

## Contents

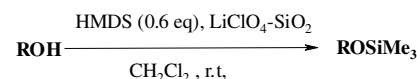
### Communication

Najmedin Azizi, Rozbeh Yousefi,  
Mohammad R. Saidi

*J. Organomet. Chem.* 691 (2006) 817

Efficient and practical protocol for silylation of hydroxyl groups using reusable lithium perchlorate dispersed in silica gel under neutral condition

An efficient and mild procedure for the Trimethylsilylation of a wide variety of alcohols, including primary, allylic, benzylic, secondary, hindered secondary, tertiary, and phenols with HMDS on the surface of silica gel dispersed with LiClO<sub>4</sub> in room temperature at few minutes in excellent yields under neutral conditions is reported.



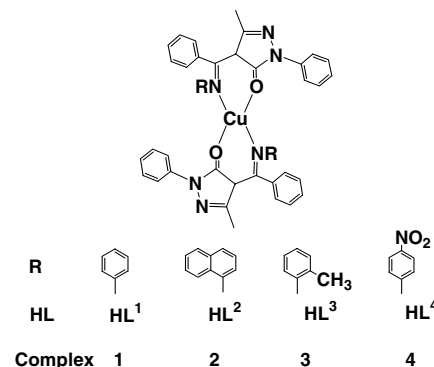
### Regular papers

Xing-Qiang Lü, Feng Bao, Bei-Sheng Kang,  
Qing Wu, Han-Qin Liu, Fang-Ming Zhu

*J. Organomet. Chem.* 691 (2006) 821

Syntheses, structures and catalytic activity of copper(II) complexes bearing *N,O*-chelate ligands

Copper complexes **1–4** bearing *N,O*-chelating  $\beta$ -ketoamine ligands based on 1-phenyl-3-methyl-4-benzoyl-5-pyrazolone condensed with aniline,  $\alpha$ -naphthylamine, *o*-methylaniline, and *p*-nitroaniline, respectively, were prepared and characterized. They were shown to catalyze the vinyl polymerization of norbornene with order of activity **2** > **4** > **3** > **1**. Both steric and electronic effects of the R group are important for the catalytic activity.

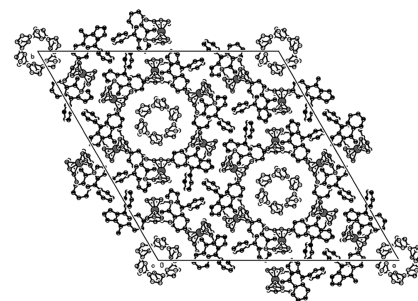


Lucia Calucci, Ulli Englert,  
Emanuela Grigiotti, Franco Laschi,  
Guido Pampaloni, Calogero Pinzino,  
Manuel Volpe, Piero Zanello

*J. Organomet. Chem.* 691 (2006) 829

Synthesis and characterization of chromium(I) bis( $\eta^6$ -toluene) derivatives containing sterically demanding anions

In the solid state, a *cis*-eclipsed conformation of the toluene rings is found for [Cr( $\eta^6$ -CH<sub>3</sub>C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>][dbcp] · THF, [dbcp]<sup>−</sup> = 1,2-dibenzoylcyclopentadienyl, whereas two different conformations (an almost *cis*-eclipsed and a quasi-staggered one) are observed in the unit cell of [Cr( $\eta^6$ -CH<sub>3</sub>C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>][pcmcp], [pcmcp]<sup>−</sup> = *pentakis*(methoxycarbonyl)cyclopentadienyl. In [Cr( $\eta^6$ -CH<sub>3</sub>C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>][dbcp] · THF, six cations and six anions form the walls of a channel parallel to the crystallographic axis *c*, which contains six molecules of THF per repeating unit along *c*.

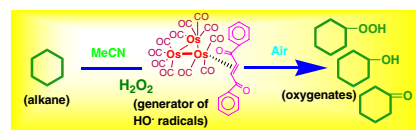


**Georgiy B. Shul'pin, Aleksandr R. Kudinov,  
Lidia S. Shul'pina, Elena A. Petrovskaya**

*J. Organomet. Chem.* 691 (2006) 837

Oxidations catalyzed by osmium compounds. Part 1: Efficient alkane oxidation with peroxides catalyzed by an olefin carbonyl osmium(0) complex

A carbonyl osmium(0) complex with  $\pi$ -coordinated olefin, (2,3- $\eta$ -1,4-diphenylbut-2-en-1,4-dione)undecacarbonyl triangulotriosmium, efficiently catalyzes oxygenation of alkanes (cyclohexane, cyclooctane, *n*-heptane, iso-octane, etc.) with hydrogen peroxide, as well as with *tert*-butyl hydroperoxide and *meta*-chloroperoxybenzoic acid in acetonitrile solution. Alkanes are oxidized to corresponding alcohols, ketones (aldehydes) and alkyl hydroperoxides.

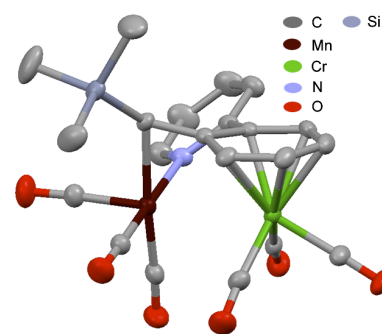


**Jean-Pierre Djukic, Christophe Michon,  
Alessandro Berger, Michel Pfeffer,  
André de Cian, Nathalie Kyritsakas-Gruber**

*J. Organomet. Chem.* 691 (2006) 846

Synthesis of *syn*-facial (Cr,Mn) benzyl complexes by the stereoselective thermolytic coupling of unsymmetric diazomethanes with cyclomanganated ( $\eta^6$ -arene)tricarbonylchromium complexes

The stereoselectivity of the coupling reaction of 1-phenyldiazomethanes with cyclomanganated ( $\eta^6$ -arene)Cr(CO)<sub>3</sub> substrates, which affords new *syn*-facial bimetallic benzyl complexes, is mostly controlled by electronic and steric effects.

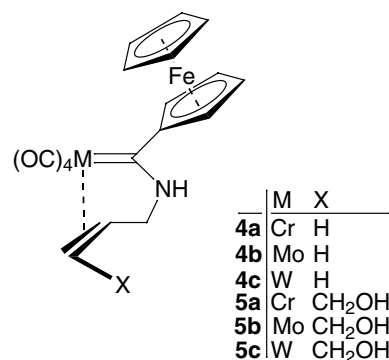


**Rainer Schobert, Rhett Kempe,  
Thomas Schmalz, Alexander Gmeiner**

*J. Organomet. Chem.* 691 (2006) 859

Syntheses, structures and electrochemistry of some 1-( $\eta^2$ -allylamino)-1-ferrocenylcarbene complexes of chromium(0), molybdenum(0) and tungsten(0). Part 13: The chemistry of metallacyclic alkenylcarbene complexes

The bimetallic chelated complexes (OC)<sub>4</sub>M=C( $\eta^2$ -NHCH<sub>2</sub>CH=CHX)Fc **4/5** [M = Cr: **a**; Mo: **b**; W: **c**; Fc = CpFe(C<sub>5</sub>H<sub>4</sub>)] were obtained by photo-decarbonylation/alkene ligation of the unchelated precursor carbene complexes (OC)<sub>3</sub>M=C(NHCH<sub>2</sub>CH=CHX)Fc (**2**; X = H)/(**3**; X = CH<sub>2</sub>OH). The latter exist as mixtures of *E*- and predominantly *Z*-isomers. The molecular structures of **4b** and **4c** were determined by X-ray single-crystal diffraction analyses. The intermetallic communicative effects and the interplay of Fc and  $\eta^2$ -alkene moieties of **4a** and **4b** were assessed by cyclic voltammetry.

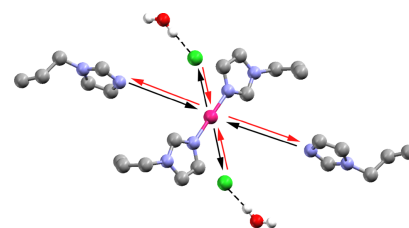


**Krystyna Kurdziel, Sebastian Olejniczak,  
Andrzej Okruszek, Tadeusz Głowiak,  
Rafał Kruszyński, Stefano Materazzi,  
Marek J. Potrzebowski**

*J. Organomet. Chem.* 691 (2006) 869

Search of structure and ligands exchange for palladium(II) complexes with *N*-allylimidazole; X-ray and solid-state/solution NMR studies

The X-ray and 1D, 2D NMR studies are employed to account structure and mechanism of reversible decomposition of palladium complex with four allyl-imidazole ligands.

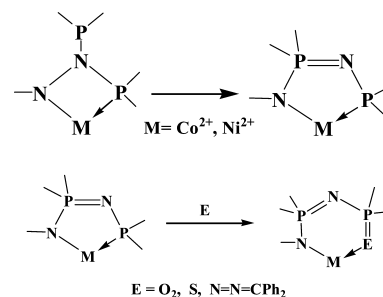


Vyacheslav V. Sushev, Alexander N. Kornev,  
Yuriy A. Min'ko, Natalia V. Belina,  
Yuriy A. Kurskiy, Olga V. Kuznetsova,  
Georgy K. Fukin, Evgenii V. Baranov,  
Vladimir K. Cherkasov, Gleb A. Abakumov

*J. Organomet. Chem.* 691 (2006) 879

Rearrangement of phosphinohydrazide ligand  $\text{-NPh-N(PPh}_2)_2$  in transition metal coordination sphere: Synthesis and characterization of nickel and cobalt spirocyclic complexes  $\text{M(NPh-PPH}_2=\text{N-PPH}_2)_2$  and their properties

The reactions of diphosphinohydrazine  $\text{PhNH-N(PPh}_2)_2$  with cobalt(II) and nickel(I) silylamides  $\text{Co[N(SiMe}_3)_2]_2$ ,  $(\text{Ph}_3\text{P})_2\text{Ni[N(SiMe}_3)_2]_2$  proceed presumably via formation of unstable phosphinohydrazide complexes  $\text{M[NPh-N(PPh}_2)_2]_2$  followed by rearrangement to a new chelating compounds  $\text{M(NPh-PPH}_2=\text{N-PPH}_2)_2$   $\{\text{M} = \text{Co (1), Ni (2)}\}$ . The reactions of **1** with dioxygen, elemental sulfur and diphenyldiazomethane led to the spirocyclic insertion products  $\text{Co(NPh-PPH}_2=\text{N-PPH}_2=\text{X})_2$  ( $\text{X} = \text{O, S, NNCPh}_2$ ) while the absorption of carbon monoxide is reversible.

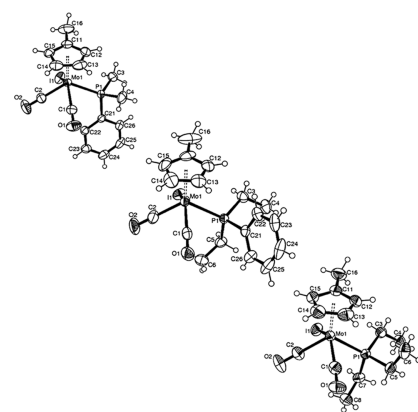


Muhammad D. Bala, Olalere G. Adeyemi,  
David G. Billing, Demetrius C. Levendis,  
Neil J. Coville

*J. Organomet. Chem.* 691 (2006) 890

Quantification of steric interactions in phosphine ligands from single crystal X-ray diffraction data. Crystal structures of  $(\eta^5\text{-C}_5\text{H}_4\text{Me})\text{Mo}(\text{CO})_2(\text{PR}_3)\text{I}$  ( $\text{R}_3 = \text{PhMe}_2, \text{PhEt}_2, \text{Et}_3$ )

The cone (and solid) angles of the phosphine ligands ( $\text{PR}_3 = \text{PPhMe}_2, \text{PPhEt}_2, \text{PEt}_3$ ) in  $(\eta^5\text{-C}_5\text{H}_4\text{Me})\text{Mo}(\text{CO})_2(\text{PR}_3)\text{I}$  have been computed from their X-ray structures and the values were found to vary from those measured by Tolman; but to be in the range of values determined for related organometallic complexes as determined from a search of the Cambridge Structural Database (CSD).

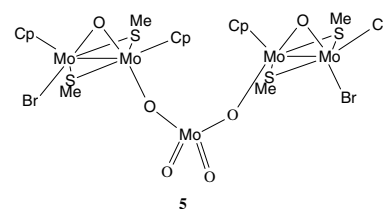


Christine Le Roy, François Y. Pétilion,  
Kenneth W. Muir, Philippe Schollhammer,  
Jean Talarmin

*J. Organomet. Chem.* 691 (2006) 898

Mixed  $\mu$ -phosphido or  $\mu$ -thiolato  $\mu$ -halodimolybdenum(III) compounds  $[\text{Mo}_2\text{Cp}_2(\mu\text{-SMe})_2(\mu\text{-X})(\mu\text{-Y})]$  ( $\text{X} = \text{PPh}_2, \text{Y} = \text{Cl}$ ;  $\text{X} = \text{SCH}_3, \text{Y} = \text{Br}$ , **1**) have been studied. The influence of the bridging groups on the structures and electrochemical behaviour of the complexes  $[\text{Mo}_2\text{Cp}_2(\mu\text{-SMe})_2(\mu\text{-X})(\mu\text{-Y})]$  **1-4** has been investigated. The X-ray structure of the original  $\text{Mo}_5$  system  $[\{\text{Mo}_2\text{Cp}_2\text{Br}(\mu\text{-O})(\mu\text{-SMe})_2\}_2(\mu\text{-MoO}_4)]$  (**5**), is reported.

Mixed  $\mu$ -phosphido or  $\mu$ -thiolato  $\mu$ -halodimolybdenum(III) compounds  $[\text{Mo}_2\text{Cp}_2(\mu\text{-SMe})_2(\mu\text{-X})(\mu\text{-Y})]$  ( $\text{X} = \text{PPh}_2, \text{Y} = \text{Cl}$  (**1**);  $\text{X} = \text{SCH}_3, \text{Y} = \text{Br}$  (**3**), **1** (**4**)) have been studied. The influence of the bridging groups on the structures and electrochemical behaviour of the complexes  $[\text{Mo}_2\text{Cp}_2(\mu\text{-SMe})_2(\mu\text{-X})(\mu\text{-Y})]$  **1-4** has been investigated. The X-ray structure of the original  $\text{Mo}_5$  system  $[\{\text{Mo}_2\text{Cp}_2\text{Br}(\mu\text{-O})(\mu\text{-SMe})_2\}_2(\mu\text{-MoO}_4)]$  (**5**), is reported.

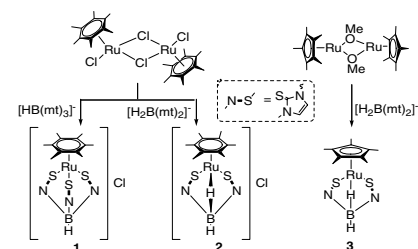


Seah Ling Kuan, Weng Kee Leong,  
Lai Yoong Goh, Richard D. Webster

*J. Organomet. Chem.* 691 (2006) 907

HMB and  $\text{Cp}^*$  ruthenium(II) complexes containing bis- and tris-(mercaptomethyl)borate ligands: Synthetic, X-ray structural and electrochemical studies ( $\text{HMB} = \eta^6\text{-C}_6\text{Me}_6, \text{Cp}^* = \eta^5\text{-C}_5\text{Me}_5$ )

Chloro- or methoxy-bridged dinuclear arene or  $\text{Cp}^*\text{Ru(II)}$  complexes react with  $[\text{HB}(\text{mt})_3]^-$  or  $[\text{H}_2\text{B}(\text{mt})_2]^-$  to give the corresponding scorpionate complexes **1-3**.

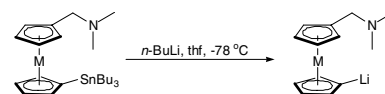


**Reinout Meijboom, Paul Beagley,  
John R. Moss, Andreas Roodt**

*J. Organomet. Chem.* 691 (2006) 916

Lithiated dimethylaminomethyl ferrocenes and ruthenocenes

Dimethylaminomethylferrocenyl lithium and -ruthenocenyl lithium were generated using tin/lithium exchange reactions. The four different metallocenyl lithium compounds were analysed using NMR spectroscopy. The metallocenyl lithium reagents are useful reagents and have been shown to react with MeOD, ClSiMe<sub>3</sub> and DMF to give air-stable derivatives.

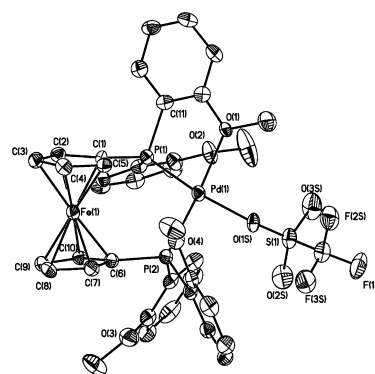


**Alexander M. Kalsin, Nikolai V. Vologdin,  
Tat'yana A. Peganova, Pavel V. Petrovskii,  
Konstantin A. Lyssenko, Fedor M. Dolgushin,  
Oleg V. Gusev**

*J. Organomet. Chem.* 691 (2006) 921

Palladium(II) complexes with *o*-aryl substituted 1,1'-bis(phosphino)ferrocenes [Fe( $\eta^5$ -C<sub>5</sub>H<sub>4</sub>-PR<sub>2</sub>)<sub>2</sub>]<sub>2</sub>Pd(NCMe)<sub>n</sub>(OTf)<sub>2</sub> (R = *o*-MeOC<sub>6</sub>H<sub>4</sub>, *o*-MeC<sub>6</sub>H<sub>4</sub>, *o*-Pr<sup>*i*</sup>C<sub>6</sub>H<sub>4</sub>, C<sub>6</sub>F<sub>5</sub>): Synthesis, structure and catalytic properties in methoxycarbonylation of ethylene

The cationic palladium(II) complexes with 1,1'-bis(phosphino)ferrocenes [Fe( $\eta^5$ -C<sub>5</sub>H<sub>4</sub>PR<sub>2</sub>)<sub>2</sub>]<sub>2</sub>Pd(NCMe)<sub>n</sub>(OTf)<sub>2</sub> (*n* = 0–2) (OTf = CF<sub>3</sub>SO<sub>3</sub>; **5**, R = *o*-MeOC<sub>6</sub>H<sub>4</sub>, *n* = 0; **6**, R = *o*-MeC<sub>6</sub>H<sub>4</sub>, *n* = 1; **7**, R = *o*-Pr<sup>*i*</sup>C<sub>6</sub>H<sub>4</sub>, *n* = 1; **8**, R = C<sub>6</sub>F<sub>5</sub>, *n* = 1) have been synthesized.

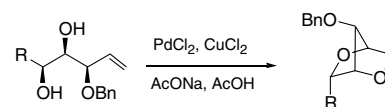


**Matej Babjak, L'uboš Remeň, Peter Szolcsányi,  
Peter Zálupský, Dušan Mikloš, Tibor Gracsa**

*J. Organomet. Chem.* 691 (2006) 928

Novel bicyclisation of unsaturated polyols in PdCl<sub>2</sub>-CuCl<sub>2</sub>-AcOH catalytic system

New type of diastereoselective and substrate selective palladium(II)-catalysed bicyclisation of unsaturated polyols is described.

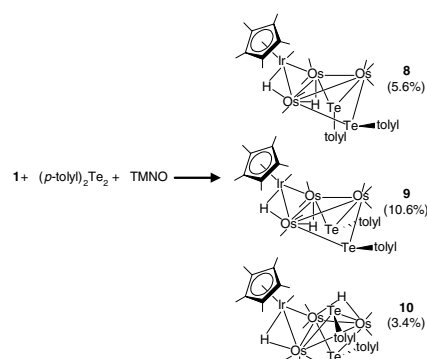


**Padmamalini Srinivasan, Mei En Tai,  
Weng Kee Leong**

*J. Organomet. Chem.* 691 (2006) 941

Reactivity of the heteronuclear cluster Cp\*IrOs<sub>3</sub>( $\mu$ -H)<sub>2</sub>(CO)<sub>10</sub> with some group 16 substrates

The TMNO-activated reaction of the mixed metal cluster Cp\*IrOs<sub>3</sub>( $\mu$ -H)<sub>2</sub>(CO)<sub>10</sub> (**1**), with Ph<sub>3</sub>PSe afforded five new clusters, viz., Cp\*IrOs<sub>3</sub>( $\mu$ -H)<sub>2</sub>(CO)<sub>9</sub>( $\mu_3$ -Se) (**3**), Os<sub>3</sub>( $\mu$ -H)<sub>2</sub>(CO)<sub>7</sub>( $\mu_3$ -Se)(PPh<sub>3</sub>)<sub>2</sub> (**4**), Cp\*IrOs<sub>3</sub>( $\mu$ -H)<sub>2</sub>(CO)<sub>9</sub>(PPh<sub>3</sub>) (**5**), Cp\*IrOs<sub>3</sub>( $\mu$ -H)<sub>2</sub>( $\mu_3$ -Se)(CO)<sub>8</sub>(PPh<sub>3</sub>) (**6**) and Cp\*IrOs<sub>3</sub>( $\mu$ -H)<sub>2</sub>( $\mu_3$ -Se)<sub>2</sub>(CO)<sub>7</sub>(PPh<sub>3</sub>) (**7**). Its reaction with di-*p*-tolyl ditelluride yielded three non-interconverting stereoisomers with the formulation Cp\*IrOs<sub>3</sub>( $\mu$ -H)<sub>2</sub>( $\mu$ -Te-*p*-C<sub>6</sub>H<sub>4</sub>CH<sub>3</sub>)<sub>2</sub>(CO)<sub>8</sub>.

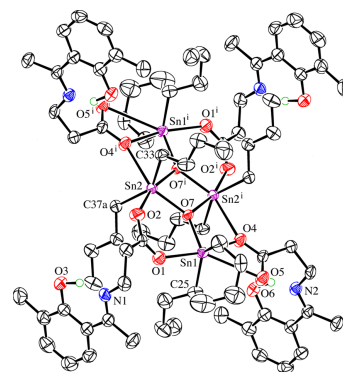


**Tushar S. Basu Baul, Cheerfulman Masharing, Smita Basu, Eleonora Rivarola, Michal Holčapek, Robert Jirásko, Antonín Lyčka, Dick de Vos, Anthony Linden**

*J. Organomet. Chem.* 691 (2006) 952

Synthesis, characterization, cytotoxic activity and crystal structures of tri- and diorganotin(IV) complexes constructed from the  $\beta$ -{[(*E*)-1-(2-hydroxyaryl)alkylidene]amino}propionate and  $\beta$ -{[(*Z*)-(3-hydroxy-1-methyl-2-butenylidene)]amino}propionate and  $\beta$ -{[(*Z*)-(3-hydroxy-1-methyl-2-butenylidene)]amino}propionate skeletons

Reactions of potassium  $\beta$ -{[(*E*)-1-(2-hydroxyaryl)alkylidene]amino}propionates and potassium  $\beta$ -{[(*Z*)-(3-hydroxy-1-methyl-2-butenylidene)]amino}propionate with  $R_3SnCl$  ( $R = nBu$  and  $Ph$ ) and  ${}^nBu_2SnCl_2$  yielded complexes of composition  $R_3SnLH$  and  $\{[{}^nBu_2Sn(LH)]_2O\}_2$ , respectively. These complexes have been characterized by  ${}^1H$ ,  ${}^{13}C$ ,  ${}^{119}Sn$  NMR, ESI-MS, IR and  ${}^{119m}Sn$  Mössbauer spectroscopic techniques in combination with elemental analysis. The crystal structures of two triorganotin(IV) complexes revealed a polymeric *trans*- $R_3SnO_2$  trigonal bipyramidal coordination geometry, while a bis(dicarboxylatotetraorganodistannoxane) formulation was observed for the di-*n*-butyltin(IV) complexes. The results of *in vitro* cytotoxicity study of a di-*n*-butyltin(IV) compound,  $\{[{}^nBu_2Sn(LH)]_2O\}_2$ , against human tumor cell lines are reported.

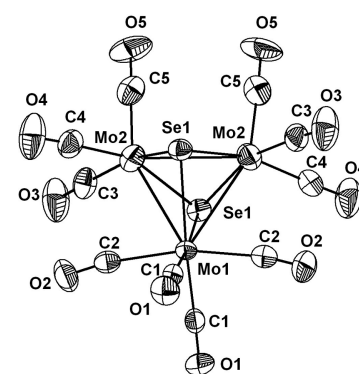


**Miao-Hsing Hsu, Chia-Yeh Miu, Yi-Chun Lin, Minghuey Shieh**

*J. Organomet. Chem.* 691 (2006) 966

Selenium-capped trimolybdenum and tritungsten carbonyl clusters  $[Se_2M_3(CO)_{10}]^{2-}$  ( $M = Mo, W$ )

A new series of selenium-capped trimolybdenum and tritungsten ring carbonyl clusters have been rationally synthesized and the formation and the structural features of the resultant clusters are also discussed.

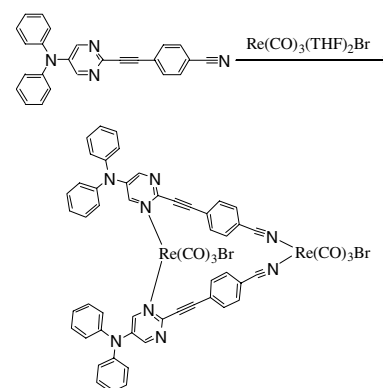


**Ping-Hsin Huang, Jiann T. Lin, Ming-Chang P. Yeh**

*J. Organomet. Chem.* 691 (2006) 975

Self-assembly molecular architectures with novel cyclic dimers

Highly emissive conjugated compounds containing pyridine (or pyrimidine) and cyano ligands have been synthesized. Dimeric complexes with rectangular geometries were formed from these compounds and rhenium carbonyls via self-assembly.

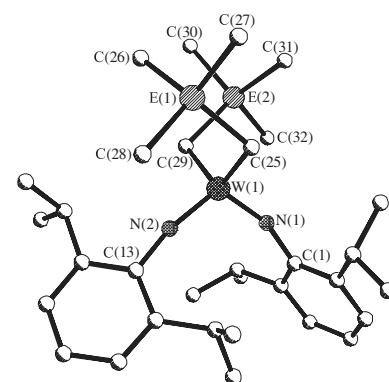


**Leonid N. Bochkarev, Vladislav I. Scherbakov, Irina P. Malysheva, Galina V. Basova, Natalia E. Stolyarova, Irina K. Grigorieva, Andrey L. Bochkarev, Georgii K. Fukin, Yurii A. Kurskii, Gleb A. Abakumov**

*J. Organomet. Chem.* 691 (2006) 983

Synthesis and structures of silicon-, germanium- and tin-containing tungsten imido alkyl complexes  $(ArN)_2W(CH_2EMe_3)_2$  ( $E = Si, Ge, Sn$ )

The novel organosilicon-, germanium- and tin-containing imido alkyl complexes of tungsten of the type  $(ArN)_2W(CH_2EMe_3)_2$  ( $Ar = 2, 6-Pr_2C_6H_3$ ;  $E = Si$  (1),  $Ge$  (2),  $Sn$  (3)) have been prepared by the reactions of  $(ArN)_2WCl_2(dme)$  ( $dme = 1,2$ -dimethoxyethane) with heteroelement-containing alkylolithium or Grignard reagents  $Me_3E-CH_2Li$  ( $E = Si, Ge$ ),  $Me_3ECH_2MgCl$  ( $E = Ge, Sn$ ). The title compounds were isolated in high yields as crystalline solids and characterized by elemental analysis, IR,  ${}^1H$ ,  ${}^{13}C$ ,  ${}^{29}Si$  and  ${}^{119}Sn$  NMR spectroscopy and X-ray diffraction studies. The geometry of the  $W$  atoms in the compounds can be described as a distorted tetrahedron.

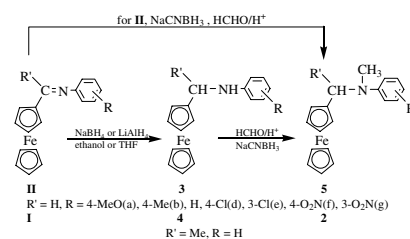


**Hong-Xing Wang, Ying-Jie Li, Rong Jin, Ji-Ru Niu, Hong-Fei Wu, Hui-Chao Zhou, Jian Xu, Ren-Qing Gao, Feng-Ying Geng**

*J. Organomet. Chem.* 691 (2006) 987

Ferrocenylamines **2**. Reductive methylation of secondary ferrocenylamines and ferrocenylaldimines: Synthesis, characterization of [(*N*-methyl-*N*-aryl)amino]methylferrocenes, 1-[(*N*-methyl-*N*-phenyl)amino]ethylferrocene and crystal structures of [( $\eta^5$ -C<sub>5</sub>H<sub>5</sub>)Fe( $\eta^5$ -C<sub>5</sub>H<sub>4</sub>-CH<sub>2</sub>NHC<sub>6</sub>H<sub>4</sub>-Cl-4)] and [( $\eta^5$ -C<sub>5</sub>H<sub>5</sub>)-Fe( $\eta^5$ -C<sub>5</sub>H<sub>4</sub>CH<sub>2</sub>N(CH<sub>3</sub>)-C<sub>6</sub>H<sub>4</sub>-OCH<sub>3</sub>-4)]

Reduction of ferrocenylimines **II**, **I** with NaBH<sub>4</sub> or LiAlH<sub>4</sub> resulted in secondary ferrocenylamines **3**, **4**. Reductive methylation of secondary ferrocenylamines **3**, **4** with aqueous formaldehyde, sodium cyanoborohydride and acetic acid both gave out corresponding *N*-methylated tertiary ferrocenylamines **5**, **2**. Reductive methylation of ferrocenylaldimines **II** also yielded **5**. The crystal structures of **3d**, **5a** were determined.

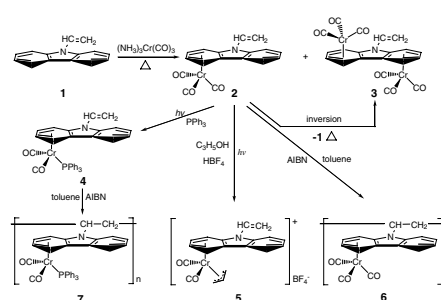


**Xiaohui Tian, Wei Shi, Kanyi Shen, Chenyan Li, Jiaping Lin, Yanchao Che, Ping Zhang**

*J. Organomet. Chem.* 691 (2006) 994

Organometallic modification approach to the control of push-pull architectures: Synthesis, properties and radical polymerization of chromium *N*-vinylcarbazole derivatives

Ligand exchange on the organometallic moiety offers control of the structures and properties of the metallocarbazole monomers and related polymers.

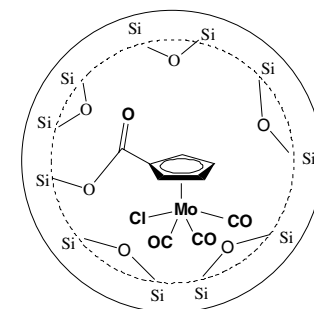


**Ayyamperumal Sakthivel, Marta Abrantes, Anthony S.T. Chiang, Fritz E. Kühn**

*J. Organomet. Chem.* 691 (2006) 1007

Grafting of  $\eta^5$ -Cp(COOMe)MoCl(CO)<sub>3</sub> on the surface of mesoporous MCM-41 and MCM-48 materials

$\eta^5$ -Cp(COOMe)MoCl(CO)<sub>3</sub> is grafted on the surface of mesoporous MCM-41 and MCM-48 and is applied for cyclooctene epoxidation as heterogeneous catalyst.



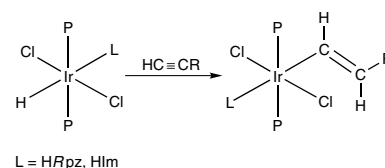
SM-41CpCOMo and SM-48CpCOMo

**Gabriele Albertin, Stefano Antoniutti, Jesús Castro, Soledad Garcia-Fontán, Enerida Gurabardhi**

*J. Organomet. Chem.* 691 (2006) 1012

Preparation and reactivity of iridium(III) hydride complexes with pyrazole and imidazole ligands

Hydride complexes containing *N*-donor molecules as supporting ligands of the IrHCl<sub>2</sub>L(PPh<sub>3</sub>)<sub>2</sub>, [IrHCl<sub>2</sub>(PPh<sub>3</sub>)<sub>2</sub>]BPh<sub>4</sub> and [IrHCl(bpy)(PPh<sub>3</sub>)<sub>2</sub>]BPh<sub>4</sub> (L = pyrazole, imidazole) type were prepared and their reaction with terminal alkyne gives stable and isolable vinyl IrCl<sub>2</sub>{CH=C(H)R}<sub>1</sub>L(PPh<sub>3</sub>)<sub>2</sub> derivatives.

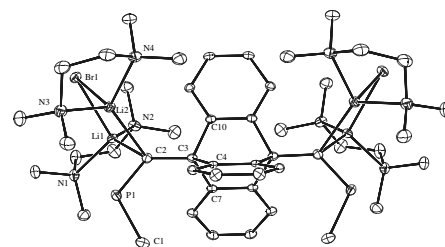


**Florian Brodkorb, Markus Brym,  
Cameron Jones, Christian Schulten**

*J. Organomet. Chem.* 691 (2006) 1025

Synthesis and characterisation of a diphosphaalkene, a diphosphaalkyne and the first diphosphavinyl lithium complex

The preparation and characterisation of a diphosphaalkene, the second example of a diphosphaalkyne and the first diphosphavinyl lithium complex are described. The latter is stable at room temperature and has been crystallographically characterised (see picture).

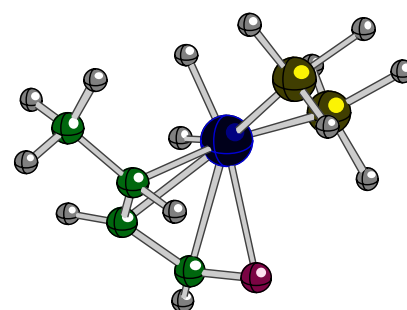


**J. Joubert, F. Delbecq**

*J. Organomet. Chem.* 691 (2006) 1030

Coordination of  $\alpha,\beta$ -unsaturated aldehydes on  $d^6$  Ru and Rh complexes: A DFT study

The coordination of  $\alpha,\beta$ -unsaturated aldehydes on Ru and Rh complexes has been investigated. On the  $ML_4$   $RuH_2(PH_3)_2$  fragment, all aldehydes are  $\eta^4$  coordinated. On the  $ML_5$   $RuH_2(PH_3)_3$  fragment, the  $\eta^2CC$  coordination is the most stable even if the  $\eta^2CO$  one can become competitive with bulky ligands and substituted aldehydes. On  $RhH_2Cl(PH_3)_2$  the  $\eta^2CO$  coordination does not exist and the most stable one is  $\eta^1O$ .

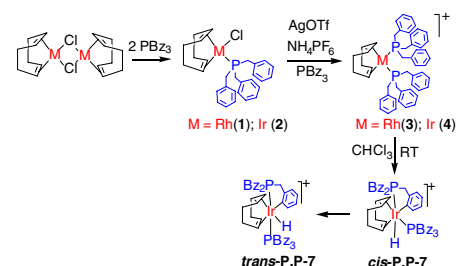


**Vanessa R. Landaeta, Maurizio Peruzzini,  
Verónica Herrera, Claudio Bianchini,  
Roberto A. Sánchez-Delgado,  
Andrés E. Goeta, Fabrizio Zanobini**

*J. Organomet. Chem.* 691 (2006) 1039

Synthesis, characterization and reactivity of tribenzylphosphine rhodium and iridium complexes

New neutral and cationic rhodium and iridium complexes containing one or two molecules of tribenzylphosphine have been synthesized and fully characterized. The bis(tribenzylphosphine)iridium derivative **4** converts in solution to *ortho*-metallated *cis*-[IrH(PBz<sub>3</sub>)(cod){ $\eta^2$ -*P,C*-(C<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>)PBz<sub>3</sub>}]PF<sub>6</sub> that transforms into the thermodynamic *trans*-isomer already at room temperature.

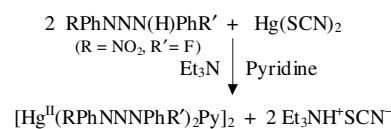


**Manfredo Hörner, Gelson Manzoni de Oliveira,  
Jeferson André Naue, Jörg Daniels,  
Johannes Beck**

*J. Organomet. Chem.* 691 (2006) 1051

Polymeric assembling through reciprocal metal- $\eta^2$ -arene  $\pi$ -interactions: Synthesis and X-ray characterization of  $[Hg^{II}(RPhNNN-PhR')_2Py]_2$  (R = NO<sub>2</sub>, R' = F), an asymmetric bis diaryl-substituted triazenide-pyridinyl complex of Hg(II)

Hg(SCN)<sub>2</sub> reacts with 3-(2-fluorophenyl)-1-(4-nitrophenyl)triazene in the presence of triethylamine and pyridine to give  $[Hg^{II}(RPhNNN-PhR')_2Py]_2$  (R = NO<sub>2</sub>, R' = F), a new triazenide-pyridinyl complex of Hg(II) with reciprocal metal- $\eta^2$ -arene  $\pi$ -interactions, whose lattice can be viewed as a supramolecular unidimensional assembling of  $[Hg^{II}-(RPhNNNPhR')_2Py]$  tectonic units linked through intermolecular metal-arene  $\pi$  interactions and non-classical C-H...O hydrogen bonding.

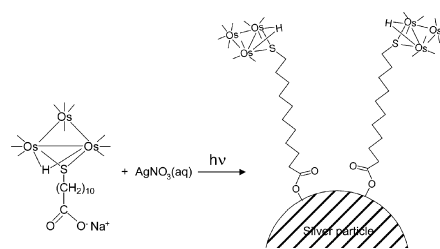


**Moawia Omer Elhag Ahmed, Weng Kee Leong**

*J. Organomet. Chem.* 691 (2006) 1055

Colloidal silver nanoparticles stabilized by a water-soluble triosmium cluster

Silver nanoparticles stabilized by the water soluble triosmium cluster  $\text{Os}_3(\mu\text{-H})(\text{CO})_{10}\text{S}(\text{CH}_2)_{10}\text{COO}[\text{Na}]$  were prepared by both photochemical and chemical reduction of silver nitrate. The silver nanoparticles were characterized by UV-Vis spectroscopy and high resolution TEM. The particles obtained by chemical reduction showed remarkable stability.



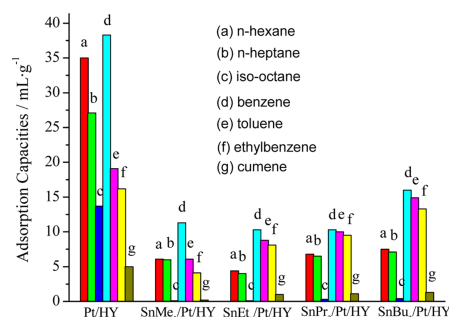
## Notes

**Ying Zheng, Zhao-hui Li, Xu-xu Wang, Xian-zhi Fu, Ke-mei Wei**

*J. Organomet. Chem.* 691 (2006) 1061

Reactivities of tetraalkyltin complexes toward Pt/HY zeolite

Tetraalkyltin complexes,  $\text{SnR}_4$  (R = Me, Et, Pr, Bu) could react with Pt/HY at 193, 243, 273 and 333 K, respectively. The modified zeolites showed better size selectivity in the absorption of hydrocarbons.



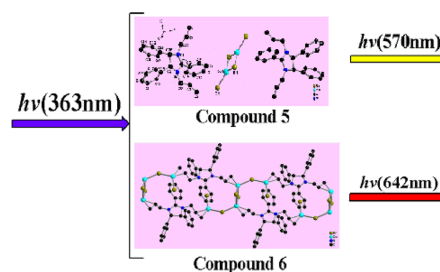
**Xue-Feng Huang, Yu-Mei Song, Xi-Sen Wang, Jie Pang, Jing-Lin Zuo, Ren-Gen Xiong**

*J. Organomet. Chem.* 691 (2006) 1065

Crystal structures of amarine and isoamarine and copper(I) coordination chemistry with their allylation products

The crystal structures of amarine (**1**) and isoamarine (**2**) which are important intermediate during the preparation of 1,2-diphenyl-diaminoethane were successfully

determined. Their allylation products, 1,3-diallyl amarine and isoamarine bromide react with  $\text{CuBr}$  to afford (**2**)  $(\text{CH}_2\text{CH}=\text{CH}_2)_2(\text{Cu}_2\text{Br}_2)$  (**5**) and (**2**)<sub>2</sub>  $(\text{CH}_2\text{CH}=\text{CH}_2)_2(\text{Cu}_2\text{Br}_2)$  (**6**), respectively, in which crystal structure reveals that **5** display an anion discrete complex without olefin moiety coordination and **6** has 1D infinite chain with olefin moiety coordination as bridging spacer. The fluorescent emission spectra of **5** ( $\lambda_{\text{emax}} = 570 \text{ nm}$ ) and **6** ( $\lambda_{\text{emax}} = 642 \text{ nm}$ ) were measured and display a significant difference which can be used for sensing them.

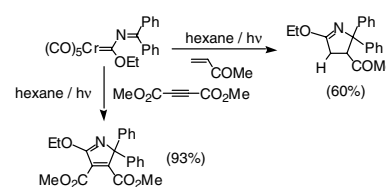


**Pedro J. Campos, Míriam Caro, Susana López-Sola, Diego Sampedro, Miguel A. Rodríguez**

*J. Organomet. Chem.* 691 (2006) 1075

Role of imino group in photochemical reactions of Fischer carbene complexes

The photochemical cycloaddition of Fischer iminecarbene complexes bearing two kinds of substituent, imine and alkoxy or amino, has been explored with alkenes and alkynes. It was found that annulated product without CO insertion is formed.

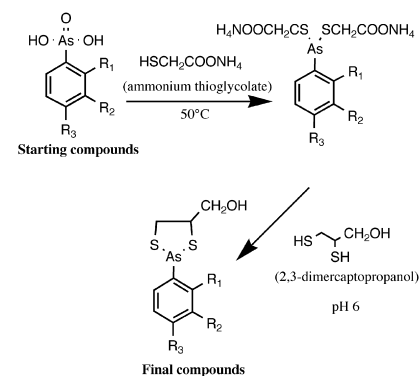




**Stéphane Gibaud, Raphaël Alfonsi,  
Pierre Mutzenhardt, Isabelle Fries, Alain Astier**  
*J. Organomet. Chem.* 691 (2006) 1081

(2-Phenyl-[1,3,2]dithiarsolan-4-yl)-methanol derivatives show in vitro antileukemic activity

(2-Phenyl-[1,3,2]dithiarsolan-4-yl)-methanol derivatives were tested on K562 and U937 human leukemia cell lines. Their systemic toxicity was estimated by the corresponding LD<sub>50</sub> on mice. The cytotoxic activity of each derivative was significantly better than that of arsenic trioxide and the therapeutic index (T.I. = LD<sub>50</sub>/IC<sub>50</sub>) was improved.



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