



## Contents

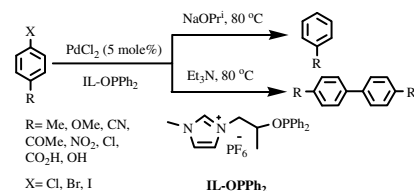
### Communications

**Nasser Iranpoor, Habib Firouzabadi, Roya Azadi**

*J. Organomet. Chem.* 693 (2008) 2469

Imidazolium-based phosphinite ionic liquid (IL-OPPh<sub>2</sub>) as Pd ligand and solvent for selective dehalogenation or homocoupling of aryl halides

Selective dehalogenation or homocoupling of aryl halides is performed using an imidazolium based phosphinite ionic liquid (IL-OPPh<sub>2</sub>) as both solvent and ligand for Pd(II) in the presence of NaOPr<sup>t</sup> or Et<sub>3</sub>N respectively.

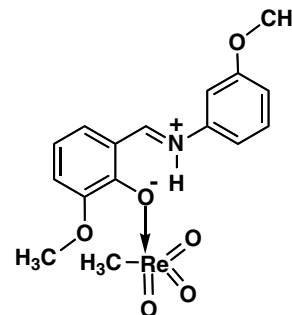


**Ming-Dong Zhou, Shu-Liang Zang, Eberhardt Herdtweck, Fritz E. Kühn**

*J. Organomet. Chem.* 693 (2008) 2473

A (salicylidene)aniline derived Schiff-base adduct of methyltrioxorhenium(VII) – *Cis*- and *trans*-coordination of the ligand

A (salicylidene)aniline derived Schiff-base adduct of MTO is synthesized and its crystal structure is examined. The structure shows that both a *cis*- and a *trans*-isomer with distinct features are present in the solid state, but interchange quickly in solution.



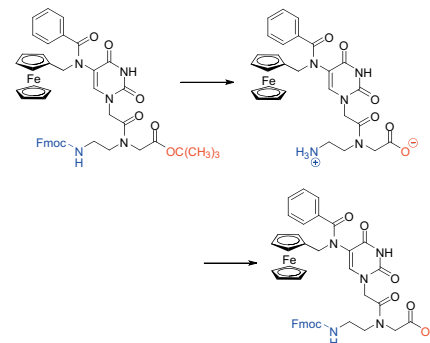
### Regular Papers

**Gilles Gasser, Leone Spiccia**

*J. Organomet. Chem.* 693 (2008) 2478

Synthesis of a ferrocenyl uracil PNA monomer for insertion into PNA sequences

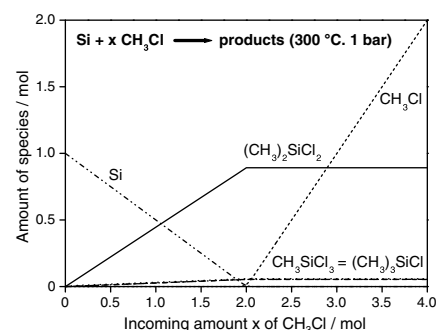
The synthesis of a new ferrocenyl peptide nucleic acid (PNA) monomer that could potentially be inserted at any chosen position within PNA oligomeric sequences is presented.



**Jörg Acker, Klaus Bohmhammel***J. Organomet. Chem.* 693 (2008) 2483

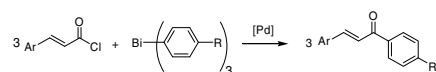
Thermodynamic assessment of the copper catalyzed direct synthesis of methylchlorosilanes

The copper catalyzed direct synthesis of methylchlorosilanes is modeled by thermodynamic equilibrium calculations. By the introduction of defined kinetic constraints, which are equivalent to a selective blocking of certain reaction pathways, the experimentally observed product distribution can be modeled. The obtained results are discussed in light of possible reaction pathways, orders of product stabilities, and the impact of varying reaction conditions.

**Maddali L.N. Rao, Varadhachari Venkatesh, Deepak N. Jadhav***J. Organomet. Chem.* 693 (2008) 2494

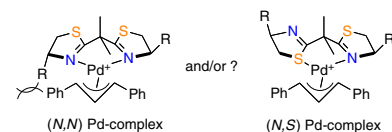
A palladium catalyzed atom-efficient cross-coupling reactivity of triarylbis-muths with  $\alpha,\beta$ -unsaturated acyl chlorides

An atom-efficient cross-coupling reactivity of triarylbi-muths (1 equiv) was demonstrated by cross-coupling reaction with 3 equiv of  $\alpha,\beta$ -unsaturated acyl chlorides under palladium catalysis in the synthesis of a series of functionalized  $\alpha,\beta$ -unsaturated ketones in high isolated yields.

**Alexander Betz, Lian Yu, Markus Reiher, Annie-Claude Gaumont, Paul-Alain Jaffrès, Mihaela Gulea***J. Organomet. Chem.* 693 (2008) 2499

(*N,N*) vs. (*N,S*) chelation of palladium in asymmetric allylic substitution using bis(thiazoline) ligands: A theoretical and experimental study

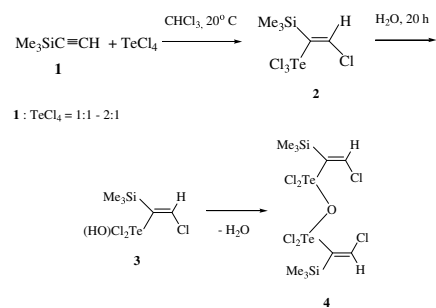
Non-symmetric bis(thiazolines) and oxazoline-thiazolines were synthesized and compared to  $C_2$ -symmetric bis(thiazolines) in the palladium-catalyzed allylic substitution. The experimental results obtained in this study support the hypothesis of a competition between the (*N,N*) and the (*N,S*) palladium chelation, when sterically hindered bis(thiazolines) are used as ligands. A quantum chemical study performed on the Pd-complexes derived from three selected ligands, two  $C_2$ -symmetric bis(thiazolines) and one oxazoline-thiazoline, also supports this hypothesis.

**S.V. Amosova, A.V. Martynov, V.A. Shagun, M.V. Musalov, L.I. Larina, L.B. Krivdin, L.V. Zhilitskaya, M.G. Voronkov***J. Organomet. Chem.* 693 (2008) 2509

*anti*-Markovnikov addition of tellurium tetrachloride to trimethyl ethynyl silane

An investigation of the  $\text{TeCl}_4$  interaction with trimethyl ethynyl silane **1** in  $\text{CHCl}_3$  has shown that *anti*-Markovnikov adduct [Z-1-(trimethylsilyl)-2-chlorovinyl]tellurium trichloride is formed as the only product. In time, it is

hydrolyzed to give [Z-1-(trimethylsilyl)-2-chlorovinyl]tellurium(hydroxy)-dichloride which, in turn, is dehydrated to afford bis[(2-chloro-1-trimethyl-silylvinyl)dichlorotellurium]oxide. These data revealed that the reaction studied was the first example of *anti*-Markovnikov *syn*-addition of  $\text{TeCl}_4$  to terminal acetylenes. A computed simulation of the  $\text{TeCl}_4$  interaction with ethynyl silane **1** in a gas state using PES method did not reveal dominating orientation of the addition but showed the conditions at which *anti*-Markovnikov addition can occur and which were probably met in carrying out the reaction in  $\text{CHCl}_3$ .



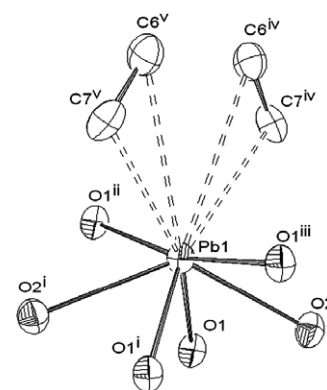
**Mahmood Payehghadr, Sohaila Yousefi, Ali Morsali**

*J. Organomet. Chem.* 693 (2008) 2514

Thermal, structural and solution studies of a new lead(II) coordination polymer with  $\eta^4$  Pb–C interactions

A new Pb(II) one-dimensional coordination polymer  $\{[\text{Pb}(\text{PAA})_2]_n$  (**1**),  $\text{PAA}^-$  = phenylacetate) was synthesized by the reaction of  $\text{Pb}(\text{CH}_3\text{COO})_2 \cdot 3\text{H}_2\text{O}$  and ligand phenylacetic acid. Compound **1** was structurally characterized by single-crystal X-ray diffraction. The crystal structure of this

compound consists of one-dimensional polymeric units of  $[\text{Pb}(\text{PAA})_2]$  and the coordination number of  $\text{Pb}^{\text{II}}$  ions is six, the lead atoms have irregular coordination sphere containing stereo-chemically active lone pair and tetra-hapto ( $\eta^4$ ) interactions, thus attaining a total hapticity of 10 with environment  $\text{C}_4\text{O}_6\text{Pb}$ . The thermal stability of compound **1** was studied by thermal gravimetric (TG) and differential thermal analyses (DTA). The results of studies of the stoichiometry and formation of complex **1** in methanol, ethanol and acetonitrile solutions were found to be in support of their solid state stoichiometry.

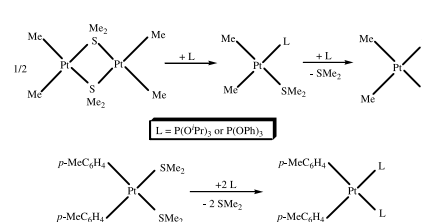


**Ahmad R. Esmaeilbeig, Hamid R. Samouei, Mehdi Rashidi**

*J. Organomet. Chem.* 693 (2008) 2519

Organoplatinum(II) complexes with phosphite ligands

Mono-phosphite complexes  $\text{cis-}[\text{PtMe}_2\text{L}(\text{SMe}_2)]$  and bis-phosphite complexes  $\text{cis-}[\text{Pt}(\text{MeC}_6\text{H}_4)_2\text{L}_2]$ , in which  $\text{L} = \text{P}(\text{O}^i\text{Pr})_3$  or  $\text{P}(\text{OPh})_3$ , were synthesized and their reactions with  $\text{MeI}$ ,  $\text{PPh}_3$ ,  $\text{dppm} = \text{bis}(\text{diphenylphosphino})\text{methane}$ , and  $\text{NN} = 4,4'$ -bipyridine were studied.

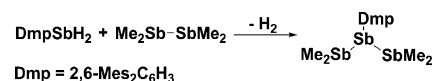


**H.J. Breunig, E. Lork, O. Moldovan, C.I. Raț**

*J. Organomet. Chem.* 693 (2008) 2527

Syntheses of a stable trisibine and of related antimony compounds with the 2,6-dimesitylphenyl (Dmp) substituent

The syntheses of  $\text{DmpSbX}_2$  ( $\text{X} = \text{Br}, \text{Cl}, \text{H}, \text{SbMe}_2$ ),  $\text{Dmp}(\text{Ph})\text{SbX}$  ( $\text{X} = \text{Br}, \text{H}, \text{OH}$ ),  $\text{Dmp}(\text{Me})\text{SbX}$  ( $\text{X} = \text{H}, \text{Sb}(\text{Me})\text{Dmp}$ ) are reported.  $\text{DmpSb}(\text{SbMe}_2)_2$  is the first stable *catena* stibine. The molecular structures of  $\text{DmpSbBr}_2$ ,  $\text{DmpSbI}_2$ ,  $\text{Dmp}(\text{Ph})\text{SbX}$  ( $\text{X} = \text{Br}, \text{H}, \text{OH}$ ), and  $\{\text{Dmp}(\text{Me})\text{SbH}\}_2$  were determined by X-ray diffraction on single crystal.



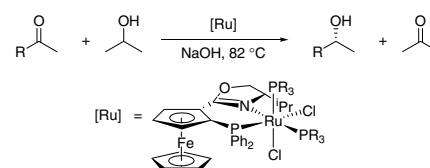
**Cesar A. Madrigal, Almudena García-Fernández, José Gimeno, Elena Lastra**

*J. Organomet. Chem.* 693 (2008) 2535

Asymmetric transfer hydrogenation of ketones catalyzed by ruthenium(II) complexes bearing a chiral phosphino-ferrocenyl oxazoline ligand

The catalytic activity in asymmetric transfer hydrogenation of ketones using octahedral and half-sandwich ( $\eta^5$ -indenyl and  $\eta^6$ -arene) ruthenium(II) complexes containing the chiral

ligand (4*S*)-2-[(*S*<sub>p</sub>)-2-(diphenylphosphino)-ferrocenyl]-4-(isopropyl)oxazoline (FcPN) has been explored. Catalytic studies with complex  $\text{fac-}[\text{RuCl}_2\{\eta^2(\text{P},\text{N})\text{-FcPN}\}(\text{PMe}_3)_2]$  (**1**) show excellent TOF values ( $9600 \text{ h}^{-1}$ ). Experiments in the presence of free FcPN, which lead to an increase in conversion rates and ee values when the catalyst is complex  $[\text{Ru}(\eta^5\text{-C}_9\text{H}_7)\{\kappa^2(\text{P},\text{N})\text{-FcPN}\}(\text{PPh}_3)][\text{PF}_6]$  (**4**) have been carried out. The characterization of the new complexes  $\text{mer-trans-}[\text{RuCl}_2\{\text{P}(\text{OMe})_3\}_2\{\kappa^2(\text{P},\text{N})\text{-FcPN}\}]$  and of the water-soluble complexes  $\text{fac-}$  and  $\text{mer-trans-}[\text{RuCl}_2(\text{PTA})_2\{\kappa^2(\text{P},\text{N})\text{-FcPN}\}]$  is also reported.

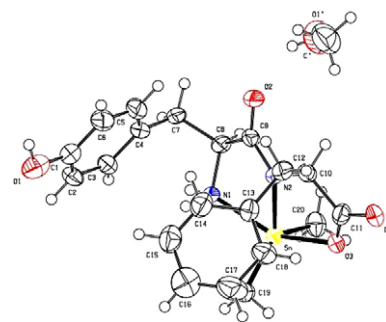


**Mala Nath, Hitendra Singh, George Eng, Xueqing Song**

*J. Organomet. Chem.* 693 (2008) 2541

New di- and triorganotin(IV) derivatives of tyrosinylphenylalanine as models for metal–protein interactions: Synthesis and structural characterization. Crystal structure of  $\text{Me}_2\text{Sn}(\text{Tyr-Phe}) \cdot \text{MeOH}$

Di- and triorganotin(IV) derivatives of tyrosinylphenylalanine ( $\text{H}_2\text{Tyr-Phe}$ ) have been synthesized and characterized by various spectroscopic methods. The single crystal X-ray structure of  $\text{Me}_2\text{Sn}(\text{Tyr-Phe}) \cdot \text{MeOH}$  shows distorted trigonal-bipyramidal arrangement with two methyl groups and peptide nitrogen ( $\text{N}^-_{\text{peptide}}$ ) in the equatorial positions, while the carboxylic oxygen ( $\text{O}^-_{\text{carboxyl}}$ ) and the amino nitrogen ( $\text{N}_{\text{amino}}$ ) are at axial positions. One methanol molecule is also present.



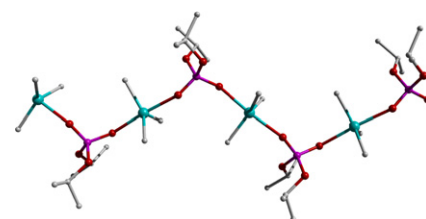
**Rufen Zhang, Mingqing Yang, Chunlin Ma**

*J. Organomet. Chem.* 693 (2008) 2551

Self-assembly of di- and triorganotin(IV) complexes: Syntheses, characterization and crystal structures of 1D polymeric chain containing *O,O*-diethyl or *O,O*-diisopropyl phosphoric acid ligands

A series of organotin(IV) complexes with *O,O*-diethyl phosphoric acid ( $\text{L}^1\text{H}$ ) and *O,O*-diisopropyl phosphoric acid ( $\text{L}^2\text{H}$ ) of the types:  $[\text{R}_3\text{Sn} \cdot \text{L}]_n$  ( $\text{L} = \text{L}^1, \text{R} = \text{Ph}$  1,  $\text{R} = \text{PhCH}_2$  2,

$\text{R} = \text{Me}$  3,  $\text{R} = \text{Bu}$  4;  $\text{L} = \text{L}^2, \text{R} = \text{Ph}$  9,  $\text{R} = \text{PhCH}_2$  10,  $\text{R} = \text{Me}$  11,  $\text{R} = \text{Bu}$  12),  $[\text{R}_2\text{ClSn} \cdot \text{L}]_n$  ( $\text{L} = \text{L}^1, \text{R} = \text{Me}$  5,  $\text{R} = \text{Ph}$  6,  $\text{R} = \text{PhCH}_2$  7,  $\text{R} = \text{Bu}$  8;  $\text{L} = \text{L}^2, \text{R} = \text{Me}$  13,  $\text{R} = \text{Ph}$  14,  $\text{R} = \text{PhCH}_2$  15,  $\text{R} = \text{Bu}$  16), have been synthesized. All complexes were characterized by elemental analysis, TGA, IR and NMR ( $^1\text{H}$ ,  $^{13}\text{C}$ ,  $^{31}\text{P}$  and  $^{119}\text{Sn}$ ) spectroscopy analysis. Among them, complexes 1, 2, 3, 5, 8, 9 and 11 have been characterized by X-ray crystallography diffraction analysis. In the crystalline state, the complexes adopt infinite 1D infinite chain structures which are generated by the bidentate bridging phosphonate ligands and the five-coordinated tin centers.



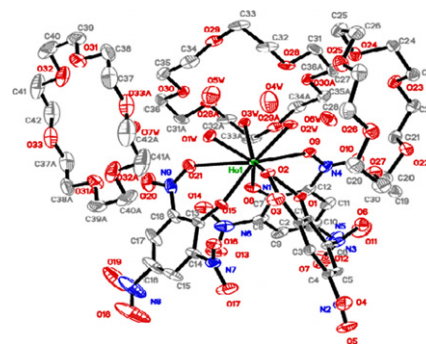
**Muhammad I. Saleh, Eny Kusriani, Hoong K. Fun, Bohari M. Yamin**

*J. Organomet. Chem.* 693 (2008) 2561

Structural and selectivity of 18-crown-6 ligand in lanthanide–picrate complexes

The mononuclear  $[\text{Ln}(\text{Pic})_2(\text{18C6})]^+(\text{Pic})^-$  ( $\text{Ln} = \text{La-Gd}$ ) and  $[\text{Ln}(\text{Pic})_3(\text{OH}_2)_3] \cdot 2(\text{18C6}) \cdot 4\text{H}_2\text{O}$  ( $\text{Ln} = \text{Tb, Ho}$ ) complexes have been synthesized and characterized by reaction of  $[\text{Ln}(\text{Pic})_2(\text{OH}_2)_6]^+(\text{Pic})^- \cdot 6\text{H}_2\text{O}$  with the 18C6 ligand in a 1:5 ratio. The current study was evaluated in the solid phase to understand the coordination pattern of Ln(III) with the 18C6

ligand. The small differences in the ionic radii of Ln(III) play an important role in the selection of electron rich atoms for the formation of coordination bond. The X-ray crystallographic analysis for the La–Gd complexes indicated the existence of interaction between the Ln(III) ion and the oxygen atoms of the 18C6 ligand in the crystalline state. The  $^1\text{H}$  NMR spectra suggested no interaction between the Ln(III) ion and the 18C6 ligand in the solid state and/or solution was observed for the Tb and Ho complexes. Good selectivity of the 18C6 ligand toward Ln(III) in the presence of picrate anion ( $\text{Pic}^-$ ) which depends on the lanthanide contraction and steric effects were observed.

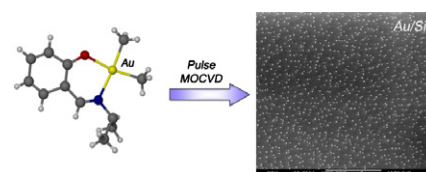


**Aleksandr A. Bessonov, Natalia B. Morozova, Nikolay V. Gelfond, Pyotr P. Semyannikov, Iraida A. Baidina, Sergey V. Trubin, Yuriy V. Shevtsov, Igor K. Igumenov**

*J. Organomet. Chem.* 693 (2008) 2572

Synthesis, crystal structure and thermal behavior of dimethylgold(III) derivatives of salicylaldimine Schiff bases – Novel precursors for gold MOCVD applications

Dimethylgold(III) derivatives of salicylaldimine Schiff bases were studied as viable MOCVD precursors to gold nanomaterials. Gold nanoparticles 5–15 nm were deposited at temperatures lower than 200 °C by pulse MOCVD.

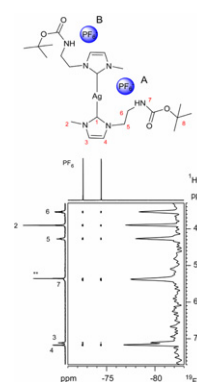


**Luigi Busetto, M. Cristina Cassani, Cristina Femoni, Alceo Macchioni, Rita Mazzoni, Daniele Zuccaccia**

*J. Organomet. Chem.* 693 (2008) 2579

Synthesis, molecular structures and solution NMR studies of *N*-heterocyclic carbene–amine silver complexes

Novel *N*-heterocyclic carbene–amine silver complexes have been prepared and the solid state structures determined by X-ray diffraction analysis have revealed three different bonding motifs: a biscarbene salt  $[(\text{NHC-NHBoc})_2\text{Ag}]\text{PF}_6$  (NHC-NHBoc = 1-(2-BocNH-ethyl)-3-methyl-imidazolin-2-ylidene), a tetranuclear complex  $[\text{Ag}(\text{NHC-NHBoc})_2]_2[\text{Ag}_2\text{I}_4]$ , and a polymeric silver “staircase”  $[(\text{NHC-NHBoc})_2-\text{Ag}_4-\text{I}_4]_n$ , composed of  $\text{Ag}_4\text{I}_4$  clusters. PGSE and NOE NMR experiments were employed to investigate the level of aggregation and anion–cation relative orientation in solution.

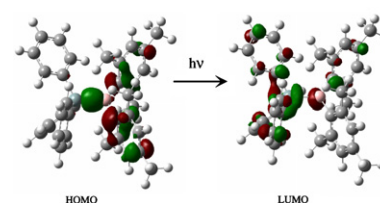


**José C. Araujo da Silva, Jean-Paul Pillot, Marc Birot, Jean-Pierre Desvergne, Daniel Liotard, Jean-Claude Rayez, Marie-Thérèse Rayez**

*J. Organomet. Chem.* 693 (2008) 2592

The Si–B chromophore: A joint experimental and theoretical investigation

Organosilylboranes with mesityl groups on boron exhibit an unexpected fluorescence emission band, along with a charge transfer from the silicon atom and the mesityl groups toward the boron atom. MNDO/*d* calculations showed that these phenomena can be ascribed to a large extent to an Si–B HOMO–LUMO transition.

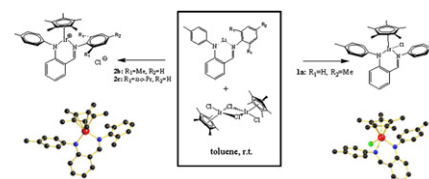


**Xia Meng, Yue-Jian Lin, Guo-Xin Jin**

*J. Organomet. Chem.* 693 (2008) 2597

Syntheses and molecular structures of 18/16-electron half-sandwich iridium(III) complexes with chelating anilido-imine ligands

Sixteen-electron half-sandwich iridium complexes **1b**, **2b**, **2c** and 18-electron half-sandwich complex **1a** have been synthesized and characterized structurally. **1a** can be converted to **1b** by the reaction of **1a** with  $\text{AgSO}_3\text{CF}_3$  in  $\text{CH}_3\text{CN}$  solution.

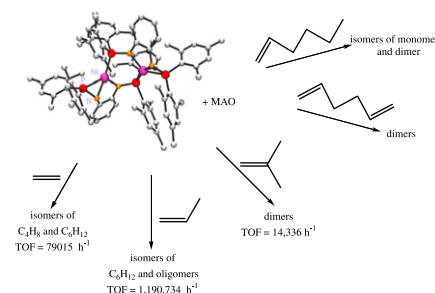


**Felicite Majoumo-Mbe, Peter Lönnecke, Victoria Volkis, Manab Sharma, Moris S. Eisen, Evamarie Hey-Hawkins**

*J. Organomet. Chem.* 693 (2008) 2603

Oligomerization of  $\alpha$ -olefins by the dimeric nickel bisamido complex  $[\text{Ni}\{1-\text{N}(\text{PMes}_2)-2-\text{N}(\mu-\text{PMes}_2)\text{C}_6\text{H}_4-\kappa^3\text{N},\text{N}',\text{P},\kappa^1\text{P}'\}]_2$  activated by methylalumoxane (MAO)

$[\text{Ni}\{1-\text{N}(\text{PMes}_2)-2-\text{N}(\mu-\text{PMes}_2)\text{C}_6\text{H}_4-\kappa^3\text{N},\text{N}',\text{P},\kappa^1\text{P}'\}]_2$  after activation by methylalumoxane is a highly active catalyst in the oligomerization and isomerization of  $\alpha$ -olefins such as ethene, propene, isobutene, 1-hexene and 1,5-hexadiene. To our knowledge this is the most active catalyst for the oligomerization of propene.

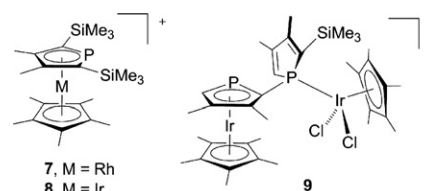


**Verena Schnitzler, Walter Frank, Christian Ganter**

*J. Organomet. Chem.* 693 (2008) 2610

Straightforward synthesis of phosphametalloocene cations of Rh and Ir

The phospharhodocenium and iridocenium cations **7** and **8** were prepared in good yield. The Me<sub>3</sub>Si groups of the phosphole prevent the heterocycle from η<sup>1</sup>-P coordination and enforce the formation of the metallocene type structure. The byproduct **9** was also isolated. It features phosphairidocenium and Ir half-sandwich units, which are linked by a bridging phosphole ligand.



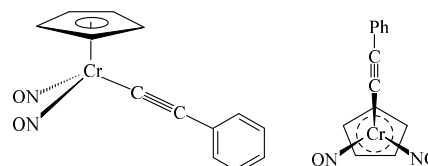
**Yu-Pin Wang, Hsien-Li Leu, Hsiu-Yao Cheng, Tso-Shen Lin, Yu Wang, Gene-Hsiang Lee**

*J. Organomet. Chem.* 693 (2008) 2615

Cyclopentadienyl chromium and tungsten complexes with halide, methyl and σ-phenylethynyl ligands: Structures of (η<sup>5</sup>-C<sub>5</sub>H<sub>5</sub>)Cr(NO)<sub>2</sub>(-C≡C-C<sub>6</sub>H<sub>5</sub>), (η<sup>5</sup>-C<sub>5</sub>H<sub>5</sub>)Cr(NO)<sub>2</sub>I and [(η<sup>5</sup>-C<sub>5</sub>H<sub>4</sub>)-COOCH<sub>3</sub>]W(CO)<sub>3</sub>Cl

With copper(I) iodide as catalyst, CpCr(NO)<sub>2</sub>(C≡C-C<sub>6</sub>H<sub>5</sub>) (**5**), [(η<sup>5</sup>-C<sub>5</sub>H<sub>4</sub>)-COOCH<sub>3</sub>]Cr(NO)<sub>2</sub>(C≡C-C<sub>6</sub>H<sub>5</sub>) (**10**), and [(η<sup>5</sup>-C<sub>5</sub>H<sub>4</sub>)-COOCH<sub>3</sub>]

W(CO)<sub>3</sub>(C≡C-C<sub>6</sub>H<sub>5</sub>) (**13**), were prepared. The phenyl group in **5** is oriented perpendicularly to the Cp with an eclipsed conformation. The orientation is rationalized and complemented by molecular orbital calculation. The opposite correlation was observed on the chemical shift assignments of C(2)-C(5) on Cp ring in compounds of [(η<sup>5</sup>-C<sub>5</sub>H<sub>4</sub>)-COOCH<sub>3</sub>]Cr(NO)<sub>2</sub>X and [(η<sup>5</sup>-C<sub>5</sub>H<sub>4</sub>)-COOCH<sub>3</sub>]W(CO)<sub>3</sub>X, using HetCOR NMR spectroscopy. The electron density distribution in the cyclopentadienyl ring is discussed on the basis of <sup>13</sup>C NMR data and compared with the calculations via density functional B3LYP correlation-exchange method.



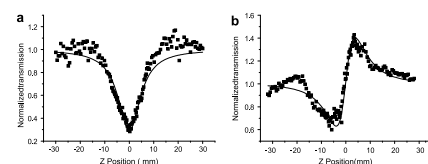
**Haiyan Yang, Linke Li, Yinglin Song, Hongwei Hou, Yaoting Fan**

*J. Organomet. Chem.* 693 (2008) 2624

Syntheses and characterization of ferrocenylthiocarboxylate-containing coordination compounds for nonlinear optics

Four metal-organic coordination compounds containing ferrocenylthiocarboxylate components have been prepared in

search of good nonlinear optical materials. Hg-containing compound **4** exhibits very strong third-order NLO absorptive and refractive effects. The NLO absorptive coefficient α<sub>2</sub> value (2.11×10<sup>-10</sup> m W<sup>-1</sup>) is larger than those of all the reported ferrocenylcarboxylate-containing coordination compounds and comparable to the well-performing Hg-containing complexes. Additionally, we further analyzed their NLO behaviors through studying electrochemical properties of the four compounds.

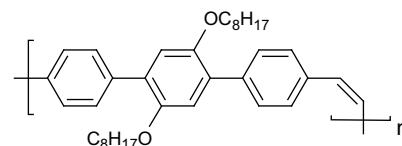


**Francesco Babudri, Antonio Cardone, Tiziana Cassano, Gianluca M. Farinola, Francesco Naso, Raffaele Tommasi**

*J. Organomet. Chem.* 693 (2008) 2631

Synthesis and optical properties of a poly(2',5'-dioctyloxy-4,4''-terphenylene-vinylene) with high content of (Z) vinylene units

Poly(2',5'-dioctyloxy-4,4''-terphenylene-vinylene) with (Z) configuration of the vinylene double bonds was prepared by Suzuki-Miyaura polymerization of (Z)-4,4'-diiodostilbene and 2,5-dioctyloxy-1,4-benzenediboronic acid.

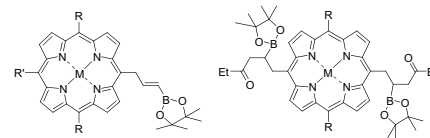


## Notes

**Natalia N. Sergeeva, Vanesa López Pablo, Mathias O. Senge***J. Organomet. Chem.* 693 (2008) 2637

Synthesis of porphyrin boronates with (un)saturated side-chains

Cross-metathesis and addition reactions allow the rapid generation of porphyrin synthons with mono and bis-substituted unsaturated boronyl residues.

**Pek Ke Chan, Weng Kee Leong***J. Organomet. Chem.* 693 (2008) 2641

Reaction of  $[M(CO)_4]^-$  ( $M = Ir, Rh$ ) with cyclopropenyl tetrafluoroborate – Ring opening and coupling of cyclopropenyl ligands to form dinuclear metal complexes

Reaction of  $[PPN][Ir(CO)_4]$  with  $[C_3Ph_3][BF_4]$  resulted in ring opening to afford the dinuclear species  $Ir_2(CO)_4(\mu, \eta^1: \eta^2-C_3Ph_3)(\mu, \eta^2: \eta^3-C_3Ph_3)$  and  $Ir_2(CO)_4(\mu, \eta^4: \eta^4-C_6Ph_6)$ , the latter also involving coupling of the resulting acyclic, propenyl ligands.

