



## Contents

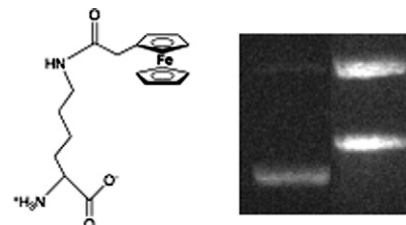
### Communications

**Amanda M. Gellett, Paul W. Huber, Pamela J. Higgins**

*J. Organomet. Chem.* 693 (2008) 2959

Synthesis of the unnatural amino acid *N*<sup>ε</sup>-*N*<sup>ε</sup>-(ferrocene-1-acetyl)-L-lysine: A novel organometallic nuclease

The synthesis of a new unnatural amino acid, *N*<sup>ε</sup>-*N*<sup>ε</sup>-(ferrocene-1-acetyl)-L-lysine, has been successfully achieved. The structure of the compound permits incorporation of ferrocene into both peptides or proteins and the nucleolytic activity exhibited by this molecule can be further developed to investigate protein–nucleic acid interactions.

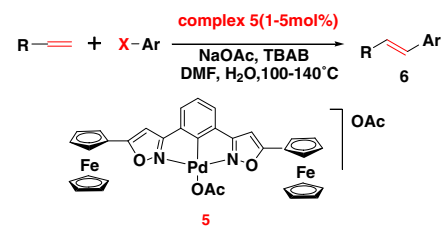


**Yong-jia Shang, Jian-wei Wu, Chen-li Fan, Jin-song Hu, Ben-ye Lu**

*J. Organomet. Chem.* 693 (2008) 2963

Synthesis of 1,3-bis-(5-ferrocenylisoxazole-3-yl) benzene-derived palladium(II) acetate complex and its application in Mizoroki–Heck reaction in an aqueous solution

The first synthesis and characterization of 1,3-bis-(5-ferrocenylisoxazole-3-yl) benzene-derived palladium(II) acetate complex were described and its application in Heck coupling reactions in an aqueous solution was studied. Complex 5 had been demonstrated to be a highly stable, active and efficient catalyst for Mizoroki–Heck coupling reactions.

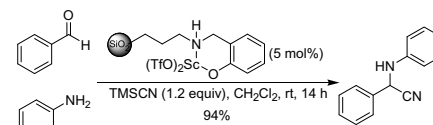


**Babak Karimi, Ali Asghar Safari**

*J. Organomet. Chem.* 693 (2008) 2967

One-pot synthesis of  $\alpha$ -aminonitriles using a highly efficient and recyclable silica-based scandium (III) interphase catalyst

Both aryl and alkyl imines, which formed in situ from aldehydes and amines undergo smooth nucleophilic addition with trimethylsilyl cyanide in the presence of a catalytic amount of a recyclable silica-based scandium (III) interphase catalyst under mild reaction condition to furnish the corresponding  $\alpha$ -aminonitriles in good to excellent yields.



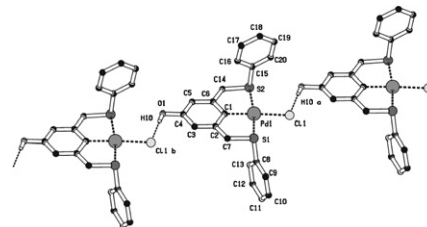
## Regular Papers

**Nilesh C. Mehendale, Martin Lutz,  
Anthony L. Spek,  
Robertus J.M. Klein Gebbink,  
Gerard van Koten**

*J. Organomet. Chem.* 693 (2008) 2971

Self-assembly of *para*-OH functionalized ECE-metallated pincer complexes

The synthesis and structural characterization of *para*-OH functionalized ECE pincer complexes are reported. These complexes were found to self-assemble by means of hydrogen bonding between the metal-halide or cationic metal fragment and the hydroxy group to form polymers or dimers, respectively.

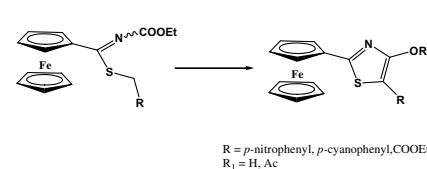


**Anna Wrona, Janusz Zakrzewski,  
Lucjan Jerzykiewicz, Keitaro Nakatani**

*J. Organomet. Chem.* 693 (2008) 2982

“Push–pull” 2-ferrocenyl-4-hydroxythiazoles: A novel method of the construction of the thiazole ring

The title compounds were obtained via cyclization of ferrocenyl thioimidates in the presence of sodium ethoxide. Compound having R = *p*-nitrophenyl and R<sub>1</sub> = Ac showed significant second-order NLO properties determined by the EFISH method.

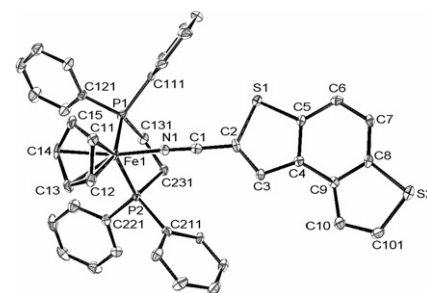


**M. Helena Garcia, Pedro Florindo,  
M. Fátima M. Piedade, M. Teresa Duarte,  
M. Paula Robalo, Jürgen Heck,  
Christian Wittenburg, Jan Holtmann,  
Emanuela Licandro**

*J. Organomet. Chem.* 693 (2008) 2987

Synthesis of organometallic Ru(II) and Fe(II) complexes containing fused rings hemi-helical ligands as chromophores. Evaluation of non-linear optical properties by HRS

A new family of η<sup>5</sup>-cyclopentadienylruthenium(II)/iron(II) complexes possessing novel benzodithiophene ligands (BDT) which planarity is guaranteed by the fused rings skeleton, is presented. Structures of [Ru(η<sup>5</sup>-C<sub>5</sub>H<sub>5</sub>)(PPh<sub>3</sub>)<sub>2</sub>(NCC<sub>10</sub>H<sub>5</sub>S<sub>2</sub>)] [PF<sub>6</sub>] (**1Ru**), [Ru(η<sup>5</sup>-C<sub>5</sub>H<sub>5</sub>)(PPh<sub>3</sub>)<sub>2</sub>(NCC<sub>10</sub>H<sub>5</sub>S<sub>2</sub>)] [CF<sub>3</sub>SO<sub>3</sub>] (**1'Ru**), [Ru(η<sup>5</sup>-C<sub>5</sub>H<sub>5</sub>)(DPPE)(NCC<sub>10</sub>H<sub>5</sub>S<sub>2</sub>)] [PF<sub>6</sub>] (**2Ru**) and [Fe(η<sup>5</sup>-C<sub>5</sub>H<sub>5</sub>)(DPPE)(NCC<sub>10</sub>H<sub>5</sub>S<sub>2</sub>)] [PF<sub>6</sub>] (**2Fe**) were determined by X-ray diffraction. Quadratic hyperpolarizabilities (β) were determined by hyper-Rayleigh scattering (HRS) at 1500 nm.

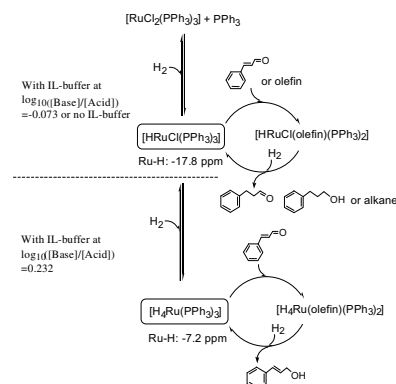


**Li Xu, Guangnan Ou, Youzhu Yuan**

*J. Organomet. Chem.* 693 (2008) 3000

Ionic liquids as acid/base buffers in non-aqueous solvents for homogeneous catalysis: A case of selective hydrogenation of olefins and unsaturated aldehyde catalyzed by ruthenium complexes

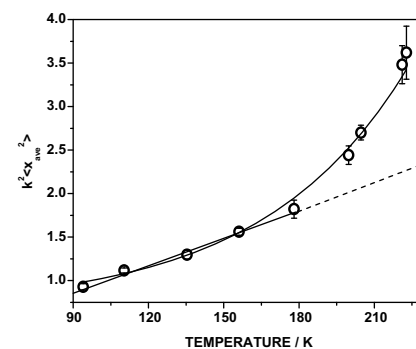
The acidity/basicity in non-aqueous and low-water media can be tuned by using a class of ionic liquids (ILs) with buffering characteristics. The hydrogenation activity and selectivity of olefins and *trans*-cinnamaldehyde catalyzed by the ruthenium complexes in non-aqueous system could be inverted by adding the different IL-buffers.



**Rolfe H. Herber, Israel Nowik***J. Organomet. Chem.* 693 (2008) 3007

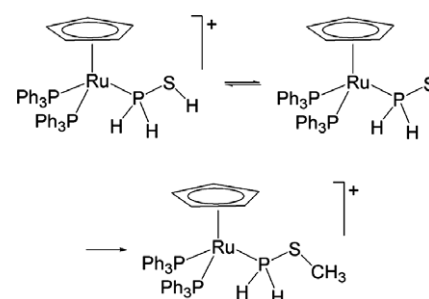
Metal atom dynamics in organometallics: Vibrational amplitude determination for bis phosphino ferrocenes including a waxy system

Three structurally related phosphino ferrocenes have been examined by temperature-dependent  $^{57}\text{Fe}$  Mössbauer effect spectroscopy to elucidate the metal atom dynamics over a temperature range.

**Massimo Di Vaira, Maurizio Peruzzini, Stefano Seniori Costantini, Piero Stoppioni***J. Organomet. Chem.* 693 (2008) 3011

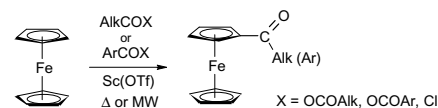
Reactivity of thiophosphinous acid bound to ruthenium

The thiophosphinous acid,  $\text{PH}_2\text{SH}$ , stabilized through coordination to the  $\text{CpRu}(\text{PPh}_3)_2$  platform, is reversibly deprotonated to yield the neutral compound  $[\text{CpRu}(\text{PPh}_3)_2(\text{PH}_2\text{S})]$ , where the thiophosphinite anion,  $\text{PH}_2\text{S}^-$ , remains bound to the metal through the phosphorus atom. The sulfur of the coordinated anion may be alkylated to yield  $[\text{CpRu}(\text{PPh}_3)_2(\text{PH}_2\text{SCH}_3)]\text{-CF}_3\text{SO}_3$ .

**Serena Berardi, Valeria Conte, Giulia Fiorani, Barbara Floris, Pierluca Galloni***J. Organomet. Chem.* 693 (2008) 3015

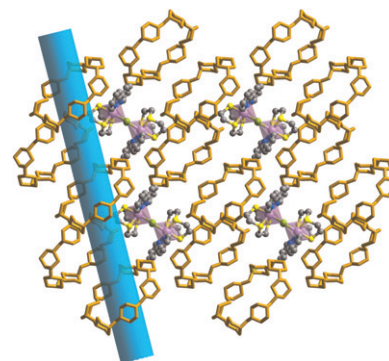
Improvement of ferrocene acylation. Conventional vs. microwave heating for scandium-catalyzed reaction in alkylmethylimidazolium-based ionic liquids

Quantitative acylation of ferrocene was achieved within minutes, with microwave irradiation, 1-butyl-3-methylimidazolium bis(trifluoromethanesulfonyl) imide as solvent, carboxylic anhydrides as acylating reagent and scandium triflate as catalyst.

**Joana Marques, Lucia Anjo, Maria P.M. Marques, Teresa M. Santos, Filipe A. Almeida Paz, Susana S. Braga***J. Organomet. Chem.* 693 (2008) 3021

Structural studies on supramolecular adducts of cyclodextrins with the complex  $[\text{Ru}(\text{[9]aneS}_3)(\text{bpy})\text{Cl}]\text{Cl}$

$[\text{Ru}(\text{[9]aneS}_3)(\text{bpy})\text{Cl}]\text{Cl}$  was immobilised in  $\beta$ -CD and TRIMEB yielding two crystalline 1:1 adducts studied by powder XRD, TGA,  $^{13}\text{C}\{^1\text{H}\}$  CP/MAS NMR, FT-IR and Raman. For  $[\text{Ru}(\text{[9]aneS}_3)(\text{bpy})\text{Cl}]\text{Cl} \cdot \text{TRIMEB}$  a channel packing mode is proposed, obtained by Monte Carlo optimisation of the XRD data.

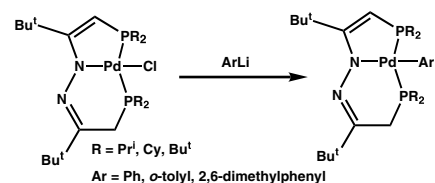


**Jan Storch, Jan Čermák, Martin Pošta,  
Jan Sýkora, Ivana Císařová**

*J. Organomet. Chem.* 693 (2008) 3029

Palladium(II) aryl-amido complexes of diphosphinoazines in unsymmetrical PNP' pincer-type configuration

Square planar palladium(II) aryl-amido complexes of diphosphinoazines in mono-anionic unsymmetrical PNP' pincer-type coordination were prepared by reactions of phenyl-, *o*-tolyl-, or 2,6-dimethylphenyllithium with previously described chloro-amido complexes of diphosphinoazines having isopropyl, cyclohexyl and *tert*-butyl substituents on phosphorus atoms. Two compounds were characterized by X-ray diffraction.

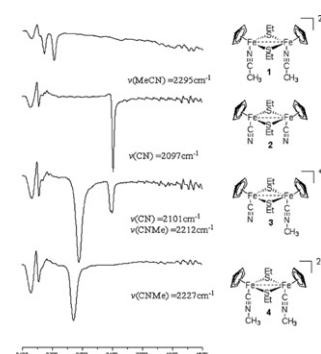


**Sodio C.N. Hsu, Yu-Chen Zheng,  
Hsing-Yin Chen, Min-Yuan Hung,  
Ting-Shen Kuo**

*J. Organomet. Chem.* 693 (2008) 3035

Synthesis, characterization, and structural study of iron–sulfur core {Cp<sub>2</sub>Fe<sub>2</sub>(μ-S<sub>2</sub>)<sub>2</sub>} complexes

The known complex [Cp<sub>2</sub>Fe<sub>2</sub>(μ-SR)<sub>2</sub>(MeCN)<sub>2</sub>](PF<sub>6</sub>)<sub>2</sub> (**1**) containing two labile MeCN ligands reacts with 2 equiv. KCN to afford a yellow complex Cp<sub>2</sub>Fe<sub>2</sub>(μ-S<sub>2</sub>Et)<sub>2</sub>(CN)<sub>2</sub> (**2**). The reaction of complex **2** with equimolar amounts of MeOTf yields a monomethylation product [Cp<sub>2</sub>Fe<sub>2</sub>(μ-S<sub>2</sub>Et)<sub>2</sub>(CN)(CNMe)](OTf) (**3**). Dimethylation of complex **2** by 2 equiv. MeOTf gives a complex [Cp<sub>2</sub>Fe<sub>2</sub>(μ-S<sub>2</sub>Et)<sub>2</sub>(CNMe)<sub>2</sub>](OTf)<sub>2</sub> (**4**).

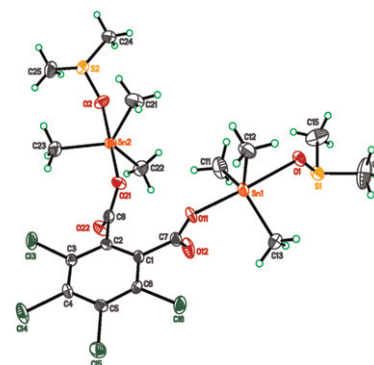


**M. Khawar Rauf,  
M. Adeel Saeed, Imtiaz-ud-Din, M. Bolte,  
A. Badshah, B. Mirza**

*J. Organomet. Chem.* 693 (2008) 3043

Synthesis, characterization and biological activities of some new organotin(IV) derivatives: Crystal structure of [(Sn Ph<sub>3</sub>)(OOC<sub>6</sub>H<sub>4</sub>OH)] and [(SnMe<sub>3</sub>)<sub>2</sub>(OOC)<sub>2</sub>C<sub>6</sub>Cl<sub>4</sub>(DMSO)<sub>2</sub>]

Some new bioactive organotin(IV) carboxylates(1–6) of substituted phenyl acids have been synthesized and were characterized by multinuclear (<sup>1</sup>H, <sup>13</sup>C, <sup>119</sup>Sn) NMR, IR spectroscopy. The structures of compound (**3**) and (**4** · 2DMSO) was also studied crystallographically describing tetrahedral and trigonal bipyramidal geometry around the Sn atoms, respectively.

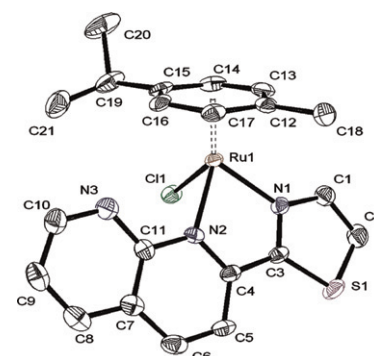


**Kota Thirumala Prasad, Bruno Therrien,  
Kollipara Mohan Rao**

*J. Organomet. Chem.* 693 (2008) 3049

Cationic half-sandwich complexes (Rh, Ir, Ru) containing 2-substituted-1,8-naphthyridine chelating ligands: Syntheses, X-ray structure analyses and spectroscopic studies

Reactions of the arene ruthenium and pentamethylcyclopentadienyl rhodium and iridium complexes with 1,8-naphthyridine substituted ligands gave the mono-nuclear cationic complexes.

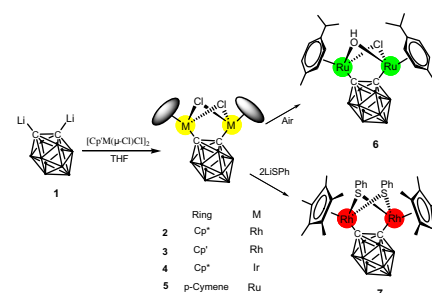


**Xin Wang, Guo-Liang Wang, Shuang Liu, Shuyi Cai, Guo-Xin Jin**

*J. Organomet. Chem.* 693 (2008) 3057

Half-sandwich binuclear carbaborane compounds: *Closo*-carbaboranes as good  $\sigma$ -donor ligands

Binuclear half-sandwich iridium, rhodium and ruthenium complexes containing Cab<sup>C,C</sup> as bidentate bridging ligand have been synthesized and characterized structurally.

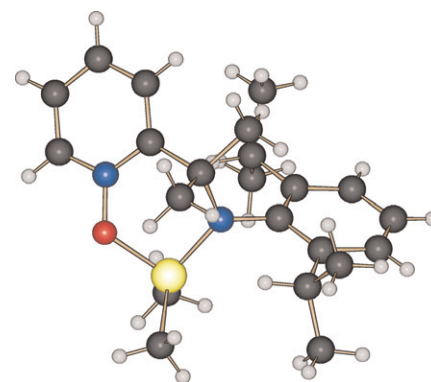


**Katrin Nienkemper, Gerald Kehr, Seda Kehr, Roland Fröhlich, Gerhard Erker**

*J. Organomet. Chem.* 693 (2008) 3063

(*N*-Arylaminomethyl)pyridine-*N*-oxides: Synthesis and characterization of potential ligand systems and the formation of their N,O-chelate aluminum complexes

A series of 2-(*N*-diisopropylphenylamino-methyl)pyridine-*N*-oxide derivatives was prepared by nucleophilic borohydride or methylaluminum addition to the corresponding (iminomethyl)pyridine-*N*-oxide precursors. Their  $\kappa$ N,O-chelate aluminum complexes were characterized by X-ray diffraction.

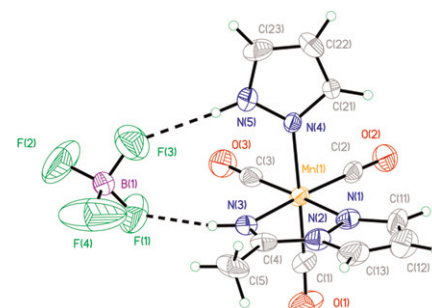


**Noelia Antón, Marta Arroyo, Patricia Gómez-Iglesias, Daniel Miguel, Fernando Villafaña**

*J. Organomet. Chem.* 693 (2008) 3074

Manganese cationic pyrazolylamidino complexes

The X-ray structures of manganese tricarbonyl cationic pyrazolylamidino complexes show moderate hydrogen bonds interactions between the anion ( $\text{BF}_4^-$  or  $\text{ClO}_4^-$ ) and the N-bond hydrogen of the pyrazolylamidino ligand and, in one case, one of the hydrogens of an aquo ligand.

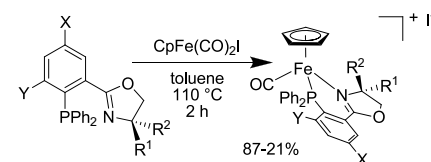


**Sergey L. Sedinkin, Nigam P. Rath, Eike B. Bauer**

*J. Organomet. Chem.* 693 (2008) 3081

Synthesis and structural characterization of new phosphinooxazoline complexes of iron

A series of new chelating phosphinooxazoline complexes of iron was synthesized and structurally characterized. Sterically and electronically tuned phosphinooxazoline were employed as ligands, and the impact of the ligand structure on the properties of the corresponding iron complexes was studied by means of IR and cyclic voltammetry.

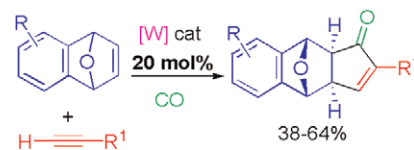


**Patricia García-García,  
Manuel A. Fernández-Rodríguez,  
Christian Rocaboy, Facundo Andina,  
Enrique Aguilar**

*J. Organomet. Chem.* 693 (2008) 3092

A sub-stoichiometric tungsten-mediated Pauson–Khand reaction: Scope and limitations

An intermolecular Pauson–Khand reaction, a [2+2+1] cycloaddition leading to cyclopentenones, is catalyzed by tungsten carbonyl complexes. Its scope and limitations are established.



**Arno Behr, Thomas Beckmann,  
Pierre Schwach**

*J. Organomet. Chem.* 693 (2008) 3097

Multiphase telomerisation of butadiene with acetic acid and acetic anhydride

Two different routes to acetoxyoctadiene are presented. The first one uses the well-known telomerisation of butadiene with acetic acid operating in a multiphase semi-batch mode. The second reaction involves the cleavage of acetic anhydride, hydrogen transfer via ketene formation and thus a telomerisation as well.

