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# Journal of Organometallic Chemistry

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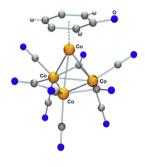
# **Contents**

#### COMMUNICATIONS

#### Shubhankar Kumar Bose, K. Geetharani, Sundargopal Ghosh

J. Organomet. Chem. 695 (2010) 2567

Reaction of  $[(CpV)_2(B_2H_6)_2]$  with four equivalents of  $[Co_2(CO)_8]$  or  $[Co_4(CO)_{12}]$  in hexane at  $70\,^{\circ}\text{C}$  yielded tetranuclear carbonyl cluster,  $[(\eta^6\text{-}C_6H_5OCo)Co_3(CO)_9]$ , which demonstrates the Cp ring exchange from  $[(CpV)_2(B_2H_6)_2]$  to  $[Co_4(CO)_{12}]$ , followed by ring expansion by CO insertion.



#### B. Krishnakumar, M. Swaminathan

J. Organomet. Chem. 695 (2010) 2572

Biologically active quinoxalines and dipyridophenazines were efficiently synthesized in excellent yield and less reaction time using inexpensive, easily recyclable TiO<sub>2</sub>-P25-SO<sub>4</sub><sup>2</sup>. Synthesis of quinoxalines with this catalyst can also be carried out in water.

# REGULAR PAPERS

# Gustavo F. Silbestri, Marcos J. Lo Fiego, María T. Lockhart, Alicia B. Chopa

J. Organomet. Chem. 695 (2010) 2578

A selective two-step synthesis of either mono- or distannylated pyridines from commercially available pyridinols, involving its conversion to the corresponding pyridyl diethyl phosphates (PyDEP) followed by the reaction with Me<sub>3</sub>SnNa in liquid ammonia, is described. The results obtained clearly indicate that the reactions proceed through an  $S_{\rm RN}1$  mechanism with intermediacy of a monosubstitution product.

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#### Tatyana P. Gryaznova, Sergey A. Katsyuba, Vasiliy A. Milyukov, Oleg G. Sinyashin

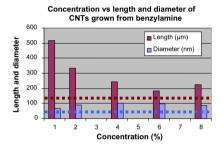
J. Organomet. Chem. 695 (2010) 2586

Influence of methyl substituents in the cyclopentadienyl ring on structures, IR spectra, metal—ligand bonding and spin state of ferrocenes and pentaphosphaferrocenes, as well as stability of the pentaphosphaferrocenes towards disproportionation to homoleptic sandwich complexes is studied with the use of DFT computations.

# Edward N. Nxumalo, Phatu J. Letsoalo, Leskey M. Cele, Neil J. Coville

J. Organomet. Chem. 695 (2010) 2596

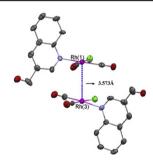
The amount of N in a nitrogen containing reagent is more important than the source and type of the N atoms used as revealed by trends in the morphology (diameter, length) of N-CNTs.



# Podma Pollov Sarmah, Biswajit Deb, Bibek Jyoti Borah, Amy L. Fuller, Alexandra M.Z. Slawin, J. Derek Woollins, Dipak Kumar Dutta

J. Organomet. Chem. 695 (2010) 2603

Four new rhodium carbonyl complexes of quinoline and its carboxaldehyde ligands like quinoline-2-carboxaldehyde, quinoline-3-carboxaldehyde and quinoline-4-carboxaldehyde have been synthesized. The complexes exhibit a significantly higher catalytic activity in the carbonylation of methanol to acetic acid and methyl acetate compared to the well known Monsanto's species  $[Rh(CO)_2l_2]^-$ .



#### H. Bera, H. Braunschweig, A. Oechsner, F. Seeler, R. Sigritz

J. Organomet. Chem. 695 (2010) 2609

Here we report the synthesis and crystal structure of a new [2]ferrocenophane [Fe- $(\eta^5-C_5H_4)_2(SntBu_2)_2$ ] with a sterically demanding distannanediyl bridge. The reactivity of the title compound towards selected main group elements was examined and in addition, this reactivity pattern was established for the related diboranediyl bridged [2]ferrocenophane [Fe( $\eta^5$ - $C_5H_4)_2(BNMe_2)_2$ ].

Contents

#### Steffen Falgner, Ginka Buchner, Reinhold Tacke

J. Organomet. Chem. 695 (2010) 2614

An efficient, convenient, and reliable multistep synthesis of rac-2'-(trimethylsilyl)isovaline (rac-3) that uses inexpensive reagents in all steps has been developed, starting from diethyl malonate (overall yield 28%). Compound rac-3 is the first  $\alpha$ -ethylated  $\alpha$ , $\alpha$ -dialkylated silicon-containing  $\alpha$ -amino acid.

#### Jie Li, Martin Lutz, Anthony L. Spek, Gerard P.M. van Klink, Gerard van Koten, Robertus J.M. Klein Gebbink

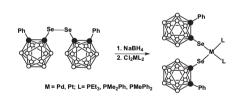
J. Organomet. Chem. 695 (2010) 2618

A triad of novel phosphite Pd complexes derived from 2,2'-biphenol-based phosphites were synthesized. The application of a novel phosphite pincer Pd complex as pre-catalyst in C-P cross-coupling reactions of diphenylphosphine-borane with various aryl iodides is reported with a wide functional group tolerance and moderate to excellent isolated yields.

# Manoj K. Pal, Vimal K. Jain, Nisha P. Kushwah, Amey Wadawale, Sergey A. Glazun, Zoya A. Starikova, Vladimir I. Bregadze

J. Organomet. Chem. 695 (2010) 2629

The reactions of PhCb°SeNa (Cb° = o-C\_2B\_{10}H\_{10}), with Na\_2PdCl\_4, MCl\_2(PR\_3)\_2 and [M\_2Cl\_2(\mu-Cl)\_2(PR\_3)\_2] afforded a variety of complexes, viz., [Pd(SeCb°Ph)Cl]\_n, [M(SeCb°Ph)\_2(PR\_3)\_2], [M\_2Cl\_2(\mu-SeCb°Ph)(\mu-Cl) (PR\_3)\_2] (M = Pd, Pt) and [Pd\_2Cl(SeCb°Ph)(\mu-Cl)(\mu-SeCb°Ph)(PEt\_3)\_2]. The latter represents the first example of asymmetric coordination of selenolate ligands in binuclear bis chalcogenolate complexes of palladium and platinum. Thermolysis of [Pd (SeCb°Ph)\_2(PEt\_3)\_2] in HDA (hexadecylamine) at 330 °C gave nano-crystals of Pd\_{17}Se\_{15}.



# K. Durka, J. Górka, P. Kurach, S. Luliński, J. Serwatowski

J. Organomet. Chem. 695 (2010) 2635

Novel functionalized iodophenylboronic acids were prepared by the *ipso*-desilylation protocols starting with silylated arylboronic acids.

X = F, Cl, Br, CF<sub>3</sub>, CN, CHO, OMe, B(OH)<sub>2</sub>

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## J.W. Faller, Tracey Friss, Jonathan Parr

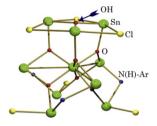
J. Organomet. Chem. 695 (2010) 2644

Hemilability and nonrigidity in a series of mixed  $P^{\wedge}P = E$  donor ligands where E = O, S, or Se have been studied in palladium and platinum complexes of the type [M  $\{\kappa^2 - (\text{dimethylamino}) \text{ethylnaphthyl-}C, N)\}$   $(P^{\wedge}P = E)$  [[SbF<sub>6</sub>] where  $P^{\wedge}P = E = Ph_2PCH_2P$  (E)Ph<sub>2</sub>. The role of the donor in hemilability, regioselectivity and the binding preferences of particular donors trans to the metallated carbon atom were investigated.

#### Zdeňka Padělková, Aleš Havlík, Petr Švec, Mikhail S. Nechaev, Aleš Růžička

J. Organomet. Chem. 695 (2010) 2651

Aminotin(II and IV) compounds containing  $[(2,6-i-Pr-C_6H_3)(H)N]$ — and  $\{2-[(CH_3)_2NCH_2]C_6H_4\}$ —ligands were prepared and structurally characterized. The unique dekatin cluster has been isolated by hydrolysis of  $\{[(2,6-i-Pr-C_6H_3)(H)N]-\mu-(Sn)-Cl\}_2$ .



# Abha A. Kaisare, Samuel B. Owens, Jr., Edward J. Valente, Gary M. Gray

J. Organomet. Chem. 695 (2010) 2658

A conformationally restrained bis(phosphite) ligand derived from 1,2-bis-(2-hydroxy ethoxy)benzene,  $\{[(2,2'-O_2C_{12}H_8)P(C_2H_4O_2)]_2C_6H_4\}$  has been synthesized and its Rh(I) metallacrown ether complex has been investigated as a catalyst for the hydroformylation of styrene in the presence and absence of LiBPh $_4$ ·3dme.

# Thomas Reiner, Markus Waibel, Alexander N. Marziale, Dominik Jantke, Florian J. Kiefer, Thomas F. Fässler, Jörg Eppinger

J. Organomet. Chem. 695 (2010) 2667

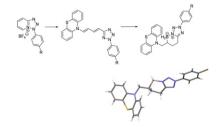
Conversion of dihydrophenyl derivatives with MCl<sub>3</sub>·n H<sub>2</sub>O (M = Ru, Os) is known to afford the corresponding dimeric  $\eta^6$ -arene complexes. Using a new, non-acidic protocol, several new members of this class of compounds including the first examples of  $\eta^6$ -arene complexes of Osmium with a pendant donor functionality were synthesized.

$$\begin{array}{c|c} 2 & & & & & & & & & & & & \\ \hline R = (CH_2)_3OH & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & \\ &$$

#### Daniella Takács, Péter Király, Ildikó Nagy, Petra Bombicz, Orsolya Egyed, Zsuzsanna Riedl, György Hajós

I. Organomet. Chem. 695 (2010) 2673

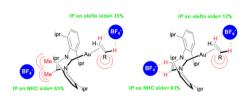
Phenothiazinyldienes obtained from tetrazolopyridinium salts and phenothiazine derivatives were subjected to reduction by borane—dimethyl sulfide in THF. Structure elucidation of the products revealed that derivatives of tetrazolo[5,1-f][1,2]azaborinin as a new fused ring system involving a bridge-head nitrogen atom have been formed.



# Nicola Salvi, Leonardo Belpassi, Daniele Zuccaccia, Francesco Tarantelli, Alceo Macchioni

J. Organomet. Chem. 695 (2010) 2679

The relative anion—cation orientation in a series of  $[(NHC)Au(alkene)]BF_4$  complexes has been investigated by interionic NOE NMR studies and theoretical DFT calculations of the Coulomb potential. Two main orientations have been observed (NHC-side) and olefin-side) whose abundances are finely tuned by the nature of the NHC-ligand.



#### Pradeep Mathur, Raj Kumar Joshi, Badrinath Jha, Amrendra K. Singh, Shaikh M. Mobin

J. Organomet. Chem. 695 (2010) 2687

Photolytic reaction of terminal acetylenes, alcohols and carbon monoxide, in presence of catalytic amount of iron pentacarbonyl, results in the formation of  $\alpha,\beta$ -vinylesters and alkoxy derivatives of  $\gamma$ -lactones. Selectivity of the products depends on the time of photolysis and solvent used.

