

## JOURNAL OF ORGANOMETALLIC CHEMISTRY, VOL. 402 (1991)

### SUBJECT INDEX

#### Aluminium

Ethylaluminium halides,  $^{27}\text{Al}$  NMR spectroscopy of (Z. Černý, J. Macháček, J. Fusek, S. Heřmánek, O. Kříž, B. Čásenský), (402) 139

#### Arsenic

Cationic titanocene bishexafluoroarsenate complexes (P. Gowik, T. Klapötke), (402) 349

#### Bismuth

$\text{BiCl}_3$ , reaction with sodium 2,4,6-tris(trifluoromethyl)phenoxide; C–F bond activation in (K.H. Whitmire, H.W. Roesky, S. Brooker, G.M. Sheldrick), (402) C4

Sterically crowded aryl bismuth compounds; synthesis and characterization of bis(2,4,6-tris(trifluoromethyl)phenyl)bismuth chloride and tris(2,4,6-tris(trifluoromethyl)phenyl)bismuth (K.H. Whitmire, D. Labahn, H.W. Roesky, M. Noltemeyer, G.M. Sheldrick), (402) 55

#### Boron

Borylation of dicarbanions; syntheses of new five- and eight-membered boron–carbon rings (G.E. Herberich, U. Eigendorf, C. Ganter), (402) C17

#### Chromium

Aryllithiumtriacetylchromium, aromatic nucleophilic substitution of methoxy or chloro groups by (F. Rose-Munch, O. Bellot, L. Mignon, A. Semra, F. Robert, Y. Jeannin), (402) 1

$[\text{CpCr}(\text{CO})_2\text{L}]_2$  complexes [L = CO, P(OMe) $_3$ ], NMR determination of metal–metal bond energies in (L.Y. Goh, Y.Y. Lim), (402) 209

2,4-Di(*t*-butyl)pentadienyl anion and its Ti(II), Cr(II), and Zn(II) complexes; synthesis of (R.D. Ernst, J.W. Freeman, P.N. Swepston, D.R. Wilson), (402) 17

( $\eta^4$ -Norbomadiene)tetracarbonylchromium and metal VIb hexacarbonyls, chemical shift anisotropy of carbon-13 nuclei in carbonyl groups of (A. Gryff-Keller, H. Krawczyk, P. Szczeciński), (402) 77

#### Cobalt

$\eta^1$ - And  $\eta^3$ -cobalt(I) allyl complexes, reactions with bis(phosphine) ligands; crystal structure of  $\{(\eta^3\text{-C}_3\text{H}_5)\text{Co}(\text{CO})_2\}_2(\mu\text{-dppe-PP})$  (C. Loubser, H.M. Roos, S. Lotz), (402) 393

#### Germanium

Dimethylgermathione,  $\text{Me}_2\text{Ge}=\text{S}$ ; study by vacuum pyrolysis-MS and low-temperature matrix IR spectroscopy (V.N. Khabashesku, S.E. Boganov, P.S. Zuev, O.M. Nefedov, J. Tamás, A. Gömöry, I. Besenyey), (402) 161

3-Thia-7,7-dimethyl-7-germabicyclo[3.3.0]oct-1(5)-ene and its selenium analogue, synthesis and reactivity of (P. Mazerolles, C. Laurent), (402) 35

#### Iridium

Heteronuclear and heterovalent diphenylphosphido-bridged complexes of rhodium, iridium and ruthenium; crystal structure of  $\{(\text{C}_5\text{Me}_5)\text{ClRh}(\mu\text{-Cl})(\mu\text{-PPh}_2)\text{Rh}(\text{COD})\} \cdot \frac{1}{2}\text{Et}_2\text{O}$  (COD = 1,5-cyclooctadiene) (M. Esteban, A. Pequerul, D. Carmona, F.J. Lahoz, A. Martín, L.A. Oro), (402) 421

**Iron**

- $(\eta^3\text{-Allyl})\text{Fe}(\text{CO})_4^+$ , reactions with allyl nucleophiles; approaches to selective isoprenologation (Z. Li, K.M. Nicholas), (402) 105
- Carbene-substituted sulphur-bridged carbonyl iron clusters, synthesis of (B. Eber, G. Huttner, L. Zsolnai, W. Imhof), (402) 221
- $(RR,SS)\text{-}[(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})(\text{PPh}_3)\text{COCH}_2]_2\text{CH}_2$ , self-recognition by the iron chiral auxiliary  $[(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})(\text{PPh}_3)]$  in the formation of (G.J. Bodwell, S.G. Davies, S.C. Preston), (402) C56
- $(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})_2\text{Si}(\text{Ph})(\text{SiMe}_3)_2$  bulky iron-substituted trisilane, X-ray structural study of (R. West, E.K. Pham), (402) 215
- Cyclopentadienyliron(II) arene cations, photochemistry of; analysis of the reaction with epoxides by means of time-resolved laser spectroscopy (K.M. Park, G.B. Schuster), (402) 355
- trans*- $[\text{FeH}(\text{P}\equiv\text{C}\text{Bu}^t)(\text{dppe})_2][\text{BF}_4]$   $\eta^1$ -phosphaalkyne complex, synthesis of; its conversion into a  $\eta^1$ -fluorophosphaalkene complex; crystal structure of *trans*- $[\text{FeH}(\text{PF}=\text{CHBu}^t)(\text{dppe})_2][\text{FeCl}_2\text{F}_2]$  (P.B. Hitchcock, M.A.N.D.A. Lemos, M.F. Meidine, J.F. Nixon, A.J.L. Pombeiro), (402) C23
- 1,2,3,4,5-Pentaethylcyclopentadiene, synthesis of (D. Stein, H. Sitzmann), (402) 249
- Thiolato bridged-iron carbonyl complexes, synthesis of (P.M. Treichel, R.A. Crane, R. Matthews, K.R. Bonnin, D. Powell), (402) 233
- Tricarbonyliron complexes as intermediates to isoquinuclidines (G.R. Stephenson, R.D. Thomas, F. Cassidy), (402) C59

**Lithium**

- Aryllithiumtricarbonylchromium, aromatic nucleophilic substitution of methoxy or chloro groups by (F. Rose-Munch, O. Bellot, L. Mignon, A. Semra, F. Robert, Y. Jeannin), (402) 1
- N,N*-Dimethyl-3,5-bis(trifluoromethyl)aniline, regioselective metalation of (N. Kuhn, A. Kuhn, M. Schulten), (402) C41
- Lithiation of 3-bromo-3-hexene; synthesis of 1,2,3,4,5-pentaethylcyclopentadiene (D. Stein, H. Sitzmann), (402) C1

**Magnesium**

- Arylmagnesium compounds, intramolecularly coordinated; effects on the Schlenk equilibrium (P.R. Markies, R.M. Altink, A. Villena, O.S. Akkerman, F. Bickelhaupt, W.J.J. Smeets, A.L. Spek), (402) 289

**Metalloenes**

- Cationic titanocene bishexafluoroarsenate complexes (P. Gowik, T. Klapötke), (402) 349
- Dinuclear ( $\eta^2$ -formaldehyde)zirconocene dimer *t*-butylisothiocyanate complexes, structure of (G. Erker, M. Mena, C. Krüger, R. Noe), (402) 67

**Molybdenum**

- $[\text{Mo}(\text{C}\equiv\text{CPh})(\text{Ph}_2\text{PCH}_2\text{CH}_2\text{PPh}_2)(\eta\text{-C}_7\text{H}_7)]$  and  $[\text{Mo}(\text{C}\equiv\text{CPh})(\text{Ph}_2\text{PCH}_2\text{CH}_2\text{PPh}_2)(\eta\text{-C}_7\text{H}_7)][\text{BF}_4]$  ( $\text{C}_7\text{H}_7$  = cycloheptatrienyl), X-ray crystal structures of; an investigation of metal-alkynyl bonding in (R.L. Beddoes, C. Bitcon, M.W. Whiteley), (402) 85
- Molybdenum and tungsten cycloheptadienyl complexes, interconversion of  $\eta^5$  and  $\eta^3$  hapticities in (J.R. Hinchliffe, M.W. Whiteley), (402) C50
- Molybdenum(0) and tungsten(0) ( $\eta^4$ -1-oxa-1,3-diene) complexes; compounds with *R*-(+)-pulegone ligands (T. Schmidt, C. Krüger, P. Betz), (402) 97
- $(\eta^4\text{-Norbornadiene})\text{tetracarboxylchromium}$  and metal VIb hexacarbonyls, chemical shift anisotropy of carbon-13 nuclei in carbonyl groups of (A. Gryff-Keller, H. Krawczyk, P. Szczeciński), (402) 77
- 1,2,3,4,5-Pentaethylcyclopentadiene, synthesis of (D. Stein, H. Sitzmann), (402) 249

**Osmium**

- $\text{Os}_6(\text{CO})_{18}$ , reaction with  $\text{Me}_3\text{NO}$ ; isolation and NMR study of the new hexaosmium cluster anion  $[\text{HOs}_6(\text{CO})_{17}]^-$  (B.F.G. Johnson, J. Lewis, M.-A. Pearsall, L.G. Scott), (402) C27
- Osmium clusters with 1,2-dipolar ligands; synthesis and crystal structure of  $\text{HOs}_3(\text{CO})_9(\mu_3\text{-}\eta^2\text{-PhNCHCPh}_3)$  (M. Langenbahn, H. Stoeckli-Evans, G. Süss-Fink) (402) C12

Osmium(II) complexes; reactions of coordinated phosphorus trichloride, phenylphosphonous dichloride, 1-phenyl-3,4-dimethylphosphole and mesitylphosphine in (D.S. Bohle, G.R. Clark, C.E.F. Rickard, W.R. Roper, W.B. Shepard), (402) 375

## Palladium

Organopalladium(IV) complexes, synthesis by halogen exchange; structure of the azidopalladium(II) complex formed on reductive elimination of ethane from Pd(N<sub>3</sub>)Me<sub>2</sub>(CH<sub>2</sub>Ph)(bpy) (A.J. Canty, P.R. Traill, B.W. Skelton, A.H. White), (402) C33

Platinum or palladium 3-diphenylphosphinocamphor complexes including acetylides (S.D. Perera, B.L. Shaw), (402) 133

## Phosphorus

$\eta^1$ - and  $\eta^3$ -cobalt(I) allyl complexes, reactions with bis(phosphine) ligands; crystal structure of  $\{(\eta^3\text{-C}_3\text{H}_5\text{)Co(CO)}_2\}_2(\mu\text{-dppe-PP})$  (C. Loubser, H.M. Roos, S. Lotz), (402) 393

Carbene-substituted sulphur-bridged carbonyl iron clusters, synthesis of (B. Eber, G. Huttner, L. Zsolnai, W. Imhof), (402) 221

Dibenzoplatinol system, photochemical and UV-spectroscopic studies of (H.-A. Brune, R. Hohenadel, G. Schmidtberg, U. Ziegler), (402) 179

*N,N*-Dimethyl-3,5-bis(trifluoromethyl)aniline, regioselective metalation of (N. Kuhn, A. Kuhn, M. Schulten), (402) C41

*trans*-[FeH(P $\equiv$ CBu<sup>1</sup>)(dppe)<sub>2</sub>][BF<sub>4</sub>]  $\eta^1$ -phosphaalkyne complex, synthesis of; its conversion into a  $\eta^1$ -fluorophosphaalkene complex; crystal structure of *trans*-[FeH(PF=CHBu<sup>1</sup>)(dppe)<sub>2</sub>][FeCl<sub>2</sub>F<sub>2</sub>] (P.B. Hitchcock, M.A.N.D.A. Lemos, M.F. Meidine, J.F. Nixon, A.J.L. Pombeiro), (402) C23

Osmium clusters with 1,2-dipolar ligands; synthesis and crystal structure of HOs<sub>3</sub>(CO)<sub>9</sub>( $\mu_3$ - $\eta^2$ -PhNCHCPh<sub>3</sub>) (M. Langenbahn, H. Stoeckli-Evans, G. Süss-Fink) (402) C12

Osmium(II) complexes; reactions of coordinated phosphorus trichloride, phenylphosphonous dichloride, 1-phenyl-3,4-dimethylphosphole and mesitylphosphine in (D.S. Bohle, G.R. Clark, C.E.F. Rickard, W.R. Roper, W.B. Shepard), (402) 375

Pyrazolate-bridged dirhodium(I) complex Rh<sub>2</sub>(CO)<sub>2</sub>(PPh<sub>3</sub>)<sub>2</sub>( $\mu$ -3,5-Me<sub>2</sub>pz)<sub>2</sub>, electrochemistry of (R. Seeber, G. Minghetti, M.I. Pilo, G. Banditelli, S. Zamponi), (402) 413

## Platinum

Bis[tetra(*n*-butyl)ammonium]bis{[ $\mu$ -bromo]2,2'- $\eta^2$ -[4,4'-bis(trifluoromethyl)biphenyl]platinate(II)}, synthesis and structure of (H.-A. Brune, H. Roth, T. Debaerdemaeker, H.-M. Schiebel), (402) 435

Dibenzoplatinol system, photochemical and UV-spectroscopic studies of (H.-A. Brune, R. Hohenadel, G. Schmidtberg, U. Ziegler), (402) 179

Platinum-catalysed elimination-addition reactions of trisilyl ethenes (T. Suzuki, P.Y. Lo), (402) 27

Platinum or palladium 3-diphenylphosphinocamphor complexes including acetylides (S.D. Perera, B.L. Shaw), (402) 133

## Potassium

2,4-Di(*t*-butyl)pentadienyl anion and its Ti(II), Cr(II), and Zn(II) complexes; synthesis of (R.D. Ernst, J.W. Freeman, P.N. Swepston, D.R. Wilson), (402) 17

## Rhodium

Acetylacetonato-1,5-cyclooctadienerrhodium(I), kinetics of the substitution of acetylacetonate by derivatives of 1,10-phenanthroline and 2,2'-dipyridyl (J.G. Leopoldt, G.J. Lamprecht, E.C. Steynberg), (402) 259

Diene- and carbonyl-rhodium(I) complexes containing bridging adeninate ligands, synthesis and structural characterisation of (W.S. Sheldrick, B. Günther), (402) 265

Heteronuclear and heterovalent diphenylphosphido-bridged complexes of rhodium, iridium and ruthenium; crystal structure of [(C<sub>5</sub>Me<sub>5</sub>)ClRh( $\mu$ -Cl)( $\mu$ -PPh<sub>2</sub>)Rh(COD)] $\cdot\frac{1}{2}$ Et<sub>2</sub>O (COD = 1,5-cyclooctadiene) (M. Esteban, A. Pequerul, D. Carmona, F.J. Lahoz, A. Martín, L.A. Oro), (402) 421

Pyrazolate-bridged dirhodium(I) complex Rh<sub>2</sub>(CO)<sub>2</sub>(PPh<sub>3</sub>)<sub>2</sub>( $\mu$ -3,5-Me<sub>2</sub>pz)<sub>2</sub>, electrochemistry of (R. Seeber, G. Minghetti, M.I. Pilo, G. Banditelli, S. Zamponi), (402) 413

## Ruthenium

- Heteronuclear and heterovalent diphenylphosphido-bridged complexes of rhodium, iridium and ruthenium; crystal structure of  $[(C_5Me_5)ClRh(\mu-Cl)(\mu-PPH_2)Rh(COD)] \cdot \frac{1}{2}Et_2O$  (COD = 1,5-cyclooctadiene) (M. Esteban, A. Pequerul, D. Carmona, F.J. Lahoz, A. Martin, L.A. Oro), (402) 421
- Mononuclear ruthenium(II) complex containing two 3e-donating  $\sigma-C$ ,  $\sigma-N$  coordinated 1-aza-1,3-dien-4-yl ligands, preparation and spectroscopic characterisation of (W.P. Mul, C.J. Elsevier, J. Spaans), (402) 125
- $Ru(\eta^4-C_8H_{12})(\eta^6-C_8H_{10})$ , thermal decomposition of (D. Labroue, R. Pince, R. Quéau), (402) 363
- Ruthenium, penta- and heptanuclear  $\pi$ -toluene derivatives of (K.J. Edwards, J.S. Field, R.J. Haines, F. Mulla), (402) 113
- Ruthenium  $\alpha$ -phenylethynyl-*trans*- $\beta$ -styryl complexes, reactions with isonitriles; hemi-labile alkyne coordination (A.F. Hill, R.P. Melling, A.R. Thompson), (402) C8

## Selenium

- 3-Thia-7,7-dimethyl-7-germabicyclo[3.3.0]oct-1(5)-ene and its selenium analogue, synthesis and reactivity of (P. Mazerolles, C. Laurent), (402) 35

## Silicon

- $(\eta^3\text{-Allyl})Fe(CO)_4^+$ , reactions with allyl nucleophiles; approaches to selective isoprenologation (Z. Li, K.M. Nicholas), (402) 105
- $(\eta^5-C_5H_5)Fe(CO)_2Si(Ph)(SiMe_3)_2$  bulky iron-substituted trisilane, X-ray structural study of (R. West, E.K. Pham), (402) 215
- 1-Mesityl-3-phenyl-1,2-bis(trimethylsilyl)-1-silacyclopentene and 2-mesityl-2-(phenylethynyl)hexamethyltrisilane, thermal isomerisation of (M. Ishikawa, Y. Yuzuriha, T. Horio, A. Kunai), (402) C20
- Organyltrichlorosilanes, acetolysis with acetic anhydride (K. Käßler, A. Porzel, U. Scheim, K. Rühlmann), (402) 155
- Platinum-catalysed elimination-addition reactions of trisilylethenes (T. Suzuki, P.Y. Lo), (402) 27
- 2-Silatranyl- and 2-(3,7,10-trimethyl)silatranylacetaldehydes, synthesis of (M. Nasim, L.I. Livantsova, D.P. Krut'ko, G.S. Zaitseva, V.S. Petrosyan, J. Lorberth), (402) 313
- Substituted polysilanes, synthesis via trifluoromethanesulphonic acid (W. Uhlig), (402) C45
- 5,5'-(1,1,3,3-Tetramethyldisiloxane-1,3-diyl)bisbicyclo[2.2.1]heptane-2,3-dicarboxylic anhydride, a disiloxane equilibration approach to the preparation and characterisation of (S.A. Swint, M.A. Buese), (402) 145

## Silver

- Silver-tin complex salts; a dimeric tin-complex anion with a double hydroxyl bridge; crystal structure of  $[Ag(AsPh_3)_4]_2[Sn_2Ph_4(NO_3)_4(OH)_2] \cdot 2CH_3CN$  (A. Bonardi, A. Cantoni, C. Pelizzi, G. Pelizzi, P. Tarasconi), (402) 281

## Sulphur

- Thiolato bridged-iron carbonyl complexes, synthesis of (P.M. Treichel, R.A. Crane, R. Matthews, K.R. Bonnin, D. Powell), (402) 233

## Tellurium

- ortho*-Tellurated azomethines with intramolecular N  $\rightarrow$  Te coordination, molecular and crystal structure of (V.I. Minkin, I.D. Sadekov, A.A. Maksimenko, O.E. Kompan, Yu.T. Struchkov), (402) 331

## Tin

- $(\eta^3\text{-Allyl})Fe(CO)_4^+$ , reactions with allyl nucleophiles; approaches to selective isoprenologation (Z. Li, K.M. Nicholas), (402) 105
- Dibenzoplatinol system, photochemical and UV-spectroscopic studies of (H.-A. Brune, R. Hohenadel, G. Schmidtberg, U. Ziegler), (402) 179
- Polyfunctional stannylallenes, NMR spectroscopic study of (E. Liepiņš, I. Birģele, E. Lukevics, E.T. Bogoradovsky, V.S. Zavgorodny), (402) 43

Silver–tin complex salts; a dimeric tin-complex anion with a double hydroxyl bridge; crystal structure of  $[\text{Ag}(\text{AsPh}_3)_4]_2[\text{Sn}_2\text{Ph}_4(\text{NO}_3)_4(\text{OH})_2] \cdot 2\text{CH}_3\text{CN}$  (A. Bonardi, A. Cantoni, C. Pelizzi, G. Pelizzi, P. Tarasconi), (402) 281

Substituted 9,9-bis(n-butyl)dibenzostannoles, syntheses of (H.-A. Brune, R. Hohenadel, G. Schmidtberg, U. Ziegler), (402) 171

Triorganostannyl esters of amic acids, synthesis and spectroscopic studies of; crystal structure of the triphenylstannyl ester of citraconic acid monopyrrolidide (A. Samuel-Lewis, P.J. Smith, J.H. Aupers, D.C. Povey), (402) 319

### Titanium

Cationic titanocene bishexafluoroarsenate complexes (P. Gowik, T. Klapötke), (402) 349

$[(\text{C}_5\text{HMe}_4)\text{TiBr}(\mu\text{-O})]_4$  and  $[(\text{C}_5\text{Me}_5)\text{TiBr}(\mu\text{-O})]_3$ , crystal and molecular structure of (S.I. Troyanov, V. Varga, K. Mach), (402) 201

2,4-Di(t-butyl)pentadienyl anion and its Ti(II), Cr(II), and Zn(II) complexes; synthesis of (R.D. Ernst, J.W. Freeman, P.N. Swepston, D.R. Wilson), (402) 17

### Tungsten

Molybdenum and tungsten cycloheptadienyl complexes, interconversion of  $\eta^5$  and  $\eta^3$  hapticities in (J.R. Hinchliffe, M.W. Whiteley), (402) C50

Molybdenum(0) and tungsten(0) ( $\eta^4$ -1-oxa-1,3-diene) complexes; compounds with *R*-(+)-pulegone ligands (T. Schmidt, C. Krüger, P. Betz), (402) 97

( $\eta^4$ -Norbormadiene)tetracarbonylchromium and metal VIb hexacarbonyls, chemical shift anisotropy of carbon-13 nuclei in carbonyl groups of (A. Gryff-Keller, H. Krawczyk, P. Szczeciński), (402) 77

### Zinc

2,4-Di(t-butyl)pentadienyl anion and its Ti(II), Cr(II), and Zn(II) complexes; synthesis of (R.D. Ernst, J.W. Freeman, P.N. Swepston, D.R. Wilson), (402) 17

### Zirconium

Dinuclear ( $\eta^2$ -formaldehyde)zirconocene dimer t-butylisothiocyanate complexes, structure of (G. Erker, M. Mena, C. Krüger, R. Noe), (402) 67

### Book reviews

A guide for the perplexed organic experimentalist, 2nd edition, by H.J. Loewenthal (C. Eaborn), (402) C63

Dictionary of organometallic compounds. Cumulative structure index to volumes 1–5; edited by J.E. Macintyre (C. Eaborn), (402) C38

Gmelin handbook of inorganic chemistry, 8th edition, index. Formula index, 2nd supplement (K.R. Seddon), (402) C37

Tin-based antitumour drugs; edited by M. Gielen (C. Eaborn), (402) C38