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Communication

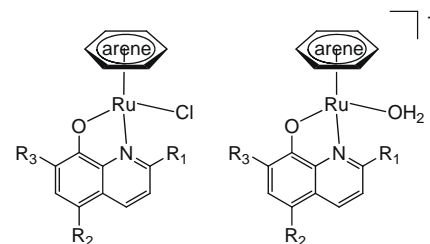
**Trieu-Tien Thai, Bruno Therrien,
Georg Süß-Fink**

J. Organomet. Chem. 694 (2009) 3973

Arene ruthenium oxinato complexes: Synthesis, molecular structure and catalytic activity for the hydrogenation of carbon dioxide in aqueous solution

Arene ruthenium oxinato complexes of the types $[(\eta^6\text{-arene})\text{Ru}(\eta^2\text{-}N,O\text{-}L)\text{Cl}]$ and $[(\eta^6\text{-arene})\text{Ru}(\eta^2\text{-}N,O\text{-}L)(\text{OH}_2)]^+$ have been synthesized from the dinuclear precursors

$[(\eta^6\text{-arene})\text{RuCl}_2]_2$ (arene = *para*-cymene or hexamethylbenzene) and the corresponding oxine LH (LH = 8-hydroxyquinoline, 5-chloro-8-hydroxyquinoline, 5,7-dichloro-8-hydroxyquinoline, 5-nitro-8-hydroxyquinoline, 5,7-dimethyl-8-hydroxyquinoline, 5,7-dichloro-2-methyl-8-hydroxyquinoline). The X-ray crystal structure analyses show these complexes to have a piano-stool geometry with the arene ligand, the chelating oxinato ligand and the chloro or the aqua ligand surrounding the ruthenium center in a pseudo-tetrahedral fashion.



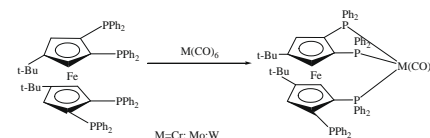
Review

**Aurelia Pascariu, Smaranda Iliescu,
Adriana Popa, Gheorghe Iliu**

J. Organomet. Chem. 694 (2009) 3982

Polydentate phosphines

Polyphosphine compounds are very interesting and useful species in various areas of application. Polyphosphines have been proven to be versatile ligands in inorganic and organometallic chemistry. The transition metal derivatives having as ligand polydentate phosphines continue to catch the attention because of their potential for the formation of metal cluster or for use as catalysts.



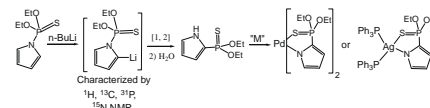
Regular Papers

**Sabrina Marie, Martin Lutz,
Anthony L. Spek,
Robertus J.M. Klein Gebbink,
Gerard van Koten, Nelly Kervarec,
François Michaud, Jean-Yves Salaün,
Paul-Alain Jaffrès**

J. Organomet. Chem. 694 (2009) 4001

Application of a base-induced [1,2]-rearrangement to synthesize thiophosphonate bidentate $S(\text{sp}^2)\text{-N}$ monoanionic ligand: Characterization of its silver and palladium complexes

New bidentate $S(\text{sp}^2)\text{-N}$ monoanionic ligand is obtained by a base-induced [1,2] phospho-Fries rearrangement whose reactional intermediates have been characterized by low temperature NMR. The coordination of this ligand to silver or palladium has been studied.

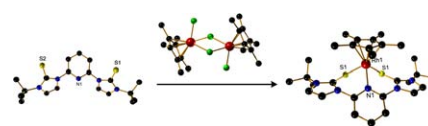


**Wei-Guo Jia, Yuan-Biao Huang,
Guo-Xin Jin**

J. Organomet. Chem. 694 (2009) 4008

Synthesis, characterization of novel half-sandwich iridium and rhodium complexes containing neutral pyridine-based organochalcogen ligands

A series of half-sandwich iridium(III) and rhodium(III) complexes containing neutral pyridine-based organochalcogen ligands have been synthesized and characterized structurally. (Ir or Rh red; S yellow; N blue; C black; Cl green).

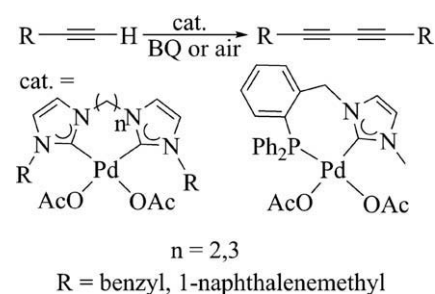


**Tsun-Hung Hsiao, Tzu-Liang Wu,
Sandipan Chatterjee, Chin-Yi Chiu,
Hon Man Lee, Lorenzo Bettucci,
Claudio Bianchini, Werner Oberhauser**

J. Organomet. Chem. 694 (2009) 4014

Palladium acetate complexes bearing chelating *N*-heterocyclic carbene (NHC) ligands: Synthesis and catalytic oxidative homocoupling of terminal alkynes

Palladium acetate complexes bearing chelating (NHC) ligands have been synthesized, characterized and tested in oxidative homocoupling reactions of terminal alkynes in the presence of *p*-benzoquinone or air pressure. The bite angle of the chelating carbene in the precursor has shown to influence its catalytic activity.

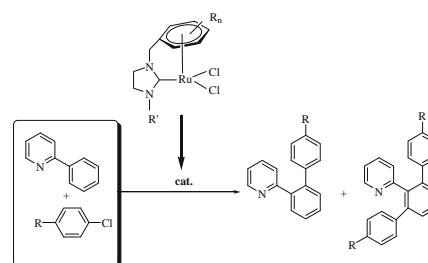


**Serpil Demir, Ismail Özdemir,
Bekir Çetinkaya**

J. Organomet. Chem. 694 (2009) 4025

Synthesis and catalytic properties of novel ruthenium *N*-heterocyclic-carbene complexes

$[\text{RuCl}_2(p\text{-cymene})]_2$ with 1,3-dialkylimidazolium salts, in the presence of a small excess of cesium carbonate yields chelated $\eta^6\text{-arene}$, $\eta^1\text{-carbene}$ ruthenium complexes. The catalytic activity of $\text{RuCl}_2(\eta^6\text{-arene}, \eta^1\text{-imidazolinyldiene})$ complexes was evaluated in the direct arylation of 2-phenylpyridine with chlorobenzene derivatives.

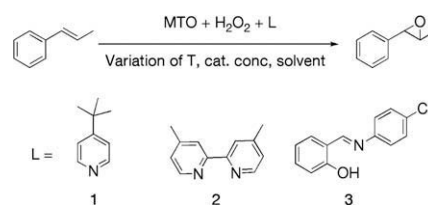


Philipp Altmann, Fritz E. Kühn

J. Organomet. Chem. 694 (2009) 4032

Methyltrioxorhenium catalysed epoxidations: A comparative study of different *N*-donor ligands

The effect of different *Lewis*-base adducts (pyridine derivatives, *Schiff*-bases) of methyltrioxorhenium (MTO) on the efficiency as catalysts of the epoxidation of *trans*- β -methylstyrene and *cis*-cyclooctene was studied. Further, the catalysis conditions were optimised by varying (a) the catalyst and *Lewis*-base concentration, (b) the reaction temperature and (c) the solvent.

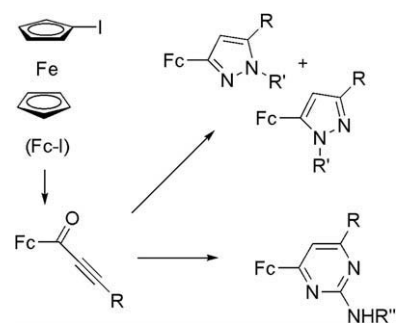


Csaba Fehér, Árpád Kuik, László Márk, László Kollár, Rita Skoda-Földes

J. Organomet. Chem. 694 (2009) 4036

A two-step synthesis of ferrocenyl pyrazole and pyrimidine derivatives based on carbonylative Sonogashira coupling of iodoferrocene

A new method for the synthesis of 3-substituted-1-ferrocenyl-2-propyn-1-ones was developed involving carbonylative Sonogashira coupling of iodoferrocene with terminal acetylenes. New ferrocenyl 1,3,5-trisubstituted pyrazoles and 2,4,6-trisubstituted pyrimidines were obtained by the addition-cyclocondensation reaction of the alkynones with hydrazines and guanidium salts, respectively.

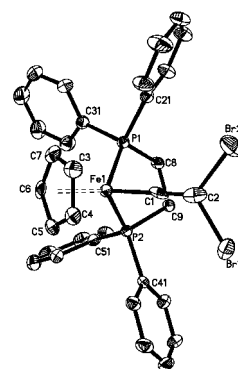


Neil J. Brown, Mark A. Fox, Mark E. Smith, Dmitry S. Yufit, Judith A.K. Howard, Paul J. Low

J. Organomet. Chem. 694 (2009) 4042

The syntheses and structures of mono- and di-bromovinylidenes

Reaction of metal acetylide and vinylidene complexes with cyanogen bromide has given access to bromovinylidene complexes, including the first examples of compounds containing a terminal dihalovinylidene ligand.

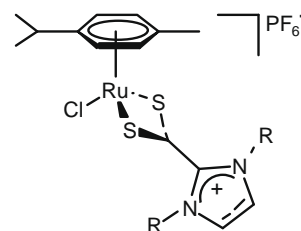


Quentin Willem, François Nicks, Xavier Sauvage, Lionel Delaude, Albert Démonceau

J. Organomet. Chem. 694 (2009) 4049

Ruthenium–arene complexes bearing imidazol(in)ium-2-dithiocarboxylate ligands: Evaluation of their catalytic activity in the synthesis of enol esters

Ruthenium–arene complexes bearing imidazol(in)ium-2-dithiocarboxylate ligands catalyze the synthesis of enol esters from carboxylic acid and terminal alkynes. The catalytic activity was improved significantly under microwave heating or conventional heating in a sealed tube at 160 °C, driving the reaction to completion in less than 4 h of reaction.

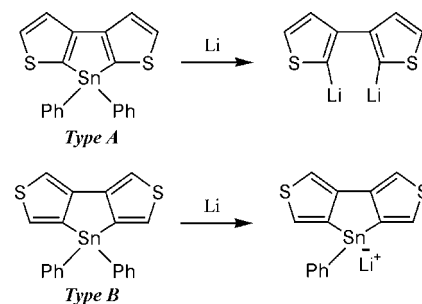


Masaichi Saito, Munenori Shiratake, Tomoyuki Tajima, Jing Dong Guo, Shigeru Nagase

J. Organomet. Chem. 694 (2009) 4056

Synthesis and structure of the dithienostannole anion

Novel dithienostannoles were synthesized by the reactions of the corresponding dilithiobithiophenes with dichlorodiphenylstannane. A unique byproduct, 10-membered ring compound was also obtained. Reduction of type A dithienostannole with lithium afforded 2,2'-dilithio-3,3'-bithiophene, while reduction of type B dithienostannole with lithium afforded the corresponding dithienostannole anion.

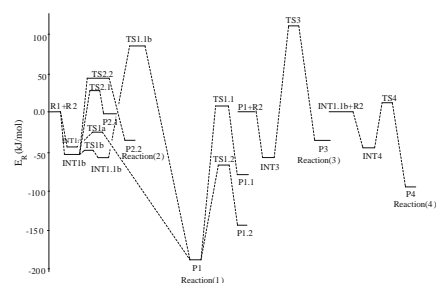


**Xiu-Hui Lu, Yue-Hua Xu, Le-Yi Shi,
Jun-Feng Han, Zhen-Xia Lian**

J. Organomet. Chem. 694 (2009) 4062

Theoretical study on the mechanism of cycloaddition reaction between dimethyl germylidene and formaldehyde

The potential energy surface for the cycloaddition reactions between dimethyl germylidene and formaldehyde with CCSD (T)//MP2/6-31G* method. On the basis of the potential energy surface, we can predicted reactions (3) and (4) $[R1 + R2 \rightarrow INT1a \xrightarrow{TS1a} P1 \xrightarrow{R2} INT3; R1 + R2 \rightarrow INT1b \xrightarrow{TS1b} INT1.1b \xrightarrow{R2} INT4 \xrightarrow{TS4} P4]$ is dominant reaction pathways of the cycloaddition reaction between singlet dimethyl germylidene and formaldehyde.

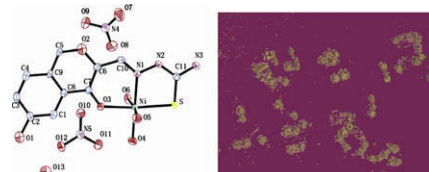


**Bao-dui Wang, Zheng-Yin Yang,
Ming-hua Lü, Jun Hai, Qin Wang,
Zhong-Ning Chen**

J. Organomet. Chem. 694 (2009) 4069

Synthesis, characterization, cytotoxic activity and DNA binding Ni(II) complex with the 6-hydroxy chromone-3-carbaldehyde thiosemicarbazone

A novel chromone thiosemicarbazone and its Ni(II) complex were synthesized and characterized. The DNA binding mode of complex and ligand with CT-DNA were also studied via spectra and viscosity measurement. The inhibition experiment results of the complex and ligand to HeLa, Raji and Thp-1 cancer cell lines suggested that the complex exhibits significant anticancer activity.

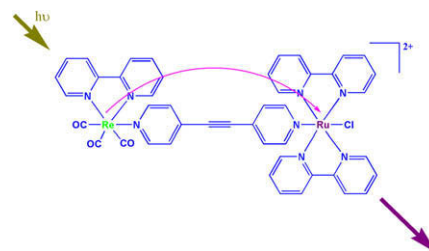


**Murugesan Velayudham,
Subramanian Singaravelu,
Seenivasan Rajagopal,
Perumal Ramamurthy**

J. Organomet. Chem. 694 (2009) 4076

Synthesis, characterization and photophysics of alkyne bridged bimetallic rhenium(I) and ruthenium(II) complexes

Six new homobimetallic and heterobimetallic complexes of rhenium(I) and ruthenium(II) bridged by ethynylene spacer are synthesized and characterized. The electrochemical and photophysical properties of all the complexes are studied. In Re–Ru heterobimetallic complexes, intramolecular energy transfer from *Re(I) to Ru(II) is observed.

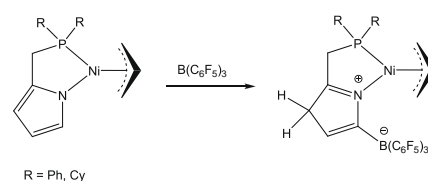


**Lewis M. Broomfield, David Boschert,
Joseph A. Wright, David L. Hughes,
Manfred Bochmann**

J. Organomet. Chem. 694 (2009) 4084

Synthesis of neutral and zwitterionic phosphinomethylpyrrolato complexes of nickel

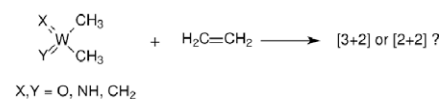
Nickel allyl complexes of new 2-phosphinomethyl-1H-pyrrolato ligands have been prepared. Activation with $B(C_6F_5)_3$ leads to electrophilic attack in 5-position of the pyrrole ring, to give the thermally unstable zwitterions which catalyse the isomerisation if 1-hexene.



Robin Haunschild, Gernot Frenking*J. Organomet. Chem.* 694 (2009) 4090

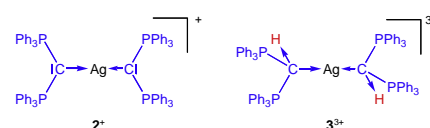
Comparative theoretical study of [3+2] and [2+2] cycloadditions of ethylene and $WXYMe_2$; X, Y = (=O), (=NH), (=CH₂)

Quantum chemical calculations using DFT at the B3LYP level show that the addition reaction of ethylene to $WXYMe_2$ where X, Y = (=O), (=NH), (=CH₂) are further examples where a [2+2] addition is kinetically preferred over a [3+2] addition.

**Wolfgang Petz, Florian Öxler, Bernhard Neumüller***J. Organomet. Chem.* 694 (2009) 4094

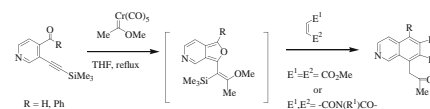
Syntheses and crystal structures of linear coordinated complexes of Ag^+ with the ligands $C(PPh_3)_2$ and $(HC(PPh_3)_2)^+$

The double ylide $C(PPh_3)_2$ (**1**) has two lone pairs of free electrons and reacts with AgX (X = Cl, BF_4) in THF to afford the cationic complex [**2**]⁺ in which **1** acts as a two electron donor. The deprotonated complex [**3**]³⁺, where **1** provides four electrons, results upon reaction of the salt (H**1**) BF_4 with $AgBF_4$. In both complexes a linear C–Ag–C array is achieved as proved by X-ray analyses.

**Soumita Mukherjee, Gouranga P. Jana, Binay K. Ghorai***J. Organomet. Chem.* 694 (2009) 4100

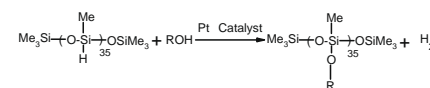
Synthesis of isoquinolines through the coupling of Fischer carbene complexes with *o*-alkynylpyridine carbonyl derivatives

The reaction of Fischer carbene complex with *o*-alkynylpyridine carbonyl derivatives has been investigated. The reaction initially affords furo[3,4-*c*]pyridine as transient intermediates, which can be trapped by suitable dienophiles to afford isoquinoline derivatives.

**Kazem D. Safa, Shahin Tofangdarzadeh, Akbar Hassanpour***J. Organomet. Chem.* 694 (2009) 4107

Facile route to synthesis of functionalised poly(methylalkoxy)siloxane under mild and aerobic conditions in the presence of platinum catalysts

A facile and high yield method of synthesis of novel and functional poly(methylalkoxy)siloxanes is reported. The Si–H groups of poly(methylhydrogen)siloxanes (PMHS) were treated with various simple (primary, secondary, tertiary) and functional alcohols (1a–20a) in the presence of platinum based catalysts (Speier and Karstedt catalysts).

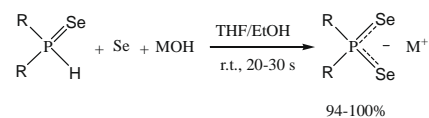


**Boris A. Trofimov, Alexander V. Artem'ev,
Svetlana F. Malysheva, Nina K. Gusarova**

J. Organomet. Chem. 694 (2009) 4116

Reaction of secondary phosphine selenides with the system Se/MOH (M = Li, Na, K, Rb, Cs): A novel three-component synthesis of diorganodiselenophosphinates

Secondary phosphine selenides, $R_2P(Se)H$ (R = PhCH₂CH₂, PhCH(Me)CH₂, 4-*t*-BuC₆H₄CH₂CH₂, NaphthylCH₂CH₂, Ph), react with the system Se/MOH (M = Li, Na, K, Rb, Cs) in the system THF/EtOH at ambient temperature unusually fast (20–30 s) to give cleanly and almost quantitatively (94–100% yield) earlier unknown diorganodiselenophosphinates of alkali metals.



R = Ph, Ph(CH₂)₂, 4-*t*-BuC₆H₄(CH₂)₂, 2-Naphthyl(CH₂)₂,
Ph(Me)CHCH₂

M = Li, Na, K, Rb, Cs