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Volume 664, Issues 1–2, 16 December 2002

Journal of Organometallic Chemistry

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Contents

Communication

Liu Xiaozhong, Li Hongmei, Kong Fanzhi

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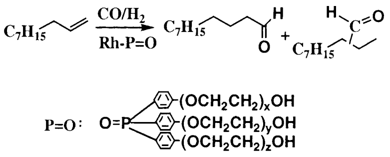
Polyether phosphine oxide induced phase separable homogeneous catalysis for hydroformylation of higher olefins

Polyether triarylphosphine oxide gives high activity and allows easy separation of the catalyst for hydroformylation of 1-decene.



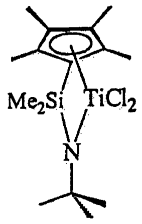
Regular Papers

Luigi Resconi, Isabella Camurati, Cristiano Grandini, Marilisa Rinaldi, Nicoletta Mascellani, Orazio Traverso

J. of Organomet. Chem. 664 (2002) 5

Indenyl-amido titanium and zirconium dimethyl complexes: improved synthesis and use in propylene polymerization

The synthesis of a series of indenyl amido titanium dimethyl complexes, by means of the direct synthesis from the ligand, a 2-fold excess of MeLi, and $TiCl_4$ is reported. The ^1H NMR spectra of the complexes show a quartet structure for the metal-bound methyl groups, due to through-metal proton–proton coupling. Coupling of Ti-methyl protons with protons on the Cp ring is also revealed by COSY 2D-NMR.



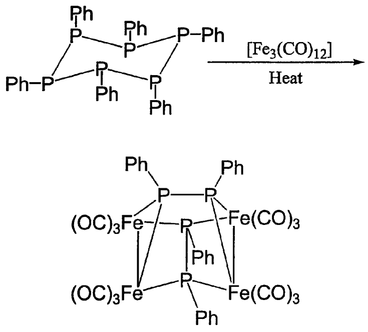
1-TiCl$_2$

Rohini M. De Silva, Martin J. Mays, Gregory A. Solan

J. of Organomet. Chem. 664 (2002) 27

Reactivity of *cyclo*-$(PhX)_6$ (X = As, P) towards $[M_3L_2(CO)_{10}]$ (M = Ru, L = CO or NCMe; M = Fe, L = CO)

Hybrid transition metal-main group cluster complexes, resulting from both the preservation and fragmentation of phenyl-substituted *cyclo*-hexaarsane and *cyclo*-hexaphosphane ligands, are accessible from the reactions of the corresponding hexameric rings with Group 8 transition metal carbonyl complexes.



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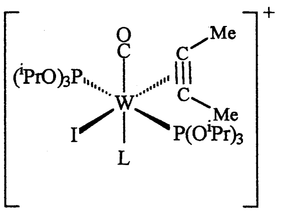
Paul K. Baker, Michael G.B. Drew,
Deborah S. Moore

J. of Organomet. Chem. 664 (2002) 37

Nitrile exchange reactions of [WI(CO)(NCMe){P(O^{i}Pr)$_3$}$_2$(η^2-MeC$_2$Me)][BPh$_4$]; X-ray crystal structures of [WI(CO)(L){P(O^{i}Pr)$_3$}$_2$(η^2-MeC$_2$Me)][BPh$_4$] {L = NC^{i}Pr, NC^{t}Bu, NCCH$_2$Ph, 1,2-C$_6$H$_4$(NCCH$_2$)$_2$}

Reaction of [WI(CO)(NCMe){P(O^{i}Pr)$_3$}$_2$(η^2-MeC$_2$Me)][BPh$_4$] with equimolar quantities of L {L = NCEt, NC^{i}Pr, NC^{t}Bu, NCPh, NCCH$_2$Ph, 1,2-C$_6$H$_4$(NCCH$_2$)$_2$, NCCH$_2$(C$_4$H$_3$S-3)} in CH$_2$Cl$_2$ afforded the acetonitrile exchanged products, [WI(CO)L{P(O^{i}Pr)$_3$}$_2$(η^2-MeC$_2$Me)][BPh$_4$] (**1**–**7**) in good yield. Four of the complexes, for L = NC^{i}Pr (**2**), NC^{t}Bu (**3**), NCCH$_2$Ph (**5**) and 1,2-C$_6$H$_4$(NCCH$_2$)$_2$ (**6**) have been by structurally characterised by X-ray crystallography.

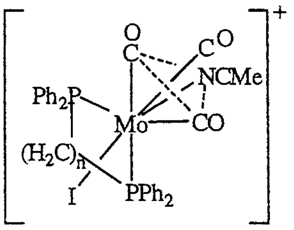


Paul K. Baker, Michael G.B. Drew,
Deborah S. Moore

J. of Organomet. Chem. 664 (2002) 45

Synthesis and reactions of the cationic seven-coordinate complexes, [MoI(CO)$_3$(NCR){Ph$_2$P(CH$_2$)$_n$PPh$_2$}][BF$_4$] (R = Me, n = 1, 2 and 3; R = Et, n = 1). Crystal structures of [MoI$_2$(CO)$_2$(PPh$_3$){Ph$_2$P(CH$_2$)PPh$_2$}], [MoI(CO)$_2${Ph$_2$P(CH$_2$)PPh$_2$}$_2$][BF$_4$]·CH$_2$Cl$_2$, [MoCl$_3$O{Ph$_2$PO(CH$_2$)OPPh$_2$}] and [Mo$_3$(μ_3-I)$_2${μ_2-Ph$_2$P(CH$_2$)PPh$_2$}$_3$]I

The synthesis of the cationic seven-coordinate complexes of molybdenum (II), [MoI(CO)$_3$(NCMe){Ph$_2$P(CH$_2$)$_n$PPh$_2$}][BF$_4$] (n = 1, 2 and 3) is described. The reactions of these complexes with a series of neutral and anionic donor ligands are also discussed. The X-ray crystal structures of the complexes [MoI$_2$(CO)$_2$(PPh$_3$){Ph$_2$P(CH$_2$)PPh$_2$}], [MoI(CO)$_2${Ph$_2$P(CH$_2$)PPh$_2$}$_2$][BF$_4$]CH$_2$Cl$_2$, [MoCl$_3$O{Ph$_2$PO(CH$_2$)OPPh$_2$}] and [Mo$_3$(μ_3-I)$_2${μ_2-Ph$_2$P(CH$_2$)PPh$_2$}$_3$]I are also described.

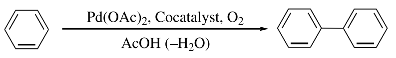


Makoto Okamoto, Midori Watanabe,
Teizo Yamaji

J. of Organomet. Chem. 664 (2002) 59

Highly selective synthesis of biphenyl by the Pd(OAc)$_2$/HPA/O$_2$/AcOH catalyst system

Hiphenyl could be synthesized with 100% selectivily by Pd-catalyzed dimerization of benzene in the presence of H$_3$PMo$_{12}$O$_{40}$ as a cocatalyst and O$_2$ in AcOH/H$_2$O solvent at 130 °C. PdHPMo$_{12}$O$_{40}$ itself could act as a catalyst to give 95% selectivity with a lower yield of biphenyl.

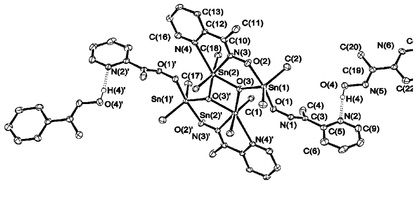


Vinita Sharma, Rajnish K. Sharma,
Rakesh Bohra, Vimal K. Jain,
John E. Drake, Mark E. Light,
Michael B. Hursthouse

J. of Organomet. Chem. 664 (2002) 66

Synthesis, spectroscopic and structural aspects of some tetraorganodistannoxanes with internally functionalized oxime. 2. Crystal and molecular structure of [{Me$_2$Sn(ON=C(Me)C$_5$H$_4$N)}$_2$O}]$_2$·2[2-NC$_5$H$_4$(Me)C=NOH]

The title compound [{Me$_2$Sn(ON=C(Me)C$_5$H$_4$N)}$_2$O}]$_2$·2[2-NC$_5$H$_4$(Me)C=NOH] was obtained during the reaction of Me$_2$SnCl$_2$ with the sodium salt of the ligand in 1:2 molar ratio. X-ray diffraction analysis of the compound reveals that it is the first tetraorganodistannoxane structural motif in which two molecules of free oxime are connected to the stannoxane framework and the two Sn–O distances of the four-membered planar Sn$_2$O$_2$ ring are identical.

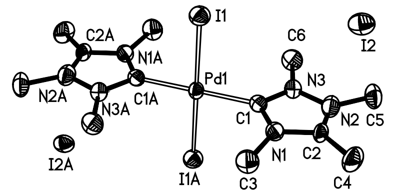


Christophe Buron, Lutz Stelzig, Olivier Guerret, Heinz Gornitzka, Vadim Romanenko, Guy Bertrand

J. of Organomet. Chem. 664 (2002) 70

Synthesis and structure of 1,2,4-triazol-2-ium-5-ylidene complexes of Hg(II), Pd(II), Ni(II), Ni(0), Rh(I) and Ir(I)

Water soluble 1,2,4-triazol-2-ium-5-ylidene complexes of Hg(II), Pd(II), Ni(II), Ni(0), Rh(I) and Ir(I), are readily prepared from the corresponding dicationic triazolium salts by one-pot deprotonation-complexation reactions. According to X-ray studies the metal–carbon bond lengths are in the range of typical metal–carbon single bonds suggesting that π-backbonding is negligible.

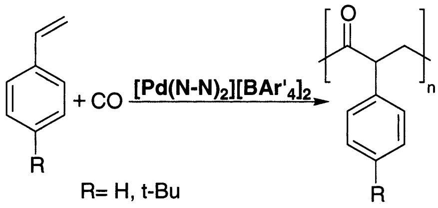


Sergio Stoccoro, Giuseppe Alesso, Maria Agostina Cinellu, Giovanni Minghetti, Antonio Zucca, Amaia Bastero, Carmen Claver, Mario Manassero

J. of Organomet. Chem. 664 (2002) 77

New complexes of palladium(II) with chelating heterocyclic nitrogen ligands. Characterization and catalytic activity in CO–styrene copolymerization. Crystal structure of $[Pd(bipy)_2][BAr'_4]_2$, Ar′ = [3,5-$(CF_3)_2C_6H_3$]

New bis-chelated palladium(II) derivatives $[Pd(bipy^R)_2]^{2+}$ and $[Pd(bipy)(bipy^R)]^{2+}$ (bipy = 2,2′-bypiridine, bipy^R = 6-substituted-2,2′-bipyridine) have been isolated as $[BAr'_4]^-$ salts (Ar′ = [3,5-$(CF_3)_2C_6H_3$]) and tested as catalyst precursors in the CO–styrene or 4-*tert*-butylstyrene (TBS) copolymerization. Their activity has been compared with that of $[Pd(bipy)_2][PF_6]_2$ and $[Pd(bipy)_2][BAr'_4]_2$. The X-ray structure of the latter complex has been solved.

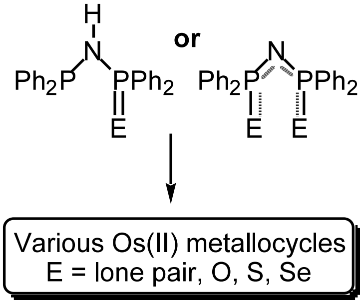


Jonathan Parr, Martin B. Smith, Mark R.J. Elsegood

J. of Organomet. Chem. 664 (2002) 85

Osmacycles containing the $\{(Ph_2PE)_2N\}^-$ ligand (E = S or Se): synthesis and crystal structures

The synthesis and spectroscopic characterisation (multinuclear NMR, IR) of new osmium(II) arene complexes with a range of P–N–P based ligands are described. Representative X-ray structures have been determined.

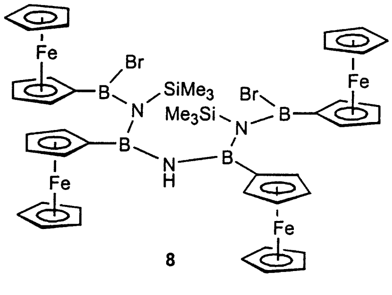


Kuangbiao Ma, Hans-Wolfram Lerner, Stefan Scholz, Jan W. Bats, Michael Bolte, Matthias Wagner

J. of Organomet. Chem. 664 (2002) 94

Stepwise assembly and structural characterization of oligonuclear ferrocene aggregates with boron–nitrogen backbone

Mono-, di-, tri- and tetranuclear (**8**) aggregates with BN backbone have been obtained upon treatment of $FcBBr_2$ [**1**, Fc = $(C_5H_5)Fe(C_5H_4)$] with selected amines.

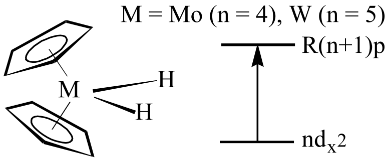


Sergey Yu. Ketkov, Valentina V. Kutyreva, Anatoly M. Ob'edkov, Georgy A. Domrachev

J. of Organomet. Chem. 664 (2002) 106

Gas-phase electronic absorption spectra of metallocene dihydrides $M(\eta^5\text{-}C_5H_5)_2H_2$ (M = Mo, W)

The gas-phase electronic absorption spectra of $MoCp_2H_2$ and WCp_2H_2 reveal a Rydberg band which disappears on going to the condensed phase. The corresponding electronic transitions originate at the non-bonding HOMO and terminate at the lowest Rydberg p-orbitals.

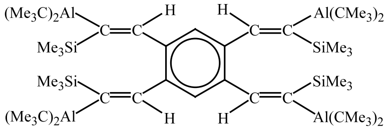


Werner Uhl, Madhat Matar

J. of Organomet. Chem. 664 (2002) 110

Syntheses of polyaluminium compounds by hydroalumination reactions, chelating Lewis acids possessing two and four coordinatively unsaturated aluminium atoms

Hydroalumination of C≡C triple bonds of a tetraalkynylbenzene derivative afforded chelating Lewis acids with two or four coordinatively unsaturated aluminium atoms.

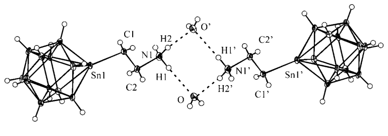


Thiemo Marx, Benno Ronig, Herbert Schulze, Ingo Pantenburg, Lars Wesemann

J. of Organomet. Chem. 664 (2002) 116

Alkylderivatives of Stanna-*closo*-dodecaborate

Reactions of the nucleophilic *closo*-borate $[SnB_{11}H_{11}]^{2-}$ with several organic halides yield in derivatives of type $[RSnB_{11}H_{11}]^{-}$. With diiodomethane and chloroiodomethane monosubstituion is not possible and the structure of this reaction product is presented. Under heating in water the sodium salt $Na_2[SnB_{11}H_{11}]$ reacts with cationic alkylbromides $[H_3N(CH_2)_nBr]Br$ ($n = 2$, 3) to give zwitterionic molecules. $[H_3N\text{-}(CH_2)_2\text{-}SnB_{11}H_{11}]$ crystallizes with one equivalent of water under the formation of hydrogen bridges.

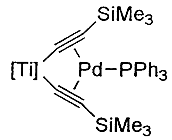


Stephan Back, Thomas Stein, Joachim Kralik, Christian Weber, Gerd Rheinwald, Laszlo Zsolnai, Gottfried Huttner, Heinrich Lang

J. of Organomet. Chem. 664 (2002) 123

Synthesis and electrochemical behaviour of σ,η^2-acetylide-bridged early–late complexes; The solid-state structure of $[(\eta^5\text{-}C_5H_4SiMe_3)_2Ti(C{\equiv}CSiMe_3)_2]Pd(PPh_3)$

The synthesis of heterobimetallic tweezer complexes of type $\{[Ti](C{\equiv}CSiMe_3)_2\}ML$ [M = Ni, Pd; L = CO, PPh_3, $P(OR')_3$] is reported. Cyclic voltammetric studies reveal an electron donating character of the respective coordinated transition metal M. The reductive process also exhibits a dependence on the π-acidity of L.

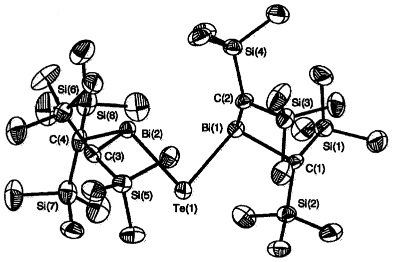


H.J. Breunig, I. Ghesner, E. Lork

J. of Organomet. Chem. 664 (2002) 130

Syntheses and structures of $(R_2Bi)_2E$ (E = S, Te) and *cyclo*-$(RSbSe)_2[W(CO)_5]_2$ [R = $CH(SiMe_3)_2$]

Synthesis, structures and spectroscopy of two bis(dialkylbismuth)chalcogenides $(R_2Bi)_2E$ (E = S (**1**), Te (**2**); R = $CH(SiMe_3)_2$) and of a tungsten complex, *cyclo*-$(RSbSe)_2[W(CO)_5]_2$ (**3**) are described. **1** and **2** are heavy atom analogues of cacodyl oxide. **2** is the first organometallic molecule with a Bi–Te bond with a known crystal structure.

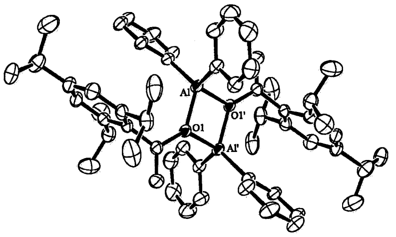


Antoni Ryszard Kunicki, Adam Chojecki, Janusz Zachara, Marek Gliński

J. of Organomet. Chem. 664 (2002) 136

The factors controlling the reaction of (2,4,6-triisopropylphenyl) methyl ketone with Ph_3Al and structure of $[Ph_2AlO(2,4,6\text{-tri-}^iPr\text{-}C_6H_2)C{=}CH_2]_2$

The reaction of (2,4,6)-tri-isopropylphenyl methyl ketone with tri-phenylaluminium was investigated. $[Ph_2AlO(2,4,6\text{-tri-}^iPr\text{-}C_6H_2)C{=}CH_2]_2$ was found to be formed exclusively. The title compound has been characterised by NMR and its crystal structure determined by X-ray diffraction study.



Thomas Stein, Heinrich Lang

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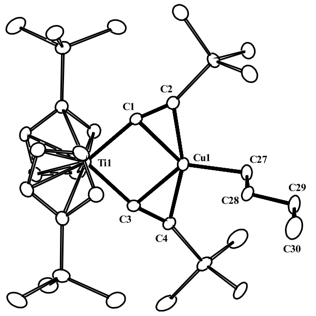
Monomere Kupfer(I)-Alkyle mit β-Wasserstoffatomen und Kupfer(I)-Aryle mit kondensierten Aromaten; die Festkörperstruktur von $[(\eta^5\text{-}C_5H_4SiMe_3)_2Ti(C{\equiv}CSiMe_3)_2]\text{-}Cu^nC_4H_9$

Die Synthese, das Reaktionsverhalten sowie die Struktur und Bindungsverhältnisse von alkinstabilisierten Kupfer(I)-Organylen, $[(\eta^5\text{-}C_5H_4SiMe_3)_2Ti(C{\equiv}CSiMe_3)_2]CuR$ (R = $^iC_3H_7$, $^nC_4H_9$, $^cC_5H_9$, 9-$C_{13}H_9$, 1-$C_{10}H_7$, 9-$C_{14}H_9$), wird vorgestellt. Während die Kupfer(I)-Alkyle β-Wasserstoffatome aufweisen, enthalten die Kupfer(I)-Aryle kondensierte aromatische Reste.

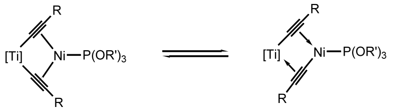


H. Lang, E. Meichel, Th. Stein, C. Weber, J. Kralik, G. Rheinwald, H. Pritzkow

J. of Organomet. Chem. 664 (2002) 150

Stabilisierung niedervalenter Ni(CO)-Bausteine durch $[Ti](C{\equiv}CR)_2$; Reaktionsverhalten von $\{[Ti](C{\equiv}CR)_2\}Ni(CO)$ gegenüber Triphenylphosphan und Phosphiten

The synthesis and reaction chemistry of the heterobimetallic tweezer-complexes $\{[Ti](C{\equiv}CR)_2\}NiL$ (L = CO, $P(OR')_3$, PPh_3, ...) is described. Their structural behaviour in solution as well as in the solid-state is reported.

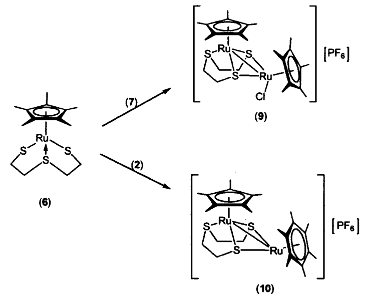


Lai Yoong Goh, Ming Ern Teo, Soo Beng Khoo, Weng Kee Leong, Jagadese J. Vittal

J. of Organomet. Chem. 664 (2002) 161

Cyclic thioether and acyclic thioether–thiolate complexes of pentamethylcyclopentadienyl ruthenium(II, III)

Metal–metal bonded dinuclear complexes were obtained from the reactions of [Cp*Ru(tpdt)] (**6**) (tpdt = $S(CH_2CH_2S^-)_2$) with $[Cp^*RuCl_2]_2$ (**7**) and $[(C_6Me_6)RuCl_2]_2$ (**2**).

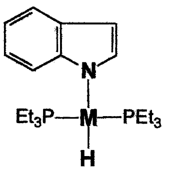


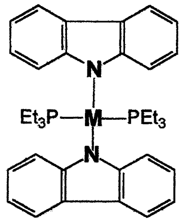
Carolina López, Gerardo Barón, Alma Arévalo, Miguel Angel Muñoz-Hernández, Juventino J. García

J. of Organomet. Chem. 664 (2002) 170

Oxidative insertion into the N–H bond of carbazole, indole and pyrrole with zerovalent metals

The reactions of carbazole ($C_{12}H_8NH$), indole (C_8H_6NH) and pyrrole (C_4H_4NH) with the zerovalent $[Pt(PEt_3)_3]$, $[Pd(PEt_3)_3]$ and $[Ni(PEt_3)_3]$ gave oxidative insertion into the N–H bond, affording the corresponding hydrides of the type *trans*-[HM(LN)($PEt_3)_2$], LN = de-protonated heterocyclic ligand; the isolated compounds for platinum were *trans*-$[HPt(C_8H_6N)(PEt_3)_2]$ (**1**), *trans*-$[HPt(C_4H_4N)(PEt_3)_2]$ (**2**), and for nickel *trans*-$[HNi(C_{12}H_8N)(PEt_3)_2]$ (**3**), *trans*-$[HNi(C_8H_6N)(PEt_3)_2]$ (**4**) and *trans*-$[HNi(C_4H_4N)(PEt_3)_2]$ (**5**); on using palladium the corresponding hydrides were also detected in solution, however, after longer reaction time the double substituted compounds: *trans*-$[Pd(C_{12}H_8N)_2(PEt_3)_2]$ (**6**), *trans*-$[Pd(C_8H_6N)_2(PEt_3)_2]$ (**7**) and *trans*-$[Pd(C_4H_4N)_2(PEt_3)_2]$ (**8**) were obtained. A crystal structure is reported for **6**.



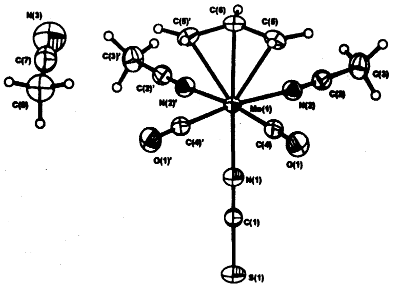


Jonathan W. Goodyear, Clive W. Hemingway, Ross W. Harrington, Matthew R. Wiseman, Brian J. Brisdon

J. of Organomet. Chem. 664 (2002) 176

The crystal structure of $[Mo(NCS)(CO)_2(\eta^3\text{-}C_3H_5)(NCMe)_2]\cdot MeCN$ and the reactions of $\{Mo(CO)_2(\eta^3\text{-}C_3H_5)^+\}$ containing species with symmetric alkynes

The crystal structure of $[Mo(NCS)(CO)_2(\eta^3\text{-}C_3H_5)(NCMe)_2]\cdot MeCN$ (**1**) is presented. Compound **1** and the analogous chloro-complex $[Mo(Cl)(CO)_2(\eta^3\text{-}C_3H_5)(NCMe)_2]$ (**2**) are shown to act as catalysts in the conversion of PhC≡CPh to a mixture of hexaphenylbenzene and *E*,*E*-1,2,3,4-tetraphenylbutadiene. In contrast $MeO_2CC{\equiv}CCO_2Me$ is not oligomerised. Compound **2** is also shown to dimerise 1,4-diphenylbutadiyne to *Z*,*E*-1,4,5,8-tetraphenyl-1,7-octa-3,5-diene-1,7-diyne.

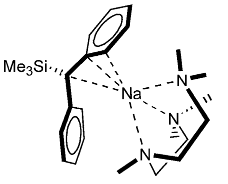


Michael S. Hill, Peter B. Hitchcock

J. of Organomet. Chem. 664 (2002) 182

Sodium and potassium derivatives of diphenyl(trimethylsilyl)methane

Base-free and PMDETA coordinated sodium and potassium derivatives of $Ph_2(Me_3Si)CH$ have been prepared and fully characterised by multinuclear NMR and, in the case of the monomeric sodium derivative shown, by single crystal X-ray diffraction.

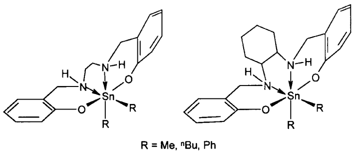


Reyes García-Zarracino,
Jesús Ramos-Quiñones, Herbert Höpfl

J. of Organomet. Chem. 664 (2002) 188

Preparation and structural characterization of six new diorganotin(IV) complexes of the $R_2Sn(SaleanH_2)$ and $R_2Sn(SalceanH_2)$ type ($R = Me$, ${}^{n}Bu$, Ph)

Six new diorganotin(IV) complexes of the $R_2Sn(SaleanH_2)$ and $R_2Sn(SalceanH_2)$ type ($R = Me$, ${}^{n}Bu$, Ph) have been prepared and structurally characterized. In all cases a *fac–fac* configuration mode has been determined, whereby the conformation of the coordinated ligands can vary depending on the steric bulk of the organic groups attached to the tin atom.

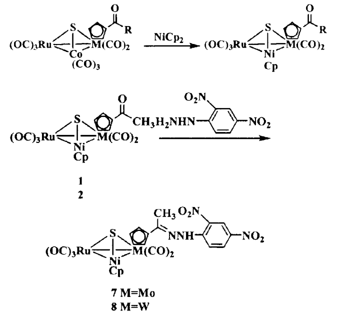


Zhi-Guo Bian, Wei-Qiang Zhang,
Hong-Xia Guan, Yuan-Qi Yin,
Qing-Shan Li, Jie Sun

J. of Organomet. Chem. 664 (2002) 201

Synthesis, reaction and enantiomeric resolution of chiral clusters containing SRuNiM ($M = Mo$, W) core

The treatment of $[CoRuM(CO)_8(\mu_3\text{-}S)(\eta^5\text{-}C_5H_4R)]$ with $NiCp_2$ in THF at refluxing temperature gives six novel clusters. The reactions of the clusters with 2,4-dinitrophenylhydrazine were investigated. The structures of three clusters have been established by the single crystal X-ray diffraction method and the enantiomers of chiral complexes **1**, **3** and **5** were successfully separated by liquid chromatography.

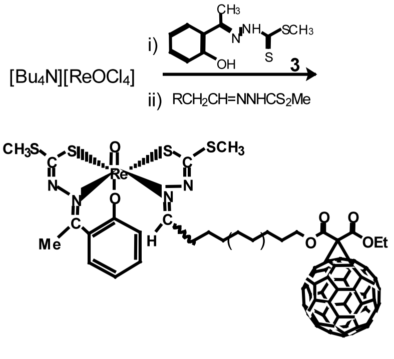


Sandrine Ballot, Nicolas Noiret

J. of Organomet. Chem. 664 (2002) 208

Oxorhenium(V) ‘3+2’ mixed-ligand complexes carrying the SNO/SN donor and C_{60}

Fullerenes based rhenium complexes were prepared by exchange reactions of $[Bu_4N][ReOCl_4]$ with bidentate SN and tridentate Schiff bases derived from the condensation of ketones or aldehydes with dithiocarbazic acid methyl ester ($H_2N\text{–}NH\text{–}C(=S)SCH_3$.

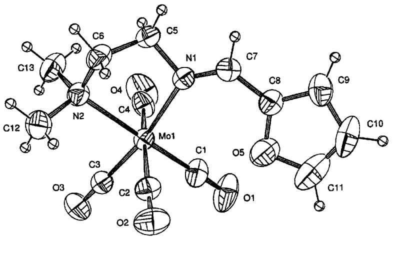


Anne-Cécile Hervé, Jean-Jacques Yaouanc,
Jean-Claude Clément, Hervé des Abbayes,
Loïc Toupet

J. of Organomet. Chem. 664 (2002) 214

Hemilability of the primary amine–metal bond in polyamine-(Group 6) metal carbonyl complexes

A series of *cis*-$LM(CO)_4$ complexes was prepared by reaction of non symmetrical diamines ($L = R^1R^2N\text{–}(CH_2)_n\text{–}NH_2$, with R^1 and $R^2 =$ alkyl groups) with metal carbonyls $M(CO)_6$, ($M = Cr$, Mo, W). Only the primary amine of these complexes reacted with mono or dialdehydes, thus leading to mono or dinuclear imine complexes, stabilized by the metal moiety and strongly suggesting that the NH_2–metal bond has a hemilabile character.

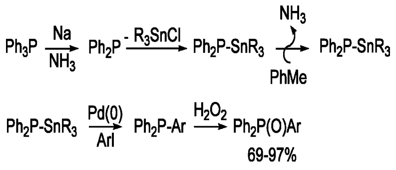


Sandra E. Martín, Mariana Bonaterra, Roberto A. Rossi

J. of Organomet. Chem. 664 (2002) 223

One-pot palladium-catalyzed phosphination of aryl iodides with Ph_2PSnR_3

The palladium catalyzed reaction of several iodoarenes with $Me_3Sn{-}PPh_2$, prepared from the reaction of Me_3SnCl with Ph_2P^- ions gave good yields of aryldiphenylphosphines (isolated as the oxides) in a one pot procedure.

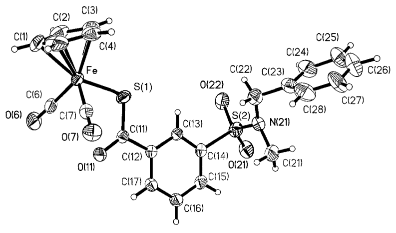


Mohammad El-khateeb, Aseel Younes

J. of Organomet. Chem. 664 (2002) 228

Preparation and organic transformation reactions of $CpFe(CO)_2SCO{-}3{-}C_6H_4{-}SO_2Cl$

Treatment of the iron sulfides $(\mu\text{-}S_x)[CpFe(CO)_2]_2$ with $3\text{-}ClCOC_6H_4SO_2Cl$ gave the novel organoiron thiocarboxylate complex $CpFe(CO)_2SCO{-}3{-}C_6H_4SO_2Cl$ which contains a free sulfonyl chloride group. This complex reacts with nucleophiles such as R_2NH, ArOH and RSH to give stable complexes $CpFe(CO)_2SCO{-}3{-}C_6H_4SO_2NR_2$, $CpFe(CO)_2SCO{-}3{-}C_6H_4SO_2OAr$, and $CpFe{-}(CO)_2SCO{-}3{-}C_6H_4SO_2SR$, respectively. The crystal structure of $CpFe(CO)_2{-}SCO{-}3{-}C_6H_4SO_2N(CH_3){-}CH_2Ph$ has been determined.

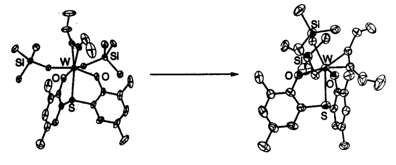


Yoshinori Takashima, Yuushou Nakayama, Hajime Yasuda, Akira Nakamura, Akira Harada

J. of Organomet. Chem. 664 (2002) 234

Steric isomerization of alkyne–dialkyltungsten complexes with a chelating diaryloxo ligand: crystal structures of C_s- and C_1-$W(\eta^2\text{-}RC{\equiv}CR)[2,2'\text{-}S(4\text{-}Me\text{-}6\text{-}R'C_6H_2O)_2](CH_2SiMe_3)_2$

These C_s symmetric dialkyltungsten complexes C_s-$W(\eta^2\text{-}EtC{\equiv}CEt)(Me_2tbp)(CH_2SiMe_3)_2$ (**1**-C_s) was found to undergo stereo isomerization to C_1 symmetric isomers, **1**-C_1, at 30 °C. The thermodynamic parameters for the isomerization from **1**-C_s to **1**-C_1 were estimated. The structures of the C_s and C_1-isomers of **1** were determined by X-ray crystallography.

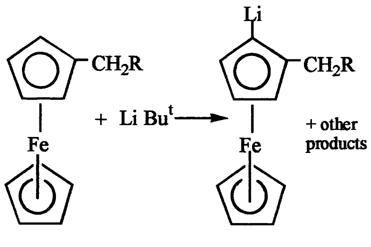


Peter B. Hitchcock, G. Jeffery Leigh, Maria Togrou

J. of Organomet. Chem. 664 (2002) 245

Lithiation of ferrocenylamines and vanadium dinitrogen chemistry

The reactions of a range of ferrocenylamines with lithium butyl lithiate them in the 2-position of one ring, but generally result in further lithiations which make the monolithio derivatives difficult to isolate and purify. The 2-lithio compounds plus $[VCl_2(tmen)_2]$ ($tmen = Me_2NCH_2CH_2NMe_2$) usually react with dinitrogen, but the products, probably bridging complexes, could not be characterised.



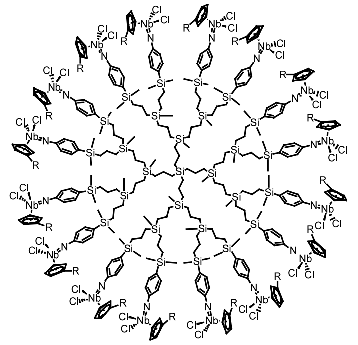
R = NMe_2, NEt_2, CH_2NMe_2, $NMeCH_2Ph$ or NC_4H_8O

José M. Benito, Ernesto de Jesús, F. Javier de la Mata, Juan C. Flores, Rafael Gómez, Pilar Gómez-Sal

J. of Organomet. Chem. 664 (2002) 258

Arylimido niobium(V) complexes: mononuclear and dendritic derivatives

Niobium centers have been anchored to the periphery of carbosilane dendrimers up to the third generation using arylimido ligands as linkers. These metallodendrimers have been obtained by reaction of niobium chlorides and carbosilane N,N-bis(trimethylsilyl)aniline-ended dendrimers.

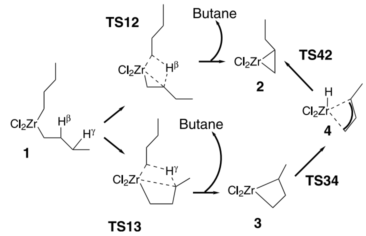


Etienne Derat, James Bouquant, Philippe Bertus, Jan Szymoniak, Stéphane Humbel

J. of Organomet. Chem. 664 (2002) 268

Specific solvent effect on R_2ZrCl_2 (R = butyl, ethyl) reactivity, a density functional study

The specific effect of the solvent is computed with the B3LYP DFT method for the reaction $ZrCl_2Bu_2 \rightarrow ZrCl_2$(butene). Two pathways are computed: the β- and the γ-hydrogen migration.

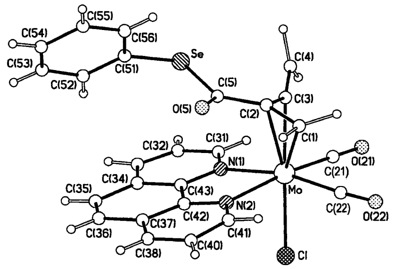


Annabelle G.W. Hodson, Rupinder K. Thind, Mary McPartlin

J. of Organomet. Chem. 664 (2002) 277

Synthesis and reactivity of organochalogen ester substituted η^3-butadienyl complexes of Mo(II): crystal structure of $[MoCl(CO)_2(\eta^3\text{-}CH_2C(COSePh)C{=}CH_2)(1,10\text{-phenanthroline})]\cdot 0.5\ CH_2Cl_2$

Bis(organochalcogen) mercurials (Se, Te) or chalcogenols (S, Se) were used to prepare a series of 2-substituted η^3-butadienyl complexes of molybdenum. Their predicted reactivity, based on X-ray data of the benzeneselenol derivative and molecular modelling evidence, was investigated using a variety of nucleophiles and electrophiles, and their behaviour compared to η^3-allyls.

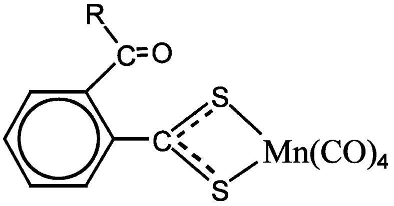


Wade J. Mace, Lyndsay Main, Brian K. Nicholson, Marion Hagyard

J. of Organomet. Chem. 664 (2002) 288

Reactions of cyclomanganated complexes with carbon disulfide: routes to η^2-aryl-dithiocarboxylate-$Mn(CO)_4$ complexes and to the trithiocarbonate complex $(\mu_3\text{-}CS_3)_2Mn_4(CO)_{16}$

Cyclomanganated aryl ketones react with CS_2 to generate dithiocarboxylate complexes of $Mn(CO)_4$.

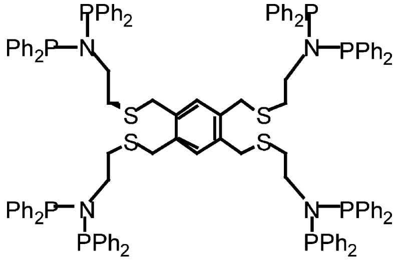


Kirsty G. Gaw, Martin B. Smith,
Jonathan W. Steed

J. of Organomet. Chem. 664 (2002) 294

Facile syntheses of new multidentate (phosphino)amines: X-ray structure of 1,4-$\{(OC)_4Mo(Ph_2P)_2NCH_2\}_2C_6H_4$

New multidentate (phosphino)amines 1,4-$\{(Ph_2P)_2N\}_2C_6H_4$, 1,4-$\{(Ph_2P)_2NCH_2\}_2$-C_6H_4 and the novel ligand 1,2,4,5-$\{(Ph_2P)_2NCH_2CH_2SCH_2\}_4C_6H_2$ are described. The X-ray structure of 1,4-$\{(OC)_4Mo(Ph_2P)_2NCH_2\}_2C_6H_4$ is reported.

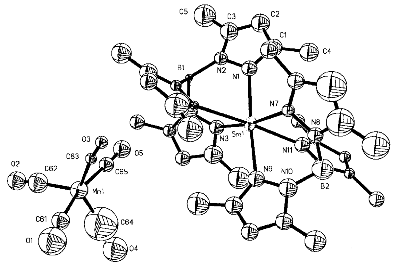


Anna C. Hillier, Andrea Sella,
Mark R.J. Elsegood

J. of Organomet. Chem. 664 (2002) 298

The reaction of samarium(II) with manganese carbonyl: unexpected conversion of CO to formate. X-ray crystal structures of $[Sm(Tp^{Me2})_2]Mn(CO)_5$ and $\{[Sm(Tp^{Me2})_2]_2$-$(\mu$-$HCO_2)\}Mn(CO)_5$ (Tp^{Me2} = HB(3,5-dimethylpyrazolyl)

The electron transfer reaction of $[Sm(Tp^{Me2})_2]$ with Mn^{2}Co^{10} gives the salt $[Sm(Tp^{Me2})_2]Mn(CO)_5$ A second product, $[(Tp^{Me2})_2Sm(\mu$-$O_2CH)Sm(Tp^{Me2})_2]Mn(CO)_5$ with a formate bridge was also isolated. Crystal structures of both products are described and mechanisms for the formation of the formate are proposed.



Note

Ernesto Schulz Lang,
Gelson Manzoni de Oliveira,
Edson Tarabal Silveira,
Robert Alan Burrow,
Ezequiel M. Vázquez-López

J. of Organomet. Chem. 664 (2002) 306

Crystal and molecular structure of (α-naphthyl)TeI_3

(α-Naphthyl)TeI_3 crystallizes in the monoclinic space group $P2_1/c$. The square pyramidal configuration about tellurium involves an intermolecular Te···I bond at 3.979 Å. The lattice is gathered by means of secondary bonds among the heavy atoms and one of the Te–I bonds shows a much longer distance. The compound represents an example of a supramolecular polymeric array formed by charge-transfer complexes.