



Contents

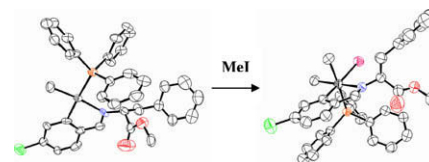
Regular Papers

**Judit Rodríguez, Javier Zafrilla,
Joan Albert, Margarita Crespo,
Jaume Granell, Teresa Calvet,
Mercè Font-Bardia**

J. Organomet. Chem. 694 (2009) 2467

Cyclometallated platinum(II) compounds with imine ligands derived from amino acids: Synthesis and oxidative addition reactions

The synthesis of cyclometallated platinum(II) compounds containing imine ligands derived from natural amino acids is reported. Oxidative addition of methyl iodide to these compounds produces the corresponding platinum(IV) derivatives with a high degree of stereoselectivity.

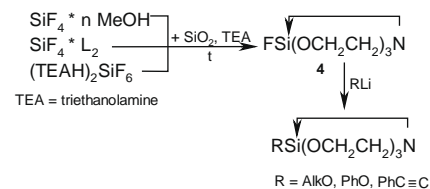


**Sergey A. Lermontov, Alena N. Malkova,
El'mira Kh. Lermontova,
Andrei V. Churakov**

J. Organomet. Chem. 694 (2009) 2476

1-Fluorosilatrane synthesis from SiF_4 complexes and its properties

Silicon tetrafluoride complexes prepared from SiO_2 react with triethanolamine in a presence of silica to form 1-fluorosilatrane **4**. Fluorine atom in **4** can be substituted by O- and C-nucleophiles.

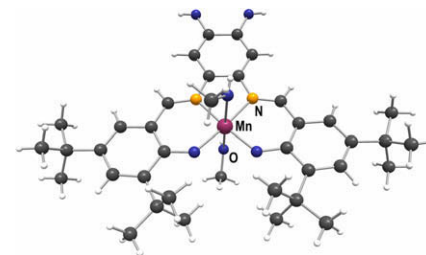


**Michael Schley, Peter Lönnecke,
Evamarie Hey-Hawkins**

J. Organomet. Chem. 694 (2009) 2480

Monometallic and heterobimetallic complexes derived from salen-type ligands

Mono- and heterometallic complexes of the salen-type ligand H_2LH_2 2,2'-[1,2-dihydroxybenzene-4,5-diylbis(nitrilomethylidene)]bis(3,5-di-*tert*-butylphenol) were applied in catalytic oxidation reactions. The manganese complex $[\{\text{Mn}(\text{CH}_3\text{OH})_2\}\text{LH}_2]\text{Cl}$ showed the highest activity.

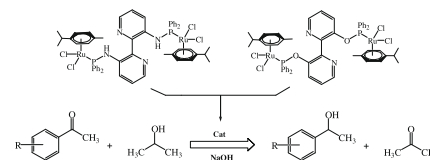


**Murat Aydemir, Akin Baysal,
Nermin Meric, Bahattin Gümüş**

J. Organomet. Chem. 694 (2009) 2488

New active ruthenium(II) complexes based N3,N3'-bis(diphenylphosphino)-2,2'-bipyridine-3,3'-diamine and P,P'-diphenylphosphinous acid-P,P'-[2,2'-bipyridine]-3,3'-diyl ester ligands for transfer hydrogenation of aromatic ketones by propan-2-ol

Two new bridged dinuclear complexes $[C_{10}H_6N_2\{NHPPh_2-Ru(\eta^6-p\text{-cymene})Cl_2\}_2]$, **3** and $[C_{10}H_6N_2\{OPPh_2-Ru(\eta^6-p\text{-cymene})Cl_2\}_2]$, **4** were prepared and characterized. The catalytic behavior of the Ru(II) complexes were investigated in the transfer hydrogenation of acetophenone derivatives in 2-propanol.

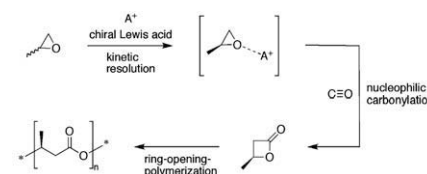


**Heimo Wölfle, Holger Kopacka,
Klaus Wurst, Peter Preishuber-Pflügl,
Benno Bildstein**

J. Organomet. Chem. 694 (2009) 2493

On the way to biodegradable poly(hydroxy butyrate) from propylene oxide and carbon monoxide via β -butyrolactone: Multisite catalysis with newly designed chiral indole-imino chromium(III) complexes

We report on the design and development of new chiral indole-based ligand families and on their chromium(III) complexes as enantioselective catalysts for the conversion of racemic propylene oxide and carbon monoxide to enantioenriched β -butyrolactone, the key monomer for the production of biodegradable poly(hydroxy butyrate) by ring-opening polymerization.

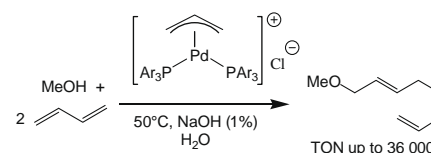


**Julien Mesnager, Emile Kuntz,
Catherine Pinel**

J. Organomet. Chem. 694 (2009) 2513

Isolated-palladium complexes for catalyzed telomerization of butadiene with methanol in the presence of water

Cationic hydrosoluble palladium complexes were prepared. They were stable at room temperature under air atmosphere for weeks. They were efficient in the telomerization of butadiene with methanol in the presence of water under mild conditions.

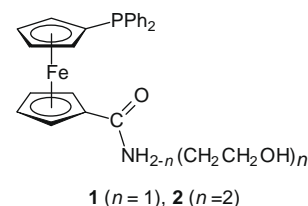


Jiří Schulz, Ivana Císařová, Petr Štěpnička

J. Organomet. Chem. 694 (2009) 2519

Preparation, coordination properties and catalytic use of 1'-(diphenylphosphanyl)-1-ferrocenecarboxamides bearing 2-hydroxyethyl pendant groups

Polar ferrocene amido-phosphane ligands **1** and **2**, readily available from 1'-(diphenylphosphanyl)-1-ferrocenecarboxylic acid (Hd₁), are suitable ligands for the preparation of defined and structurally variable hydrogen-bonded coordination arrays. Palladium complexes involving ligands **1** and **2** efficiently catalyse Suzuki–Miyaura cross-coupling in polar organic solvents, their aqueous mixtures, and in water.

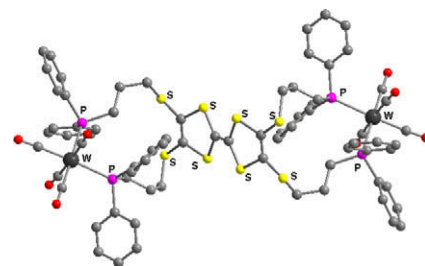


**Grégory Gachot, Pascal Pellon,
Thierry Roisnel, Dominique Lorcy**

J. Organomet. Chem. 694 (2009) 2531

Bimetallicmacrocycles involving tetrakis-(diphenylphosphinoalkylthio) tetrathiafulvalene

The synthetic approach towards tetrakis-(diphenylphosphinoalkylthio)tetrathiafulvalenes and their ability to form bimetallicmacrocycles with two $W(CO)_4$ fragments are presented.

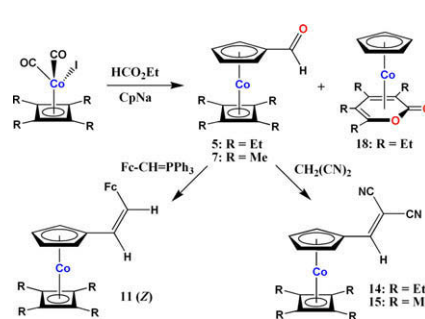


**Paul O'Donohue, Sarah A. Brusey,
Corey M. Seward, Yannick Ortin,
Bevin C. Molloy, Helge Müller-Bunz,
Anthony R. Manning,
Michael J. McGlinchey**

J. Organomet. Chem. 694 (2009) 2536

A synthetic, structural and reactivity study of $[(\eta^4-C_4R_4)Co(\eta^5-C_5H_4X)]$ complexes, R = Me or Et; X = CHO, CH=CHFc, CH=CH($\eta^5-C_5H_4$)Co($\eta^4-C_4Ph_4$), CH=C(CN)₂: Unexpected formation of $[(\eta^5-cyclopentadienyl)(\eta^4-3,4,5,6-tetraethyl-\alpha-pyrone)cobalt]$

$[(\text{Formylcyclopentadienyl})(\text{tetraalkylcyclobutadiene})cobalt]$ complexes, **5** and **7**, undergo a range of Wittig and aldol reactions to incorporate ferrocenyl and other metal sandwich moieties. The unexpected formation of $[(\eta^5-cyclopentadienyl)(\eta^4-3,4,5,6-tetraethyl-\alpha-pyrone)cobalt]$, **18**, was also observed, and a mechanistic rationale is proposed.

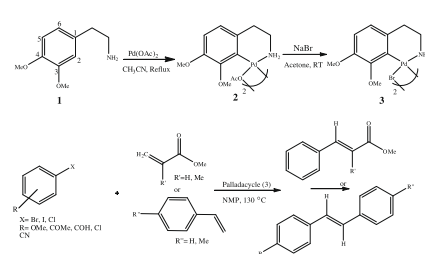


**Abdol R. Hajipour, Kazem Karami,
Azadeh Pirisedigh, Arnold E. Ruoho**

J. Organomet. Chem. 694 (2009) 2548

Application of dimeric orthopalladate complex of homoveratrylamine as an efficient catalyst in the Heck cross-coupling reaction

The $[Pd\{C_6H_2(CH_2CH_2NH_2)-(OMe)_2,3,4\}(\mu-Br)]_2$ complex of homoveratrylamine was synthesized and its application in Heck coupling reaction was studied. This complex had been demonstrated to be active and efficient catalyst for the Heck reaction of aryl iodides, bromides and even chlorides. The cross-coupled products were produced in excellent yields in short reaction time using catalytic amount of $[Pd\{C_6H_2(CH_2CH_2NH_2)-(OMe)_2,3,4\}(\mu-Br)]_2$ complex in NMP at 130 °C.

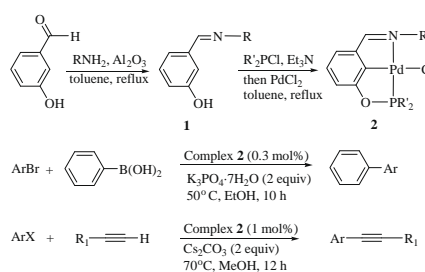


**Ben-Shang Zhang, Chao Wang,
Jun-Fang Gong, Mao-Ping Song**

J. Organomet. Chem. 694 (2009) 2555

Facile synthesis of achiral and chiral PCN pincer palladium(II) complexes and their application in the Suzuki and copper-free Sonogashira cross-coupling reactions

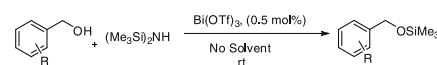
Five non-symmetrical PCN pincer palladium(II) complexes **2a–e** have been easily prepared in only two steps from readily available *m*-hydroxybenzaldehyde and characterized. The molecular structures of **2a** and **2b** were described. The complexes were found to be effective catalysts for the Suzuki and copper-free Sonogashira cross-coupling reactions.



Santosh T. Kadam, Sung Soo Kim*J. Organomet. Chem.* 694 (2009) 2562

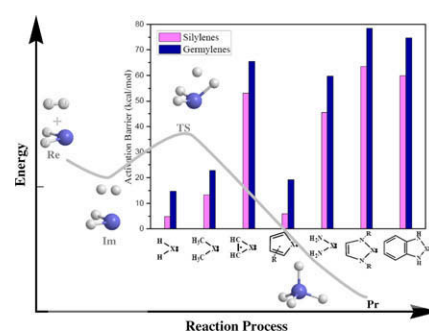
Mild and efficient silylation of alcohols and phenols with HMDS using $\text{Bi}(\text{OTf})_3$ under solvent-free condition

A very efficient and mild silylation of alcohols and phenols with $(\text{Me}_3\text{Si})_2\text{NH}$ at rt is developed using $\text{Bi}(\text{OTf})_3$ as the catalyst. Variety of aromatic and aliphatic alcohols and phenols produce corresponding silylether in excellent yield. This reaction may require the lowest catalyst quantity and relatively short reaction time of all the previous studies in recent years.

**Yong Wang, Jing Ma***J. Organomet. Chem.* 694 (2009) 2567

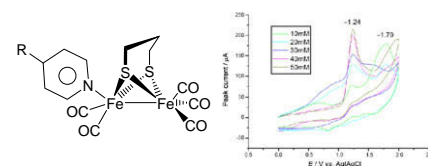
Silylenes and germylenes: The activation of H–H bond in hydrogen molecule

DFT with B3LYP functional, MP2, and CASPT2/CASSCF calculation results demonstrate the facile occurrence of the H_2 activation reaction with a variety of acyclic and cyclic silylenes and germylenes through a concerted mechanism. The activation energies of H_2 split by silylenes are smaller than those by germylenes.

**Yue Zhang, Ming-Qiang Hu, Hui-Min Wen, You-Tao Si, Cheng-Bing Ma, Chang-Neng Chen, Qiu-Tian Liu***J. Organomet. Chem.* 694 (2009) 2576

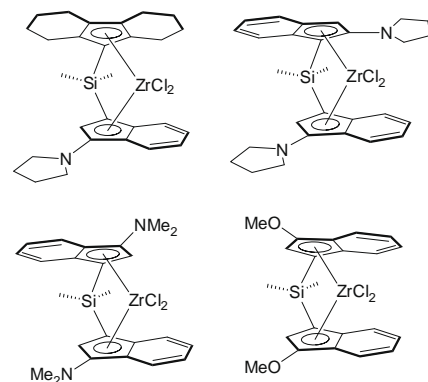
Terminal pyridine-N ligation at $[\text{FeFe}]$ hydrogenase active-site mimic

Pyridine-N ligation was able to tune the redox properties of the diiron centers of model complexes: π -backdonation renders the uneven electron density of the diiron core to pyridine ring, and under excessive HOAc, model complex was proven to be reductive active at rather low first reduction potential.

**Jerzy Klosin, William J. Kruper, Jasson T. Patton, Khalil A. Abboud***J. Organomet. Chem.* 694 (2009) 2581

Synthesis and X-ray structure of novel 2- and 3-heteroatom-substituted *ansa*-zirconocene complexes

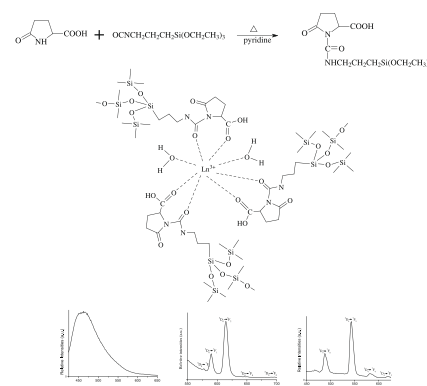
New *ansa*-zirconocene complexes with amino and alkoxy substituents attached to the η^5 -bonded indenyl fragment have been synthesized. Crystallographic analysis showed that heteroatom substituents, especially those in the 3-position on the indenyl ligand, have a substantial effect on the structure of metallocenes leading to an increase in the gap aperture in those complexes.



Bing Yan, Hai-Feng Lu*J. Organomet. Chem.* 694 (2009) 2597

Lanthanide-centered inorganic/organic hybrids from functionalized 2-pyrrolidinone-5-carboxylic acid bridge: Covalently bonded assembly and luminescence

A series organic–inorganic hybrid material with covalent bond have been prepared through the precursor (PDCA-Si) derived from 2-pyrrolidinone-5-carboxylic acid, which exhibits a self-organization under the coordination to RE^{3+} (Eu^{3+} , Tb^{3+}). Luminescence can be obtained for blue of PDCA-Si, green of Tb–PDCA-Si and red of Eu–PDCA-Si, respectively.

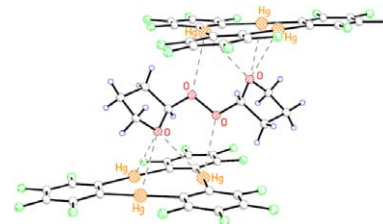


**I.A. Tikhonova, K.I. Tugashov,
F.M. Dolgushin, A.A. Korlyukov,
P.V. Petrovskii, Z.S. Klemenkova,
V.B. Shur**

J. Organomet. Chem. 694 (2009) 2604

Coordination chemistry of mercury-containing anticrowns. Synthesis and structures of the complexes of cyclic trimeric perfluoro-*o*-phenylenemercury with ethanol, THF and bis-2,2'-tetrahydrofuryl peroxide

The paper reports the ability of the mercury anticrown (o - C_6F_4Hg)₃ (**1**) to form complexes with ethanol and THF. In the case of ethanol, a pyramidal 1:1 complex, $\{[(o-C_6F_4Hg)_3](EtOH)\}$, has been isolated. In the case of THF, the complexes $\{[(o-C_6F_4Hg)_3](THF)_n\}$ ($n = 1-4$), containing pyramidal ($n = 1$) or bipyramidal ($n = 2-4$) fragments in their structures, are produced. An unusual sandwich complex of **1** with bis-2,2'-tetrahydrofuryl peroxide is also described.

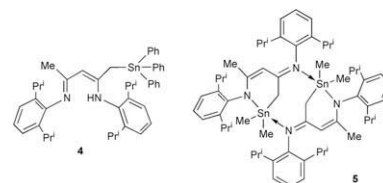


**David J. Doyle, Peter B. Hitchcock,
Michael F. Lappert, Gang Li**

J. Organomet. Chem. 694 (2009) 2611

New group 14 element(IV) β -diiminates and a Sn(II) analogue

The compounds $\{N(Ar)C(Me)_2C(H)C(O)Bu^t\}$ (**2**), $[ArNC(Me)C(H)C(Me)N(Ar)SiMe_3]$ (**3**), $[HN(Ar)C(Me)C(H)C(CH_2SnPh_3)N(Ar)]$ (**4**), $[Me_2SnN(Ar)C(Me)C(H)C\{N(Ar)\}CH_2]_2$ (**5**), $[GeCl_2(L')(OGeCl_3)]$ (**6**), $[SnCl(L')Me_2]$ (**7**) and $[SnCl(L')]$ (**8**) are reported; the X-ray structures of **3-8** are presented [Ar = $C_6H_3Pr^i-2,6$; $L' = \{N(C_6H_3Pr^i-2,6)C(H)\}_2CPh$].

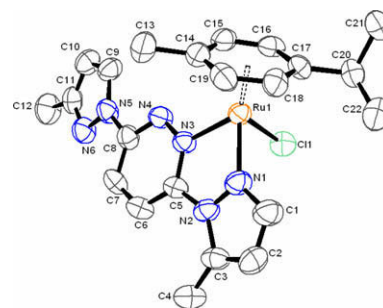


**Gajendra Gupta, Kota Thirumala Prasad,
Babulal Das, Glenn P.A. Yap,
Kollipara Mohan Rao**

J. Organomet. Chem. 694 (2009) 2618

Ruthenium half-sandwich complexes with tautomerized pyrazolyl-pyridazine ligands: Synthesis, spectroscopic and molecular structural studies

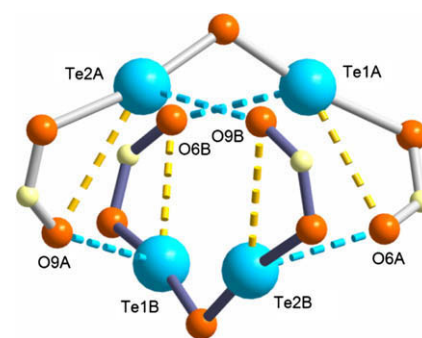
Reactions of η^6 -areneruthenium complexes with a series of pyrazolyl-pyridazine ligands like 3-chloro-6-(pyrazolyl)pyridazines (Cl-L1) and 3,6-bis(pyrazolyl)-pyridazines (L1) in methanol yielded mononuclear complexes.



Vadapalli Chandrasekhar, Arun Kumar*J. Organomet. Chem.* 694 (2009) 2628

Assembly of diverse structural types of organotellurium compounds in the reactions of (4-MeO-C₆H₄)₂TeO with pyridine carboxylic acids

The reactions of (4-MeO-C₆H₄)₂TeO with pyridine carboxylic acids afforded four different structural types each of which showed interesting supramolecular structures involving intermolecular Te...O interactions.

**Note**

John Hurtado, Desmond Mac-Leod Carey, Alvaro Muñoz-Castro, Ramiro Arratia-Pérez, Raúl Quijada, Guang Wu, René Rojas, Mauricio Valderrama

J. Organomet. Chem. 694 (2009) 2636

Chromium(III) complexes with terdentate 2,6-bis(azolylmethyl)pyridine ligands: Synthesis, structures and ethylene polymerization behavior

2,6-Bis(azolylmethyl)pyridine ligands are obtained by reaction of 2,6-bis(bromomethyl)pyridine with 3,5-dimethylpyrazole and 1H-indazole. The molecular structure of the ligand 2,6-bis(indazol-2-ylmethyl)pyridine was determined by single-crystal X-ray diffraction. These ligands react with the CrCl₃(THF)₃ complex to form octahedral complexes formula [CrCl₃{2,6-bis(azolylmethyl)pyridine-*N,N,N*}]₂. Theoretical calculations show that the thermodynamically preferred structure of the complexes is the *fac* configuration. After reaction with methylaluminoxane (MAO) the chromium(III) complexes are active in the polymerization of ethylene.

