$ core, (X = Br, I), in which two copper atoms have a tetrahedral geometry, while the other two are trigonal. A simple scheme is proposed to rationalize the different geometries of the $(CuX)_n$ core on the basis of steric and electronic effects.
A. Camus, G. Nardin and L. Randaccio, *Inorg. Chim. Acta*, 12 (1975) 23.

Tetrakis(biuret)strontium(II) perchlorate, $[Sr((NH_2CO)_2NH)_4](ClO_4)_2$
($P2/c$) Z = 2, R = 9.4% based on 1526 independent reflections. The two biuret ligands in the asymmetric unit are bonded to strontium as bidentates via the carbonyl oxygens. The coordination polyhedron is best described as approximately D_2-222 distorted square antiprism with the bidentate ligands spanning opposite edges of the rectangular faces. This is the first example of an eight coordinate non-transition metal complex where all of the ligands are non-ionic chemically identical oxygens. Sr—O = 2.49, 2.51, 2.69, 2.57 Å.
S. Haddad and P.S. Gentile, *Inorg. Chim. Acta*, 12 (1975) 131.

Cobalt(II) and nickel(II) complexes with nitrogen-sulfur tripod ligands. Structure of the five-coordinate complex bromotris(2-*tert*-butylthioethyl) amine-cobalt(II) hexafluorophosphate (NS_3Br donor set) $[Co(NS_3\text{-}t\text{-}Bu)Br]PF_6$ ($P2_1/n$) Z = 8, R = 6.1% for 2685 reflections. The complex cation has a trigonal bipyramidal geometry with the nitrogen and bromine atoms at the apexes and the three sulfur atoms in the equatorial plane. The tetrahedral distortion is relatively small (mean Br—Co—S angle = 98.5°). Co—Br = 2.398(3), Co—N = 2.311(11), Co—S = 2.378(4), 2.384(4), 2.354(4) Å.
G. Fallani, R. Morassi and F. Zanobiani, *Inorg. Chim. Acta*, 12 (1975) 147.

mer-Trihydrotris(triphenylphosphine)iridium(III) with benzene of solvation, $IrH_3(P(C_6H_5)_3)_3 \cdot \frac{1}{2}C_6H_6$

($P\bar{1}$) $Z = 2$, $R = 4.8\%$ for 3969 reflections. The complex is monomeric with a distorted octahedral coordination geometry in which three adjacent sites are occupied by the phosphorus atoms. The hydrogens have been located. Ir—H = 1.62, 1.58 and 1.59, Ir—P = 2.287(3), 2.347(3), 2.285(3) Å.

G.R. Clark, B.W. Skelton and T.N. Waters, *Inorg. Chim. Acta*, 12 (1975) 235.

Nucleophilic attack on $\{(\pi\text{-allyl})Pt[P(C_6H_{11})_3]_2\}PF_6$, X-ray structure of *trans*-$\{PtH_2[P(C_6H_{11})_3]_2\}$, two crystalline modifications, A and B

A. ($P\bar{1}$) $Z = 2$, $R = 4.4\%$ from 2225 non-zero reflections. B. ($C2/c$) $Z = 4$, $R = 6.8\%$ from 1875 non-zero reflections. The coordination geometry around Pt is square planar, with all the C_6 rings in a chair conformation. Pt—P = 2.26(1) (A), 2.25(1) (B) Å.

A. Immirzi, A. Musco, G. Carturan and U. Belluco, *Inorg. Chim. Acta*, 12 (1975) 423.

Seven coordinate complexes of iron(II) with pentadentate macrocyclic ligands, $FeB(NCS)_2$, A and $FeC(NCS)_2$, B, where B and C are pentadentate macrocyclic ligands

A. ($P\bar{1}$) $Z = 2$, $R = 6.0\%$ for 1078 reflections. B. ($P2/c$) $Z = 4$, $R = 6.9\%$ for 1131 reflections. The coordination geometry aroung Fe^{II} is pentagonal bipyramidal, the maximum deviations of a ring nitrogen from the least squares planes containing the metal being 0.12 and 0.30 Å respectively. These complexes undergo photoreduction from Fe^{III} to Fe^{II} in the solid state.

M.G.B. Drew, A.H.B. Othman, W.E. Hill, P. McIlroy and S.M. Nelson, *Inorg. Chim. Acta*, 12 (1975) L24.

A cobalt(III) compound of a quadridentate ligand *N,N'-o*-phenylenebis-(salicylideneiminate) in a strained non-planar configuration. [Co(salph)(L)], where L = the monoanion of dibenzoylmethane

($P2_1/n$) $Z = 4$, $R = 7.6\%$ for 3091 independent reflections. The Co—O (1.921(5) Å) bond lengths are larger than normal, reflecting the greater strain required to force the salph ligand into the non-planar configuration. Angular distortions of the ligand are discussed.

D. Cummins, E.D. McKenzie and H. Milburn, *Inorg. Chim. Acta*, 12 (1975) L17.

Technetium—phosphine complexes. Structure of *cis*-dicarbonyltetrakis (diethylphenylphosphonite)technetium(1) perchlorate, *cis*-$[Tc(CO)_2(P(OEt)_2Ph)_4]ClO_4$

($P\bar{1}$) $Z = 2$, $R = 8.6\%$ for 3570 independent reflections. The structure consists of discrete monomeric octahedral cations of *cis*-$[Tc(CO)_2(P(OEt)_2Ph)_4]^+$, the least Tc—Tc separation being 9.90 Å, and ClO_4^- anions. The coordination geometry around technetium is distorted octahedral. Tc—P

= 2.38(1), 2.41(1), 2.44(1), 2.44(1), Tc—CO = 1.90(2) Å.
M. Biagini Cingi, D.A. Clemente, L. Magon and U. Mazzi, *Inorg. Chim. Acta*, 13 (1975) 47.

An isomer of ammine(diethylenetriamine)oxalatocobalt(III) nitrate, Co(ox)-NH_3)(dien)]NO_3
(*Cc*) $Z = 4$, $R = 7.4\%$ based on 878 observed reflections. The complex has a distorted octahedral configuration with the nitrogen atoms of the dien ligand in the same coordination plane as the Co, and the proton on the secondary nitrogen atom directed toward the coordinated ammonia ligand.
M. Claire Couldwell, D.A. House and B.R. Penfold, *Inorg. Chem. Acta*, 13 (1975) 61.

$Fe_2(CO)_5(HC_2Bu^t)_3(CO)$
(*Pbca*) $Z = 8$, $R = 3.9\%$ from 2474 independent reflections. The structure shows two differently surrounded iron atoms, and a complex organic moiety comprised of three acetylene molecules and a ketonic group.
E. Sappa, L. Milone and G.D. Andreetti, *Inorg. Chim. Acta*, 13 (1975) 67.

Molecular structure of vanadyl(V) chloride as studied by gas electron diffraction, $OVCl_3$
V—Cl = 2.142(2), V—O = 1.570(5) Å.
K-I. Karakida and K. Kuchitsu, *Inorg. Chim. Acta*, 13 (1975) 113.

Pentakis(diacetamide)barium(II) perchlorate, $[Ba((CH_3CO)_2NH)_5](ClO_4)_2$
($P2_1/c$) $Z = 4$, $R = 9.4\%$ from 4041 independent reflections. The ten-coordinated complex consists of five bidentate diacetamide ligands. The bonded oxygen atoms are located at the vertices of a distorted symmetrically bicapped square antiprism (D_4d). Ba—O = 2.73(2)—2.91(2) Å.
P.S. Gentile, J. White and S. Haddad, *Inorg. Chim. Acta*, 13 (1975) 149.

DL-(Ethylvalinate-*N*,*N*-diacetato)diaquocopper(II)
($P2_1/n$) $Z = 4$, $R = 13.0\%$ from 1252 reflections. The stereochemistry around the copper is distorted octahedral, the equatorial plane consisting of the tertiary nitrogen, the two acetate oxygens and a water molecule. Bonding distances to the metal range from 1.94(1) to 2.04(1) Å. Cu—OH_2-(axial) = 2.32(1) Å, Cu—O(ester) = 2.84(2) Å.
J. Rodgers and R.A. Jacobson, *Inorg. Chim. Acta*, 13 (1975) 163.