

Contents

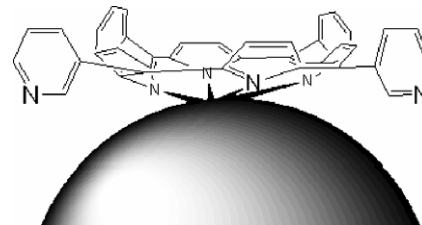
Communication

**Thomas Mayer-Gall, Alexander Birkner,
Gerald Dyker**

J. Organomet. Chem. 693 (2008) 1

Pyridyl-substituted porphyrins on palladium nanoparticles

Central versus peripheric: the binding mode of pyridylporphyrins strongly influences particle agglomeration and solubility.



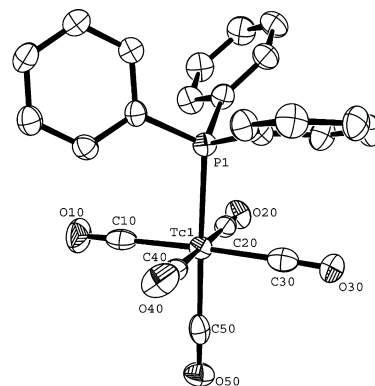
Regular Papers

**A.E. Miroslavov, A.A. Lumpov,
G.V. Sidorenko, E.M. Levitskaya,
N.I. Gorshkov, D.N. Suglobov, R. Alberto,
H. Braband, V.V. Gurzhiy, S.V. Krivovichev,
I.G. Tananaev**

J. Organomet. Chem. 693 (2008) 4

Complexes of technetium(I) (^{99}Tc , $^{99\text{m}}\text{Tc}$) pentacarbonyl core with π -acceptor ligands (*tert*-butyl isocyanide and triphenylphosphine): Crystal structures of $[\text{Tc}(\text{CO})_5(\text{PPh}_3)]\text{OTf}$ and $[\text{Tc}(\text{CO})_5(\text{CNC}(\text{CH}_3)_3)\text{ClO}_4]$

Complexes $[\text{}^{99\text{m}}\text{TcX}(\text{CO})_5]$ ($\text{X} = \text{Cl}, \text{Br}, \text{I}$) were prepared by high-pressure carbonylation with CO of $^{99\text{m}}\text{TcO}_4^-$ in aqueous solutions; they stable in solutions for several hours, but in a longer storage, they gradually decompose to give the tricarbonyl species. Substitution of the halide ligands in $[\text{}^{99}\text{TcX}(\text{CO})_5]$ and $[\text{}^{99\text{m}}\text{TcX}(\text{CO})_5]$ with *tert*-butyl isocyanide and triphenylphosphine was studied. The structures of the complexes $[\text{Tc}(\text{CO})_5(\text{PPh}_3)]\text{OTf}$ and $[\text{Tc}(\text{CO})_5(\text{CNC}(\text{CH}_3)_3)\text{ClO}_4]$ are presented.

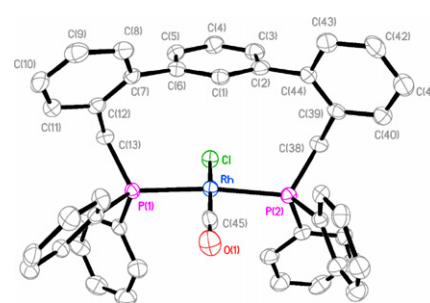


Brad P. Morgan, Rhett C. Smith

J. Organomet. Chem. 693 (2008) 11

Wide bite angle diphosphine rhodium complexes: Synthesis, structure, and catalytic 1,4-addition of arylboronic acids to enones

A terphspan Rh(I) complex has been prepared and structurally characterized. The terphspan ligand **LI** has a wide bite angle of 171.37° in the $[\text{ClRh}(\text{CO})\text{LI}]$ complex. The terphspan ligand supports active catalysts for 1,4-addition of arylboronic acids to enones.

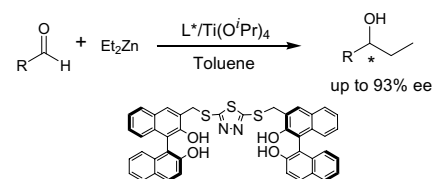


**Zhi-Bing Dong, Bing Liu, Cao Fang,
Jin-Shan Li**

J. Organomet. Chem. 693 (2008) 17

A facile synthesis and the asymmetric catalytic activity of BINOL-based thiazole (thiadiazole) thioether ligands

Four new BINOL-based thiazole (thiadiazole) thioether ligands were prepared and their asymmetric catalytic effectiveness was tested.

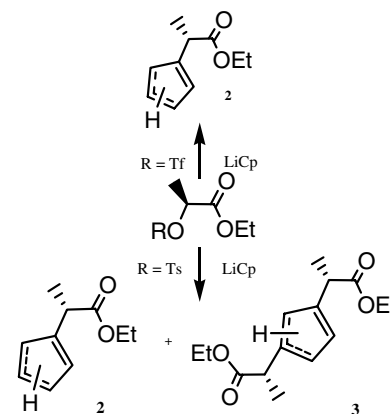


**Richard Laï, Florence Chanon,
Christian Roussel, Martial Sanz,
Nicolas Vanthuyne, Jean-Claude Daran**

J. Organomet. Chem. 693 (2008) 23

Optically active cyclopentadienyl and indenyl ligands obtained from lactic acid esters

Asymmetric cyclopentadienes and indenenes are obtained by nucleophilic attack of LiCp and IndCp on sulfonates of ethyl (*S*)-(-) lactate. The selectivity of the reaction depends on the nature of the leaving group. This is particularly true in the case of the reaction of LiCp with ethyl (*S*)-(-) lactate.

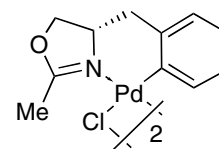


**Relindis Y. Mawo, Diane M. Johnson,
Jessica L. Wood, Irina P. Smoliakova**

J. Organomet. Chem. 693 (2008) 33

Synthesis and structural characterization of enantiopure *exo* and *endo* six-membered oxazoline-derived palladacycles

The first example of enantiopure six-membered *exo* palladacycle and examples of rare six-membered *endo* palladacycles were obtained either by cyclopalladation of oxazolines (HL) using Pd(OAc)₂ or by reacting Pd(HL)₂(OAc)₂ with Pd(OAc)₂. The regioselective reaction of (*S*)-2,4-dibenzyl-2-oxazoline with Pd(OAc)₂ demonstrated a preference of the *endo* cyclopalladation over *exo*.

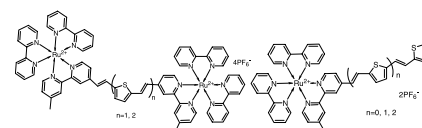


**Minna Li, Jianhui Liu, Licheng Sun,
Jingxi Pan, Changzhi Zhao**

J. Organomet. Chem. 693 (2008) 46

Oligothiophene-2-yl-vinyl bridged mono- and binuclear ruthenium(II) tris-bipyridine complexes: Synthesis, photophysics, electrochemistry and electrogenerated chemiluminescence

A series of mono- and binuclear ruthenium(II) tris-bipyridine complexes tethered to oligothiophenevinyls have been synthesized and photophysics, electrochemistry and electrogenerated chemiluminescence (ECL) properties are studied.

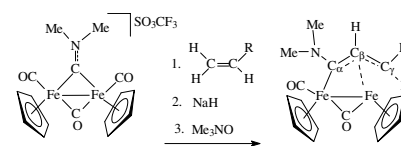


Luigi Busetto, Mauro Salmi, Stefano Zacchini, Valerio Zanotti

J. Organomet. Chem. 693 (2008) 57

Olefin–aminocarbyne coupling in diiron complexes: Synthesis of new bridging aminoallylidene complexes

Activated olefins, in the presence of NaH and Me₃NO, give regio- and stereospecific addition at the bridging aminocarbyne ligand, in diiron complexes, affording novel bridging aminoallylidene complexes. The reactivity of these complexes is also reported.

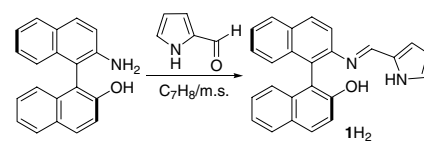


Qiwen Wang, Li Xiang, Guofu Zi

J. Organomet. Chem. 693 (2008) 68

Synthesis, structural characterization, and reactivity of organolanthanides derived from a new chiral ligand (*S*)-2-(pyrrol-2-ylmethyl-eneamino)-2'-hydroxy-1,1'-binaphthyl

A new series of chiral organolanthanide amides have been prepared from the reaction between the ligand (*S*)-2-(pyrrol-2-ylmethyl-eneamino)-2'-hydroxy-1,1'-binaphthyl (1H₂) and Ln[N(SiMe₃)₂]₃. These amides can initiate the polymerization of MMA, leading to syn-rich poly(MMA)s.

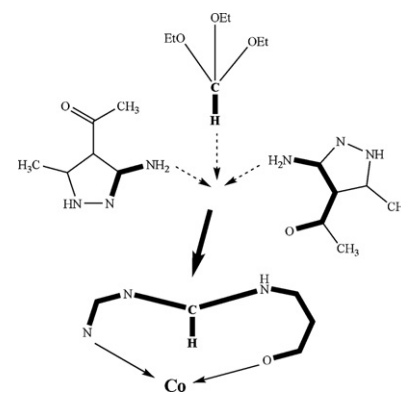


Vukadin M. Leovac, Zoran D. Tomić, Attila Kovács, Milan D. Joković, Ljiljana S. Jovanović, Katalin Mészáros Szécsényi

J. Organomet. Chem. 693 (2008) 77

Cobalt(II) complexes with disubstituted 3-aminopyrazole derivative: Mononuclear Co(II) complex with in situ prepared formamidine ligand

The novel [Co(ampf)(MeOH)₂NO₃]NO₃ complex with a formamidine-type ligand is obtained by a one-step template synthesis. It is characterized by X-ray diffraction, FT-IR and UV–Vis spectroscopy, elemental and thermal analysis. The quantum chemical computations indicate a comparable involvement of the ligand donor atoms in the total charge transfer.

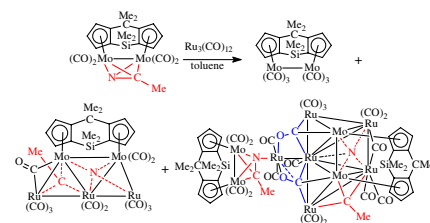


Bin Li, Shansheng Xu, Haibin Song, Baiquan Wang

J. Organomet. Chem. 693 (2008) 87

Reactions of (Me₂C)(Me₂Si)[(η⁵-C₅H₃)-Mo(CO)₃]₂ with nitrile and subsequent cleavage of the C≡N bond by cooperation of molybdenum and ruthenium

The μ-η²-η² nitrile complexes were obtained by thermal reaction of (Me₂C)(Me₂Si)[(η⁵-C₅H₃)Mo(CO)₃]₂ with PhCN or from (Me₂C)(Me₂Si)(C₅H₄)₂ and (RCN)₃Mo(CO)₃ (R = Me, Et). Subsequent reaction of the μ-η²-η² acetonitrile complex with Ru₃(CO)₁₂ yielded two C≡N bond cleaved MoRu clusters.

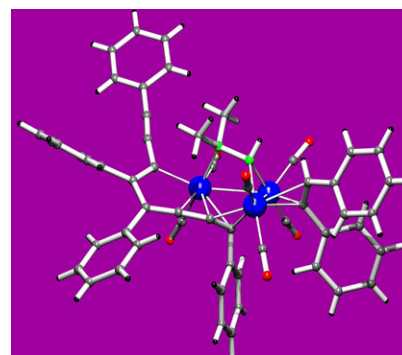


**Javier A. Cabeza, Ignacio del Río,
Lorena Martínez-Méndez,
Enrique Pérez-Carreño**

J. Organomet. Chem. 693 (2008) 97

Reactivity of a triruthenium alkenyl cluster complex with conjugated diynes: Coupling of two diyne molecules via a face-capping diyne intermediate

Triruthenium carbonyl cluster complexes containing large hydrocarbyl ligands, such as $[\text{Ru}_3(\mu_3\text{-}\kappa^2\text{-HNNMe}_2)(\mu\text{-}\kappa^2\text{-PhCHCPh})\{\mu_3\text{-}\kappa^4\text{-PhCCCC(Ph)C(Ph)CCPh}\}(\text{CO})_6]$ (shown in the figure), have been prepared by treating $[\text{Ru}_3(\mu_3\text{-}\kappa^2\text{-HNNMe}_2)(\mu\text{-}\kappa^2\text{-PhCHCPh})(\mu\text{-CO})_2(\text{CO})_6]$ with conjugated diynes. These complexes are formed through an intermediate that contains a face-capping diyne ligand.

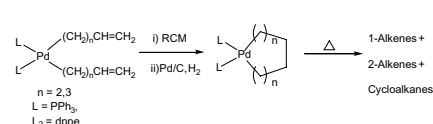


**Tebello Mahamo, Feng Zheng,
Akella Sivaramakrishna, John R. Moss,
Gregory Smith**

J. Organomet. Chem. 693 (2008) 103

New synthesis and thermal studies of palladacycloalkanes and their precursors

Novel palladacycloalkane complexes have been prepared and characterized. Thermal decomposition studies are indicated the formation of various organic products by β -hydride elimination as well as reductive elimination of these complexes. The stability of these complexes strongly depends on various factors.

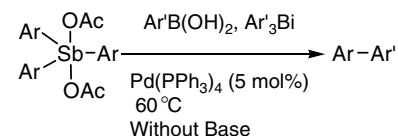


**Weiwei Qin, Shuji Yasuike, Naoki Kakusawa,
Yoshiyuki Sugawara, Masatoshi Kawahata,
Kentaro Yamaguchi, Jyoji Kurita**

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Triarylantimony dicarboxylates as pseudo-halides for palladium-catalyzed cross-coupling reaction with arylboronic acids and triaryl-bismuthanes without any base

The reaction of triarylantimony diacetates with arylboronic acids and triaryl-bismuthane in the presence of $\text{Pd}(\text{PPh}_3)_4$ led to the formation of cross-coupling products, biaryls, under mild conditions without any base. Single crystal X-ray analysis of tri(*p*-tolyl)- and tri(*p*-trifluoromethylphenyl)-antimony diacetates revealed the presence of intramolecular coordination between the antimony and two carbonyl oxygen atoms with *cis* orientation.

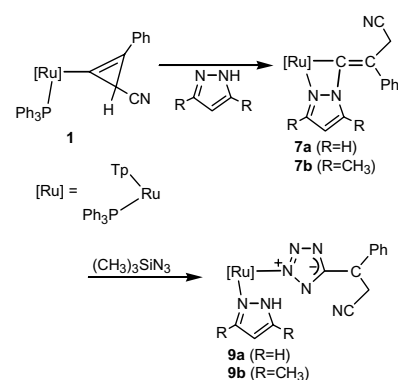


**Yih-Hsing Lo, Ying-Chih Lin,
Chiung-Cheng Huang**

J. Organomet. Chem. 693 (2008) 117

Synthesis and reactivity of ruthenium tetrazolate complexes containing a tris(pyrazolyl)borato (Tp) ligand

Treatment of the neutral ruthenium cyclopropenyl complex **1** with pyrazole afforded the ruthenium metallacyclic pyrazole complex **7a**. The reaction of **7a** with Me_3SiN_3 gives the zwitterionic tetrazolate complex **9a**.

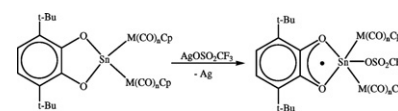


Alexandr V. Piskunov, Arina V. Lado,
Ekaterina V. Ilyakina, Georgii K. Fukin,
Evgenii V. Baranov, Vladimir K. Cherkasov,
Gleb A. Abakumov

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New organobimetallic compounds containing catecholate and *o*-semiquinolate ligands

New organobimetallic compounds $\text{CatSn}[\text{CpM}(\text{CO})_n]_2$ (**2–4**) were obtained by the insertion of $\text{CatSn}(\text{II})$ (**1**) into the metal–metal bond of $[\text{CpM}(\text{CO})_n]_2$ (Cat – 3,6-di-*tert*-butylcatecholate dianion; M = Fe (**2**), $n = 2$; M = Mo (**3**), W (**4**), $n = 3$). The structure of $\text{CatSn}[\text{CpMo}(\text{CO})_3]_2$ was determined by X-ray analysis. The oxidation of compounds **2–4** with silver(I) triflate was found to produce stable paramagnetic *o*-semiquinolate derivatives which keep both Sn–M bonds. New paramagnetic tin(IV) complexes were investigated by EPR spectroscopy.

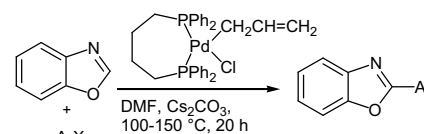


Fazia Derridj, Safia Djebbar,
Ouassini Benali-Baitich, Henri Doucet

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Direct arylation of oxazole and benzoxazole with aryl or heteroaryl halides using a palladium–diphosphine catalyst

Through the use of $\text{PdCl}(\text{dppb})(\text{C}_3\text{H}_5)$ as a catalyst, a range of aryl bromides and chlorides undergoes coupling via C–H bond activation/functionalization reaction with benzoxazole in good yields. This air-stable catalyst can be used at low loadings with several substrates.

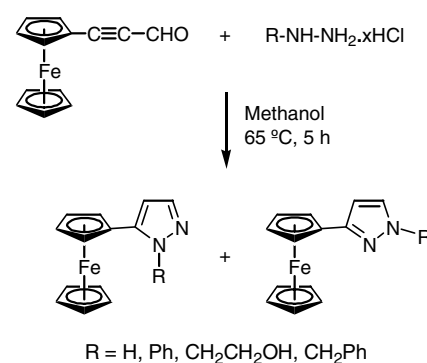


Metin Zora, Ayşe Nur Pinar,
Mustafa Odabaşoğlu, Orhan Büyükgüngör,
Günseli Turgut

J. Organomet. Chem. 693 (2008) 145

Synthesis of ferrocenyl pyrazoles by the reaction of 3-ferrocenylpropynal with hydrazinium salts

Synthesis of ferrocenyl-substituted pyrazoles via the reaction of 3-ferrocenylpropynal with hydrazinium salts is described.

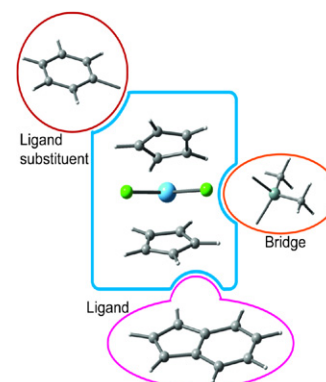


Virve A. Karttunen, Mikko Linnolahti,
Anniina Turunen, Tapani A. Pakkanen,
John R. Severn, Janne Maaranen, Esa Kokko,
Päivi Pitkänen

J. Organomet. Chem. 693 (2008) 155

The influence of the ligand structure on activation of hafnocene polymerization catalysts: A theoretical study

The influence of ligand structure of hafnocene catalysts on activation has been studied by quantum chemical methods. Altogether 54 hafnocenes with different bridges, ligands and ligand substituents were included in the analysis.



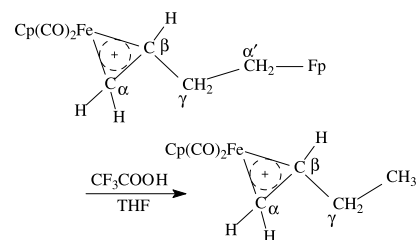
Notes

**Evans O. Changamu, Holger B. Friedrich,
Melanie Rademeyer**

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Synthesis and structure of the monometallic cationic complex $[\text{Cp}(\text{CO})_2\text{Fe}\{\eta^2\text{-(CH}_2\text{CH-CH}_2\text{CH}_3)\}]\text{PF}_6$ ($\text{Cp} = \eta^5\text{-C}_5\text{H}_5$)

The reaction of trifluoroacetic acid in THF with $[\text{Cp}(\text{CO})_2\text{Fe}(\text{CH}_2\text{CHCH}_2\text{CH}_2)\text{Fe}(\text{CO})_2\text{-Cp}]\text{PF}_6$ gave the chiral mononuclear cationic complex $[\text{Cp}(\text{CO})_2\text{Fe}(\text{CH}_2\text{CHCH}_2\text{CH}_3)]\text{PF}_6$, where the $\text{CH}_2\text{CHCH}_2\text{CH}_3$ group is coordinated in a rigid η^2 -manner, in high yield. It formed yellow orthorhombic crystals in the space group $P2_12_12_1$.

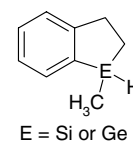


**Daniel A. Ruddy, Donald H. Berry,
Chip Nataro**

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Synthesis and characterization of 1-methyl-1-silaindane and 1-methyl-1-germaindane

The synthesis and characterization of 1-methyl-1-silaindane and 1-methyl-1-germaindane are described.



**Kirill V. Zaitsev, Yuri F. Oprunenko,
Andrei V. Churakov, Judith A.K. Howard,
Sergey S. Karlov, Galina S. Zaitseva**

J. Organomet. Chem. 693 (2008) 173

Titanium (IV) complexes based on substituted 2-[(2-hydroxyethyl)aminophenols

Novel substituted 2-[(2-hydroxyethyl)aminophenols were synthesized by the reaction of 2-methylaminophenol with different oxiranes. Titano-*spiro*-bis(ocanes) based on these ligands have been synthesized. The structure of obtained compounds was studied with ^1H and ^{13}C NMR spectroscopy. The structure of hydrolyse product of one of these ocanes was established by X-ray structure analysis.

