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Volume 689, issue 17, 1 September 2004

Journal of Organo metallic Chemistry

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# Contents

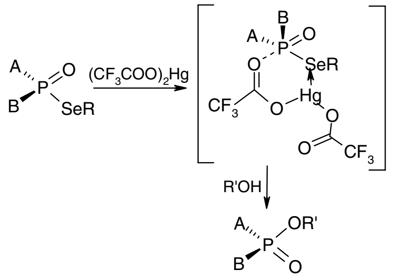
## Regular papers

**Lucyna A. Wozniak**

*J. Organomet. Chem. 689 (2004) 2745*

Mercury trifluoroacetate-catalyzed conversion of *Se*-alkyl phosphoroselenolates into the corresponding phosphates

The role of mercuric trifluoroacetate as reactive agent and activator in reactions of various *Se*-alkyl phosphoroselenoates with O- and N-nucleophiles is presented. The formation of mercury-complexed intermediates of putative mixed anhydride-like structure is indicated.

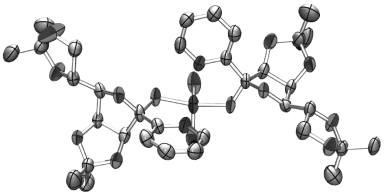


**Jörg Fridgen, Wolfgang A. Herrmann, Georg Eickerling, Ana M. Santos, Fritz E. Kühn**

*J. Organomet. Chem. 689 (2004) 2752*

Molybdenum(VI)-complexes with chiral *N*,*O*-ligands derived from carbohydrates: synthesis, structure and catalytic properties in asymmetric olefin epoxidation

Novel chiral 2′-pyridinyl alcohols derived from isopropylidene-protected carbohydrates are reported. They show different characteristics at the hydroxy group, but are all suitable ligands for chiral molybdenum(VI) complexes of the type $MoO_2L_2$ (L = chiral 2′-pyridinyl alcoholate). $MoO_2$-$(acac)_2$ served as starting material in the complex syntheses.

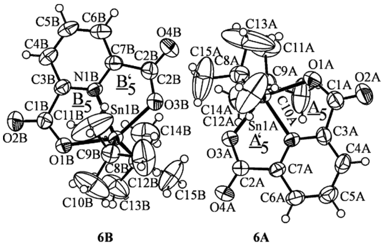


**Attila Szorcsik, László Nagy, Andrea Deák, Michelangelo Scopelliti, Zoltán A. Fekete, Ágota Császár, Claudia Pellerito, Lorenzo Pellerito**

*J. Organomet. Chem. 689 (2004) 2762*

Preparation and structural studies on the $^t$Bu$_2$Sn(IV) complexes with aromatic mono- and dicarboxylic acids containing hetero {N} donor atom

Nine $^t$BuSn(IV) complexes formed with ligands containing –COOH group(s) and aromatic {N} donor atom were prepared in the solid state. One complex was obtained as single crystals. The X-ray diffraction studies show, that the tin central atoms are in slightly distorted square pyramidal (SP) surrounding, with bond distances characteristic for organotin(IV) compounds.



Elsevier B.V.
doi:10.1016/S0022-328X(04)00506-6

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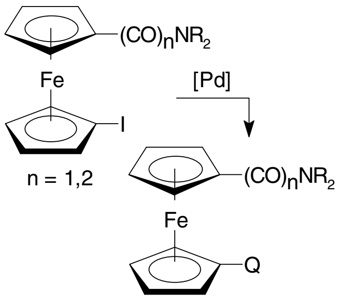
**Zsolt Szarka, Árpád Kuik,**
**Rita Skoda-Földes, László Kollár**

*J. Organomet. Chem. 689 (2004) 2770*

Aminocarbonylation of 1,1′-diiodoferrocene, two-step synthesis of heterodisubstituted ferrocene derivatives via homogeneous catalytic carbonylation/coupling reactions

1′-Iodo-ferrocenecarboxamide- or 1′-iodo-ferroceneglyoxylic amide-type products were isolated from the reaction mixtures produced via palladium-catalysed aminocarbonylation of 1,1′-diiodoferrocene under CO pressure. The products were successfully used as substrates in palladium-catalysed aminocarbonylation, coupling and carbonylative coupling reactions.



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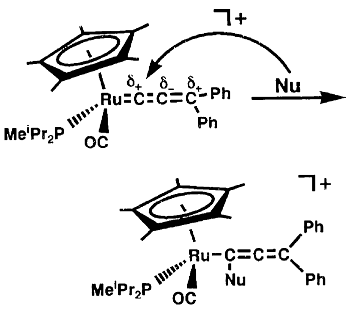
**Manuel Jiménez-Tenorio,**
**M. Dolores Palacios, M. Carmen Puerta,**
**Pedro Valerga**

*J. Organomet. Chem. 689 (2004) 2776*

Nucleophilic addition reactions to the allenylidene complex $[Cp^*Ru{=}C{=}C{=}CPh_2(CO)(PMe^iPr_2)]^+$: X-ray crystal structures of $[Cp^*Ru\{C(N{=}CPh_2)CH{=}CPh_2\}(CO)(PMe^iPr_2)][BAr'_4]$, $[Cp^*Ru\{C(NH_2C{\equiv}CH)CH{=}CPh_2\}(CO)(PMe^iPr_2)][BAr'_4]$, $[Cp^*Ru\{C(PMe^iPr_2)C{=}CPh_2\}(CO)(PMe^iPr_2)][BAr'_4]$ and $[Cp^*Ru\{C(S^nPr)CH{=}CPh_2\}(CO)(PMe^iPr_2)]$ $[BAr'_4]$

The allenylidene complex $[Cp^*Ru{=}C{=}C{=}CPh_2(CO)(PMe^iPr_2)][BAr'_4]$ (**1**) reacts with benzophenoneimine yielding the azaallenyl derivative $[Cp^*Ru\{C(N{=}CPh_2)CH{=}CPh_2\}(CO)(PMe^iPr_2)][BAr'_4]$ (**2**).



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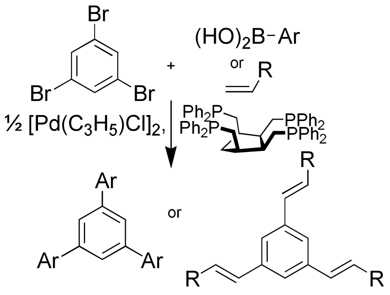
**Florian Berthiol, Isabelle Kondolff,**
**Henri Doucet, Maurice Santelli**

*J. Organomet. Chem. 689 (2004) 2786*

Reaction of aryl di-, tri-, or tetrabromides with arylboronic acids or alkenes in the presence of a palladium-tetraphosphine catalyst

*Cis,cis,cis*-1,2,3,4-tetrakis(diphenylphosphinomethyl)cyclopentane/$\frac{1}{2}[PdCl(C_3H_5)]_2$ system catalyses the Suzuki and Heck reactions of aryl di-, tri-, or tetrabromides with a range of arylboronic acids or alkenes with medium to high ratio substrate/catalyst in good yields.



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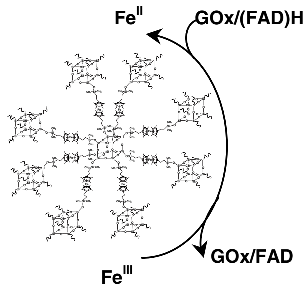
**J. Losada, M.P. Garća Armada, I. Cuadrado,**
**B. Alonso, B. González, C.M. Casado,**
**J. Zhang**

*J. Organomet. Chem. 689 (2004) 2799*

Ferrocenyl and permethylferrocenyl cyclic and polyhedral siloxane polymers as mediators in amperometric biosensors

Cyclosiloxane and silsesquioxane-based ferrocenyl and permethylferrocenyl polymers have been used as mediators in amperometric enzyme electrodes for the detection of glucose. The dependence of the sensors response on the structure of the siloxane-framework and on the presence or not of methyl groups on the ferrocenyl units is discussed.

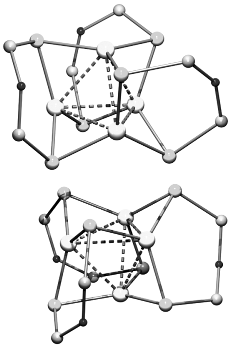


**Huizhang Liu, Nuno A.G. Bandeira, Maria José Calhorda, Michael G.B. Drew, Vitor Félix, Josef Novosad, Fabrizia Fabrizi de Biani, Piero Zanello**

*J. Organomet. Chem. 689 (2004) 2808*

Cu(I) and Ag(I) complexes of chalcogenide derivatives of the organometallic ligand dppf and the dppa analogue

Short SeSe contacts in the solid state are observed between adjacent $[Cu_4\{Ph_2P(Se)NP(Se)Ph_2\}_3]^+$ clusters units, but not for the S analogue. They correspond to weak bonds according to DFT calculations performed on suitable models.



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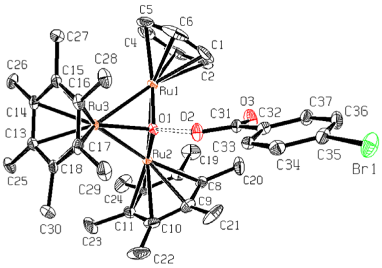
**Bruno Therrien, Ludovic Vieille-Petit, Georg Süss-Fink, Yoshihisa Sei, Kentaro Yamaguchi**

*J. Organomet. Chem. 689 (2004) 2820*

Hydrogen-bonded systems between monocarboxylic acids and the trinuclear cluster cation $[H_3Ru_3(C_6H_6)(C_6Me_6)_2(O)]^+$: cold-spray ionisation mass spectroscopic and X-ray crystallographic studies

The hydrogen-bonded systems formed between monocarboxylic acid derivatives and the trinuclear arene–ruthenium cluster cation $[H_3Ru_3(C_6H_6)(C_6Me_6)_2(O)]^+$ have been studied in solution by cold-spray ionisation mass spectroscopy (CSI-MS) and in the solid state by single-crystal X-ray structure analysis. The presence of 1:1 (acid:cluster) adducts in solution has been clearly demonstrated by CSI-MS. Single-crystal X-ray structure analyses of selected complexes show that the acid function interacts strongly with the $\mu_3$-oxo ligand.



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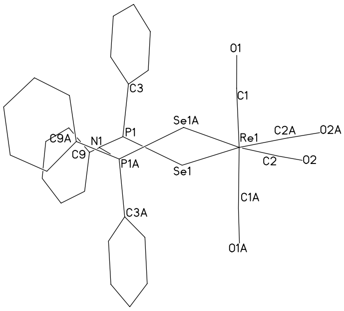
**Noé Zñiga-Villarreal, Juan Manuel Germán-Acacio, Ana Adela Lemus-Santana, Marisol Reyes-Lezama, Rubén A. Toscano**

*J. Organomet. Chem. 689 (2004) 2827*

Six-membered tetracarbonylmanganese(I) and -rhenium(I) metalacycles containing the $[Ph_2P(Se)NP(Se)Ph_2]$ ligand: solution and solid state characterization

The halocarbonyls $BrM(CO)_5$, M =Mn and Re, were reacted with the $KN(SePPh_2)_2$ salt in equimolar amounts; the reactions were thermally carried out and resulted in the generation of the hexacoordinated isostructural complexes $[M(CO)_4\{Ph_2P(Se)NP(Se)Ph_2\text{-}Se,Se'\}]$.



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**Takashi Mino, Hiroshi Segawa, Masakazu Yamashita**

*J. Organomet. Chem. 689 (2004) 2833*

Palladium-catalyzed asymmetric allylic alkylation using chiral hydrazone ligands with ferrocene skeleton

Chiral phosphine–hydrazones **3** were easily prepared from 1′-(diphenylphosphino)-1-ferrocenecarboxaldehyde with chiral hydradines. Palladium-catalyzed asymmetric allylic alkylation of 1,3-diphenyl-2-propenyl acetate (**4**) with a various malonate–BSA–LiOAc system has been successfully carried out in the presence of **3a** in good yields with good enantioselectivities (up to 84% ee).