



## Contents

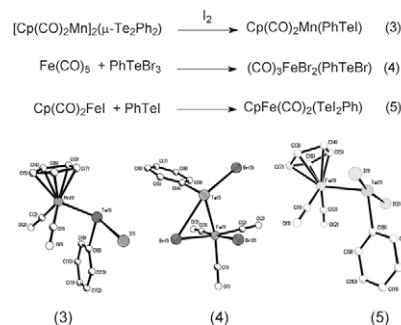
### Communications

**Yury Torubaev, Alexander Pasynskii, Pradeep Mathur**

*J. Organomet. Chem.* 694 (2009) 1781

Synthesis and X-ray investigation of novel Fe and Mn phenyltellurenyl-halide complexes:  $(\text{CO})_3\text{FeBr}_2(\text{PhTeBr})$ ,  $(\eta^5\text{-C}_5\text{H}_5)\text{-Fe}(\text{CO})_2(\text{PhTeI}_2)$  and  $\text{CpMn}(\text{CO})_2(\text{PhTeI})$

Iodine cleaves the Te-Te bond in  $[\text{CpMn}(\text{CO})_2]_2(\mu\text{-Ph}_2\text{Te}_2)$  to give the new phenyltellurenyliodine complex  $\text{CpMn}(\text{CO})_2(\text{PhTeI})$ . Insertion of PhTeI into the Fe-I bond of  $\text{CpFe}(\text{CO})_2\text{I}$  yields  $\text{CpFe}(\text{CO})_2(\text{TeI}_2\text{Ph})$ . Oxidative addition of  $\text{PhTeBr}_3$  to  $\text{Fe}(\text{CO})_5$  gives  $(\text{CO})_3\text{FeBr}_2(\text{PhTeBr})$  and it is isostructural to the recently reported  $(\text{CO})_3\text{FeI}_2(\text{PhTeI})$ . Molecular structures of the reported complexes are discussed.

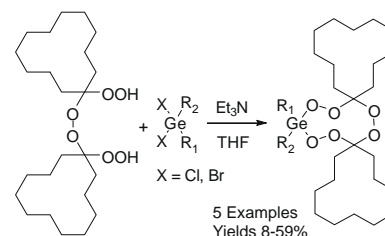


**A.O. Terent'ev, M.M. Platonov, I.V. Krylova, M.P. Egorov, G.I. Nikishin**

*J. Organomet. Chem.* 694 (2009) 1786

First synthesis of cyclic organogermanium peroxides, 1,2,4,5,7,8-hexaoxa-3-germananes

First, previously unknown, cyclic organogermanium peroxides, 1,2,4,5,7,8-hexaoxa-3-germananes, were synthesized by the reaction of 1,1'-dihydroperoxydi(cyclododecyl)peroxide with (di)alkyl(aryl)dihalogermanes.

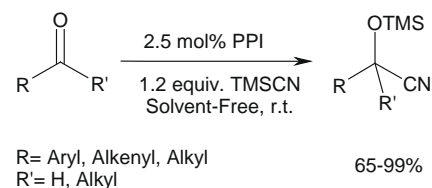


**Mohammad G. Dekamin, Zahra Karimi**

*J. Organomet. Chem.* 694 (2009) 1789

Activation of trimethylsilyl cyanide by potassium phthalimide for facile synthesis of TMS-protected cyanohydrins

Potassium phthalimide (PPI) was found to be a highly effective and easily accessible organocatalyst for the cyanosilylation of various carbonyl compounds under extremely mild conditions. The corresponding cyanohydrin trimethylsilyl ethers were obtained in high to quantitative yields in solvent-free conditions at room temperature using 2.5 mol% catalyst loading.



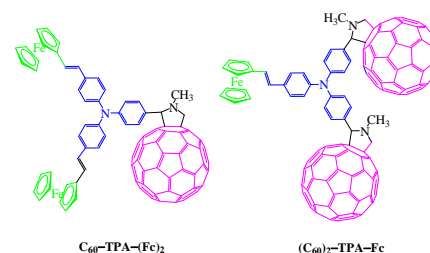


**Jai Han Seok, Seung Ho Park,  
Mohamed E. El-Khouly, Yasuyuki Araki,  
Osamu Ito, Kwang-Yol Kay**

*J. Organomet. Chem.* 694 (2009) 1818

Photoinduced processes of newly synthesized bisferrocene- and bisfullerene-substituted tetrads with a triphenylamine central block

Photoinduced processes of newly synthesized bisferrocene(Fc)- and bisfullerene( $C_{60}$ )-substituted tetrads with a triphenylamine central block have been studied by the time-resolved spectroscopic techniques. The charge separation process via the excited singlet state of  $C_{60}$  is more efficient in the  $C_{60}$  TPA (Fc) $_2$  tetrad than that in the ( $C_{60}$ ) $_2$  TPA Fc tetrad.

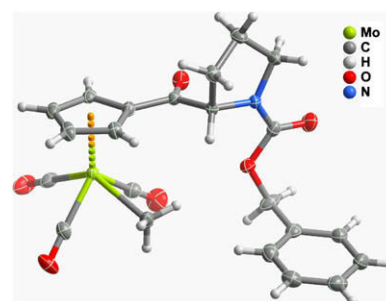


**Marta Abrantes, Filipe A. Almeida Paz,  
Anabela A. Valente, Cláudia C.L. Pereira,  
Sandra Gago, Alírio E. Rodrigues,  
Jacek Klinowski, Martyn Pillinger,  
Isabel S. Gonçalves**

*J. Organomet. Chem.* 694 (2009) 1826

Amino acid-functionalized cyclopentadienyl molybdenum tricarbonyl complex and its use in catalytic olefin epoxidation

An amino acid-functionalized cyclopentadienyl molybdenum tricarbonyl complex, [(N-benzyloxycarbonylpropyl)-cyclopentadienyl]Mo(CO) $_3$ Me, was successfully synthesized and applied as a catalyst precursor in the epoxidation of *trans*- $\beta$ -methylstyrene under mild conditions, using *tert*-butylhydroperoxide as oxidant.

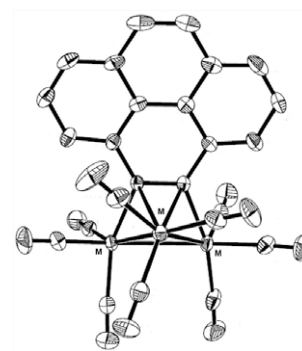


**Alejandro J. Arce, Farrah Cañavera,  
Ysaura De Sanctis, Julian Ascanio,  
Rubén Machado, Teresa González**

*J. Organomet. Chem.* 694 (2009) 1834

Synthesis and characterization of triosmium and triruthenium pyrene clusters

As models for chemisorption of arenes on metal surfaces, [ $M_3$ (CO) $_9$ ( $\mu$ -H) $_2$ ( $\mu_3\eta^1:\eta^1:\eta^2$ -C $_{16}$ H $_8$ )] (M = Os, Ru) were obtained from the reaction of 1-pyrenecarboxaldehyde (C $_{16}$ H $_9$ CHO) with triosmium and triruthenium carbonyl clusters, where the insertion of a pyrene moiety gives rise to stable, 48 electron systems.

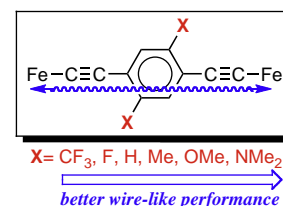


**Yumi Matsuura, Yuya Tanaka,  
Munetaka Akita**

*J. Organomet. Chem.* 694 (2009) 1840

*p*-Diethynylbenzene-based molecular wires, Fe-C $\equiv$ C-*p*-C $_6$ H $_2$ X $_2$ -C $\equiv$ C-Fe [Fe = Fe( $\eta^5$ -C $_5$ Me $_5$ )(dppe)]: Synthesis, substituent effects and unexpected formation of benzodifuran complex

A series of *p*-diethynylbenzene-based molecular wires, Fe-C $\equiv$ C-*p*-C $_6$ H $_2$ X $_2$ -C $\equiv$ C-Fe (3) (Fe = FeCp $^+$ (dppe)), is prepared and their wire-like performance is estimated on the basis of the  $K_C$  and  $V_{ab}$  values. It is revealed that electron-donating substituents (X) improve the performance. The benzodifuran complex unexpectedly formed from the precursor with X = OH shows performance comparable to 3.

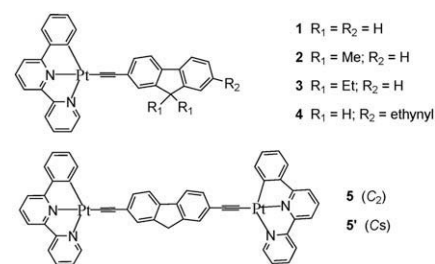


**Fu-Quan Bai, Xin Zhou, Bao-Hui Xia,  
Tao Liu, Jian-Po Zhang, Hong-Xing Zhang**

*J. Organomet. Chem.* 694 (2009) 1848

Electronic structures and optical properties of neutral substituted urene-based cyclometalated platinum(II) acetylide complexes: A DFT exploration

The lowest-lying absorptions of **1–5** are categorized as the LLCT combined with the MLCT transitions, and the phosphorescences in CH<sub>2</sub>Cl<sub>2</sub> mainly originate from their lowest energy absorption transitions, while **4** is assigned as <sup>3</sup>π\*–π/<sup>3</sup>MLCT transitions. In addition, these complexes hold promise for use as nonlinear optical material.

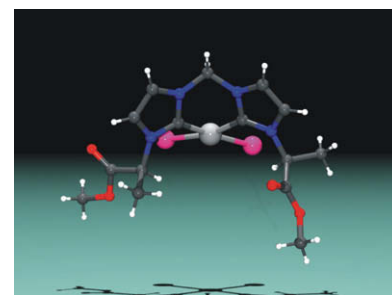


**Anke Meyer, Maria A. Taige,  
Thomas Strassner**

*J. Organomet. Chem.* 694 (2009) 1861

Chiral bisimidazolium salts derived from amino acids and their palladium(II)- and platinum(II)-biscarbene complexes

Chiral imidazoles and bidentate imidazolium iodide salts have been synthesized from naturally occurring L-amino acids. The synthesis of palladium(II)- and platinum(II) *N*-heterocyclic biscarbene complexes is described.

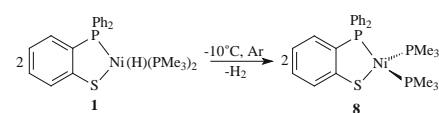


**Peter B. Kraikivskii, Markus Frey,  
Hamdi A. Bennour, Armin Gembus,  
Ralf Hauptmann, Ingrid Svoboda,  
Hartmut Fuess, Vitaly V. Saraev,  
Hans-Friedrich Klein**

*J. Organomet. Chem.* 694 (2009) 1869

Syntheses and properties of molecular nickel(II) hydride, methyl, and nickel(I) complexes supported by trimethylphosphane and (2-diphenylphosphanyl)thiophenolato and -naphtholato ligands

Syntheses of hydrido and methylnickel complexes containing monoanionic P,S ligands are described. Spontaneous elimination of dihydrogen from hydridonickel functions proceeds with formation of molecular nickel(I) complexes.

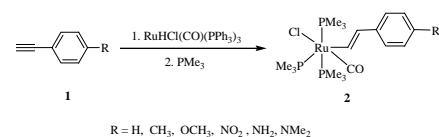


**Xianghua Wu, Tanqing Weng, Shan Jin,  
Jinghua Liang, Rui Guo, Guang-ao Yu,  
Sheng Hua Liu**

*J. Organomet. Chem.* 694 (2009) 1877

Synthesis, characterization, and substituent effects of mononuclear ruthenium complexes [RuCl(CO)(PMe<sub>3</sub>)<sub>3</sub>(CH=CH-C<sub>6</sub>H<sub>4</sub>-R-*p*)] (R = H, CH<sub>3</sub>, OCH<sub>3</sub>, NO<sub>2</sub>, NH<sub>2</sub>, NMe<sub>2</sub>)

A series of mononuclear ruthenium complexes [RuCl(CO)(PMe<sub>3</sub>)<sub>3</sub>(CH=CH-C<sub>6</sub>H<sub>4</sub>-R-*p*)] has been prepared. Electrochemical studies have revealed that electron-releasing substituents facilitate monometallic ruthenium complex oxidation, and the substituent parameter values ( $\sigma$ ) show a strong linear correlation with the anodic half-wave or oxidation peak potentials of the complexes.

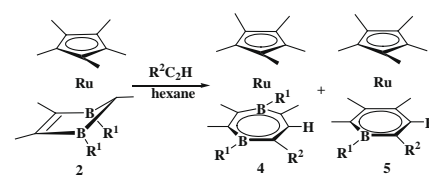


**Yong Nie, Hubert Wadepohl,  
Chunhua Hu, Thomas Oeser,  
Walter Siebert**

*J. Organomet. Chem.* 694 (2009) 1884

Insertion of alkynes into the heterocycle of ( $\eta^5$ -pentaalkyl-2,3-dihydro-1,3-diborolyl)-( $\eta^5$ -pentamethylcyclopentadienyl)ruthenium: Formation and characterization of 4-borataborepine ruthenium complexes

Regio-specific insertion of alkynes into the folded heterocycle of decamethyl-1,3-diboraruthenocene (**2**) leads to 4-borataborepine complexes **4**. Steric crowding of  $R^2$  causes elimination of the distant B  $R^1$  moiety with formation of boratabenzene complexes **5**.

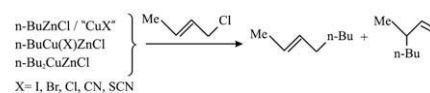


**Ender Erdik, Melike Koçoğlu**

*J. Organomet. Chem.* 694 (2009) 1890

An insight into copper catalyzed allylation of alkyl zinc halides. Comparison of reactivity profiles for catalytic and stoichiometric alkylzinc copper reagents

Evaluation of the reactivity profiles generated by  $\gamma$ -selective allylation of catalytic and stoichiometric alkylzinc cuprates supports the formation of both  $\text{RCu(X)ZnCl}$  and  $\text{R}_2\text{CuZnCl}$  as active catalysts and also reductive elimination of  $\sigma$ -allyl-Cu(III) complex to give  $\gamma$ -allylated product.

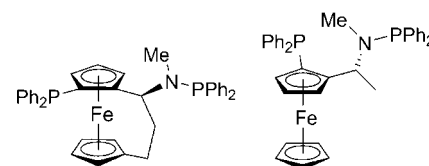


**Radovan Šebesta, Andrea Škvorcová**

*J. Organomet. Chem.* 694 (2009) 1898

Influence of structural changes in ferrocene phosphane aminophosphane ligands on their catalytic activity

New [3]ferrocenophane analog of BoPhoz ligand can be efficiently prepared by one-pot double lithiation followed by phosphanylation. Its catalytic properties are evaluated in Pd-catalyzed allylic substitution.

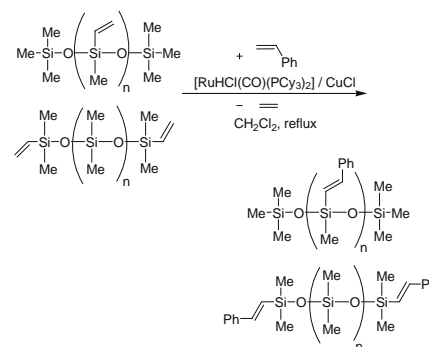


**Patrycja Żak, Monika Skrobańska,  
Cezary Pietraszuk, Bogdan Marciniec**

*J. Organomet. Chem.* 694 (2009) 1903

Functionalization of vinyl-substituted linear oligo- and polysiloxanes via ruthenium catalyzed silylative coupling with styrene

Efficient silylative coupling of linear vinyl-substituted oligo- and polysiloxanes with styrene in the presence of ruthenium hydride complexes is described.

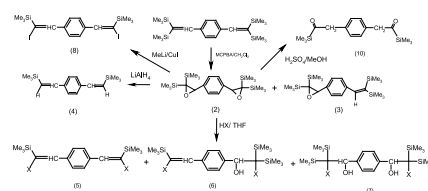


**Kazem D. Safa, Khatereh Ghorbanpour, Akbar Hassanpour, Shahin Tofangdarzadeh**

*J. Organomet. Chem.* 694 (2009) 1907

1,4-bis[2,2-bis(trimethylsilyl)ethenyl]benzene: Regioselective ring opening of its  $\alpha,\beta$ -epoxybis(silane) with some nucleophiles

Vinylbis(silane) **1** which reacts with MCPBA in  $\text{CH}_2\text{Cl}_2$  at r.t. to afford mixture of mono and disubstituted epoxybis(silanes) **3** and **2**. The compound **2** was reacted with various reagents such as HX (X=Cl, Br),  $\text{H}_2\text{SO}_4$ ,  $\text{LiAlH}_4$  and  $\text{MeLi/CuI}$  and give the related products.

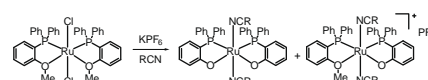


**Sodio C.N. Hsu, Shih-Chieh Hu, Zih-Shing Wu, Michael Y. Chiang, Min-Yuan Hung**

*J. Organomet. Chem.* 694 (2009) 1912

Methyl oxygen bond cleavage in hemilabile phosphine ether ligand of ruthenium(II) complexes

Two different kinds reaction mechanism are proposed to describe the methyl oxygen bond cleavage, one involving attack of anionic nucleophiles and another involving the phosphine. It is first time to observe the elimination of  $\text{CH}_3\text{Cl}$  and the formation of the phosphonium ion in a reaction, which may provide us a good example to study the condition of dealkylation of transition-metal complexes.

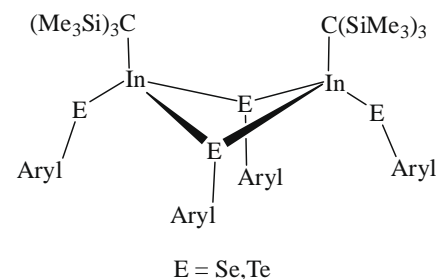


**Cloviseppe, Fabiano Molinos de Andrade, Werner Uhl**

*J. Organomet. Chem.* 694 (2009) 1918

On the reactions of the tetraindium cluster  $\text{In}_4[\text{C}(\text{SiMe}_3)_3]_4$ : Insertion of the monomeric fragments  $\text{InC}(\text{SiMe}_3)_3$  into chalcogen chalcogen bonds

The insertion of monomeric alkylindium(I) groups into the chalcogen chalcogen bonds of Aryl-E-E-Aryl compounds opened the facile access to alkylindium dichalcogenolates, which form dimers in the solid state and adopt different conformations with  $C_i$  or  $C_{2v}$  symmetry.

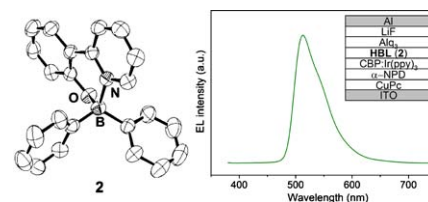


**Nam Gwang Kim, Chang Hwan Shin, Min Hyung Lee, Youngkyu Do**

*J. Organomet. Chem.* 694 (2009) 1922

Four-coordinate boron compounds derived from 2-(2-pyridyl)phenol ligand as novel hole-blocking materials for phosphorescent OLEDs

Four-coordinate boron compounds of  $\text{Ph}_2\text{B} \cdot \mathbf{1}$  (**2**) and  $(\text{C}_6\text{F}_5)_3\text{B}(\mathbf{1} \cdot \text{H})$  (**3**) derived from 2-(2-pyridyl)phenol ligand function as effective hole-blocking layer materials for the stable green phosphorescence of  $\text{Ir}(\text{ppy})_3$  in OLEDs.

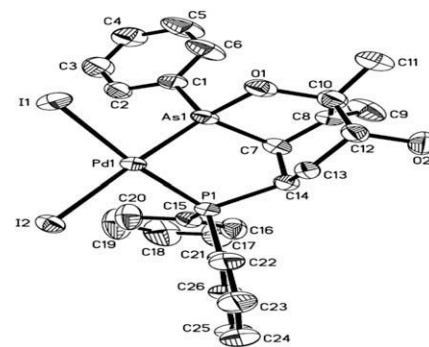


**Mengtao Ma, Sumod A. Pullarkat,  
Ke Chen, Yongxin Li, Pak-Hing Leung**

*J. Organomet. Chem.* 694 (2009) 1929

Template effects on the asymmetric cycloaddition reaction between 3,4-dimethyl-1-phenylarsole and diphenylvinylphosphine and their arsenic elimination reaction

Asymmetric cycloaddition reaction between diphenylvinylphosphine and 3,4-dimethyl-1-phenylarsole has been investigated in the presence of chiral naphthylamine template or in the absence of template. The different arsenic eliminations were observed.



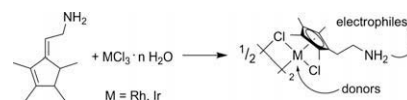
## Notes

**Thomas Reiner, Dominik Jantke,  
Andreas Raba, Alexander N. Marziale,  
Jörg Eppinger**

*J. Organomet. Chem.* 694 (2009) 1934

Side chain functionalized  $\eta^5$ -tetramethylcyclopentadienyl complexes of Rh and Ir with a pendant primary amine group

Dimeric Rh(III) and Ir(III) Cp\* complexes with pendant primary amine tether were synthesized from a Cp\*<sup>+</sup>NH<sub>2</sub> tautomer and the respective metal(III) chlorides. The electrophilic metal center and the nucleophilic side chain functionality may be addressed separately under the appropriate reaction conditions.

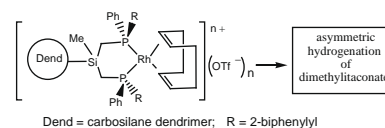


**L.I. Rodríguez, O. Rossell, M. Seco,  
G. Müller**

*J. Organomet. Chem.* 694 (2009) 1938

Carbosilane dendrimers peripherally functionalized with *P*-stereogenic diphosphine ligands and related rhodium complexes

The first dendrimer functionalized with *P*-stereogenic diphosphine ligands has been prepared and decorated with Rh(COD) fragments for catalytic studies.



**Dominik Wechsler, Gabriele Schatte,  
Mark Stradiotto**

*J. Organomet. Chem.* 694 (2009) 1943

Synthesis, characterization, and catalytic application of a new chiral P,N-indene ligand derived from (*R*)-BINOL

We report the synthesis and characterization of a new chiral P,N-indene ligand, our efforts to develop the rhodium coordination chemistry of this ligand, and the application of this ligand in rhodium-mediated asymmetric alkene hydrogenation and ketone hydrosilylation.

