

Contents

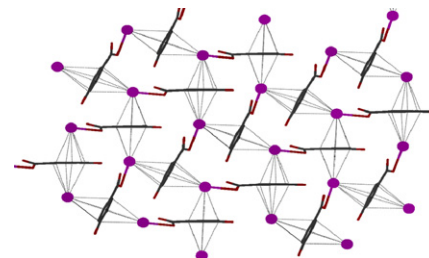
Communications

Kamran Akhbari, Ali Morsali

J. Organomet. Chem. 692 (2007) 5109

Highly polyhapto–aromatic interactions in thallium(I) coordination

In the solid state, the Tl(I) complex of 4-hydroxybenzoate (HB^-), $[\text{Tl}(\text{HB})]_n$ (**1**), can be regarded as containing polymeric chains linked through $2 \times \eta^6$ interactions of the Tl atoms with phenyl groups from adjacent units. The thallium atoms contain close $\text{Tl}^I \cdots \pi$ (aromatic) contacts, thus attaining a total hapticity of 16 with environments $\text{TlO}_4\text{C}_{12}$. The unusually high coordination number in this compound may reflect the capacity of Tl(I) to act as both a Lewis acid and a Lewis base.

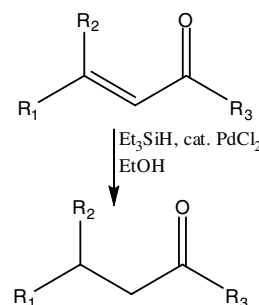


Maryam Mirza-Aghayan, Rabah Boukherroub, Mohammad Bolourtchian, Mahshid Rahimifard

J. Organomet. Chem. 692 (2007) 5113

Palladium catalyzed mild reduction of α,β -unsaturated compounds by triethylsilane

The palladium(II) chloride/triethylsilane system has been successfully applied for the selective hydrogenation of the carbon–carbon double bond of α,β -unsaturated ketones to yield the corresponding saturated carbonyl compounds. The reaction takes place under mild conditions and affords high yields.



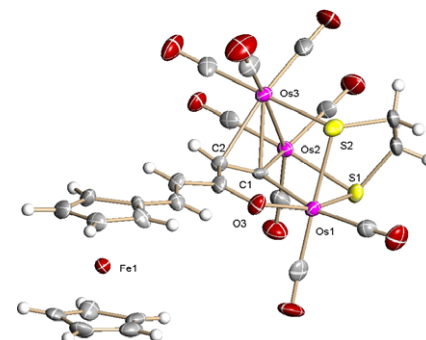
Regular Papers

Beatriz Alonso, Cecilio Álvarez-Toledano, Esther Delgado, Elisa Hernández, Iván García-Orozco, Rubén A. Toscano

J. Organomet. Chem. 692 (2007) 5117

Triosmium compounds containing the oxametallacycle $[\text{Os}(\text{CO})_3\{\text{C}(\text{R})=\text{CHC}(\text{O})\text{CH}=\text{C}(\text{H})\text{C}_5\text{H}_4\text{FeC}_5\text{H}_5\}]$ moiety. Synthesis and electrochemical studies

Triosmium compounds containing the oxametallacycle $[\text{Os}(\text{CO})_3\{\text{C}(\text{R})=\text{CHC}(\text{O})\text{CH}=\text{C}(\text{H})\text{C}_5\text{H}_4\text{FeC}_5\text{H}_5\}]$ have been obtained by reaction of the ketene dithioacetal $\text{C}_5\text{H}_5\text{FeC}_5\text{H}_4\text{CH}=\text{CHC}(\text{O})\text{CH}=\text{C}(\text{SCH}_2\text{CH}_2\text{S})$ with $\text{Os}_3(\text{CO})_{10}(\text{NCMe})_2$. X-ray diffraction and electrochemical studies have been carried out.

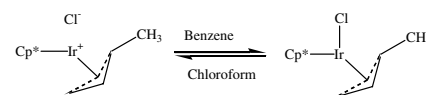


Akella Sivaramakrishna, Emma Hager, Feng Zheng, Hong Su, Gregory S. Smith, John R. Moss

J. Organomet. Chem. 692 (2007) 5125

Synthesis and structural aspects of M-allyl (M = Ir, Rh) complexes

The synthesis, characterization and chemistry of novel η^3 -allyl metal complexes (M = Ir, Rh) are described. The neutral metal allylic complex $[\text{Cp}^*\text{IrCl}(\eta^3\text{-methylallyl})]$ (**5**) ionizes in polar solvents to give $[\text{Cp}^*\text{Ir}(\eta^3\text{-methylallyl})]^+\text{Cl}^-$ (**6**) and reaches equilibrium ($5 \rightleftharpoons 6$) at room temperature. Addition of tertiary phosphine ligands to neutral complexes such as $[\text{Cp}^*\text{Ir}(\eta^3\text{-1-methylallyl})\text{Cl}]$, results in the formation of stable ionic phosphine adduct, $[\text{Cp}^*\text{Ir}(\text{PPh}_3)(\eta^3\text{-1-methylallyl})]^+\text{Cl}^-$.

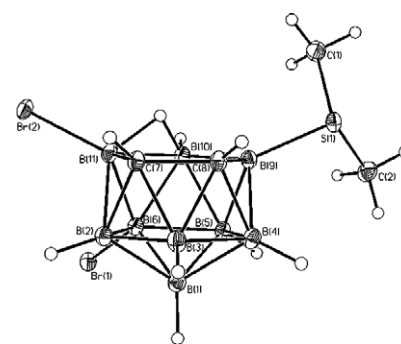


Sergey V. Timofeev, Dmitrii A. Rudakov, Elena A. Rakova, Ivan V. Glukhov, Zoya A. Starikova, Vikentii I. Bragin, Ivan A. Godovikov, Valerii L. Shirokii, Vladimir I. Potkin, Nikolai A. Maier, Igor B. Sivaev, Vladimir I. Bregadze

J. Organomet. Chem. 692 (2007) 5133

Synthesis and structure of halogen derivatives of 9-dimethylsulfonium-7,8-dicarba-*nido*-undecaborane $[\text{9-Me}_2\text{S-7,8-C}_2\text{B}_9\text{H}_{11}]$

Halogenation of 9-dimethylsulfonium-7,8-dicarba-*nido*-undecaborane $[\text{9-SMe}_2\text{-7,8-C}_2\text{B}_9\text{H}_{11}]$ gave halogen derivatives $[\text{9-SMe}_2\text{-11-X-7,8-C}_2\text{B}_9\text{H}_{10}]$, where X = Cl, Br, I. In the bromination reaction, $[\text{9-SMe}_2\text{-6-Br-7,8-C}_2\text{B}_9\text{H}_{10}]$ was isolated as a minor product being the first example of substitution at a "lower" belt of the 7,8-dicarba-*nido*-undecaborate cage. The use of excess of bromine resulted in dibromo derivative $[\text{9-SMe}_2\text{-6,11-Br}_2\text{-7,8-C}_2\text{B}_9\text{H}_9]$.

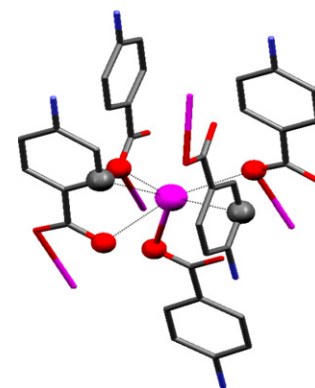


Kamran Akhbari, Ali Morsali

J. Organomet. Chem. 692 (2007) 5141

Thermal, fluorescence, structural and solution studies of a thallium(I) one-dimensional coordination polymer with 4-aminobenzoate (AB^-), $[\text{Tl}(\mu_4\text{-AB})]_n$

A new thallium(I) one-dimensional polymer, $[\text{Tl}(\mu_4\text{-AB})]_n$ (**1**) [$\text{HAB} = 4\text{-aminobenzoic acid}$], has been synthesized and characterized. The single-crystal X-ray data of compound show the coordination number in the Tl^{I} ions is five, the thallium atoms have irregular coordination sphere containing stereo-chemically active lone pair and bi-hapto (η^2) interactions, thus attaining a total hapticity of seven with environment $\text{C}_2\text{O}_5\text{Tl}$.

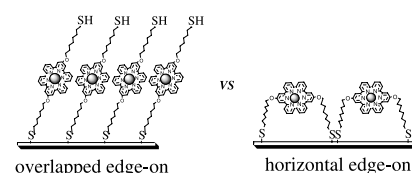


Teng-Yuan Dong, Chienlin Huang, Chiao-Pei Chen, Ming-Cheng Lin

J. Organomet. Chem. 692 (2007) 5147

Molecular self-assembled monolayers of ruthenium(II)-terpyridine dithiol complex on gold electrode and nanoparticles

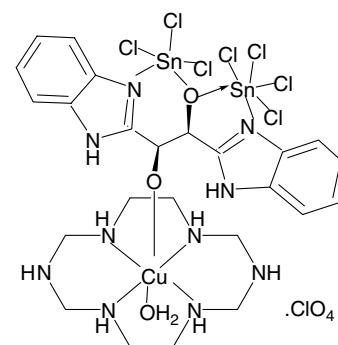
The formation of stable dithiol-bifunctionalized Ru(II)-terpyridine monolayer and the coverage-dependent behavior onto gold electrode has been studied by electrochemical technique. The morphology of Au(111) metal surface modified with MPCs was imaged using atomic force microscopy.



Mala Chauhan, Farukh Arjmand*J. Organomet. Chem.* 692 (2007) 5156

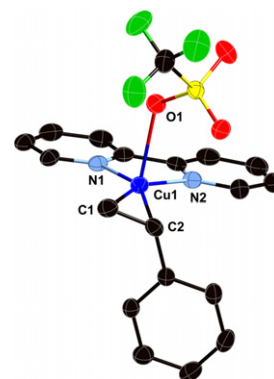
Stannoxane capping derived from chiral tridentate NNO donor ligand for nickel and copper macrocycles: Comparative binding studies of stannoxane moiety and its modulated copper complex with CTDNA

New stannoxane type dinuclear tin complex $C_{16}H_{13}N_4O_2Sn_2Cl_7$ (**1**) and its modulated macrocyclic complexes $[C_{24}H_{36}N_{10}O_3Sn_2CuCl_7] ClO_4$ (**2**) and $[C_{24}H_{34}N_{10}O_2Sn_2NiCl_7] ClO_4$ (**3**) were synthesized and characterized. Comparative binding of dinuclear stannoxane complex **1** and its modulated copper complex **2** with calf thymus DNA were investigated by various spectroscopic techniques. Interaction studies of complex **2** with guanosine 5'-monophosphate were also carried out which revealed binding through N7 atom of guanine.

**Complex 2****Carolynne Ricardo, Tomislav Pintauer***J. Organomet. Chem.* 692 (2007) 5165

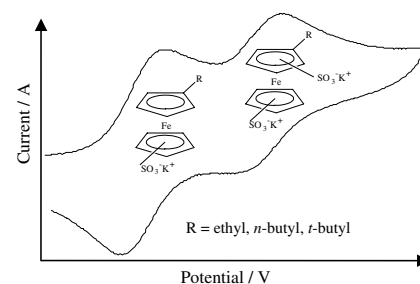
Synthesis, characterization, and the role of counterion in cyclopropanation of styrene catalyzed by $[Cu^I(2,2'-bpy)(\pi-CH_2=CHC_6H_5)][A]$ ($A = ClO_4^-$, PF_6^- and $CF_3SO_3^-$) complexes

Synthesis, characterization, and the role of counterion in cyclopropanation of styrene catalyzed by $[Cu^I(2,2'-bpy)][(\pi-CH_2=CHC_6H_5)][A]$ ($A = CF_3SO_3^-$, PF_6^- and ClO_4^-) are described.

**Gary J. Tustin, Valerie G.H. Lafitte, Craig E. Banks, Timothy G.J. Jones, Robert B. Smith, James Davis, Nathan S. Lawrence***J. Organomet. Chem.* 692 (2007) 5173

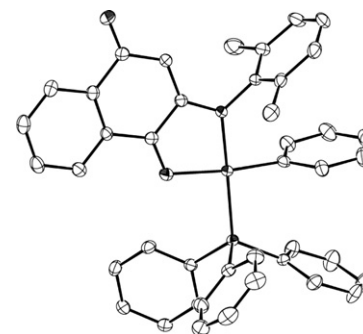
Synthesis and characterisation of water soluble ferrocenes: Molecular tuning of redox potentials

Novel alkylated ferrocene sulfonates compounds are reported. Altering the alkyl group allows the isomeric pattern to be tuned towards either electronic or steric control. Voltammetry showed the redox potential was dependent on the substituents on the cyclopentadienyl rings. This has significant impact in the future of homogenous redox mediators for sensing applications.

**Mitsuhiro Okada, Yuushou Nakayama, Takeshi Shiono***J. Organomet. Chem.* 692 (2007) 5183

Synthesis of anilinonaphthoquinone-based nickel complexes and their application for olefin polymerization

A series of anilinonaphthoquinone-based nickel complexes were synthesized and the structures were confirmed by single crystal X-ray analyses. The nickel complexes activated with $B(C_6F_5)_3$ showed good activities for ethylene polymerization under atmospheric pressure.

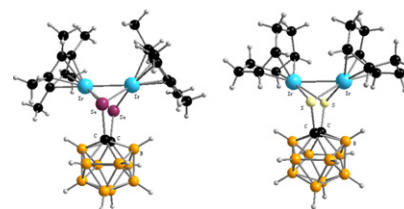


**Yin-Qiang Chen, Jian-Qiang Wang,
Guo-Xin Jin**

J. Organomet. Chem. 692 (2007) 5190

Binuclear iridium complexes containing bridging 1,2-dicarba-closo-dodecaborane-1,2-dichalcogenolato ligands: Molecular structures of the complexes $[(\text{CODIr})_2(\mu_2\text{-S}_2\text{C}_2(\text{B}_{10}\text{H}_{10}))]$ and $[(\text{Cp}^*\text{Ir})_2(\mu_2\text{-Se}_2\text{C}_2(\text{B}_{10}\text{H}_{10}))]$

Four binuclear iridium complexes with a chelating 1,2-dicarba-closo-dodecaborane-1,2-dichalcogenolato ligands $[(\text{CODIr})_2(\mu_2\text{-E}_2\text{C}_2(\text{B}_{10}\text{H}_{10}))]$ [E = S (**3a**), Se (**3b**)] ($\text{Cp}^*\text{Ir})_2[\mu_2\text{-E}_2\text{C}_2(\text{B}_{10}\text{H}_{10})]$ [E = S (**5a**), Se (**5b**)] have been synthesized and characterized. The molecular structures of **3a** and **5b** have been determined by X-ray crystallographic analysis.

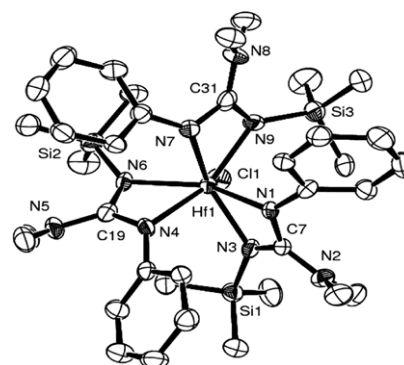


**Meisu Zhou, Hongbo Tong, Xuehong Wei,
Diansheng Liu**

J. Organomet. Chem. 692 (2007) 5195

Syntheses and structures of non-symmetric guanidinato zirconium and hafnium complexes and their catalytic behavior for ethylene polymerization

A series of guanidinate complexes were reported: $[(\text{Et}_2\text{O})\text{LiN}(\text{SiMe}_3)\text{C}(\text{NMe}_2)\text{N}(\text{Ph})_2]$ (**1**); $[(\text{THF})\text{LiN}(\text{SiMe}_3)\text{C}(\text{NMe}_2)\text{N}(\text{Ph})_2]$ (**2**); $[(\text{Et}_2\text{O})\text{LiN}(\text{SiMe}_3)\text{C}(\text{N}(\text{CH}_2)_5)\text{N}(\text{Ph})_2]$ (**5**), $[\text{PhNC}(\text{R})\text{NSiMe}_3]_3\text{MCl}$ (R = dimethylamido, M = Zr (**3**), Hf (**4**); R = 1-piperidino, M = Zr (**6**), Hf (**7**)). Complexes **3**, **4**, **6** and **7** were found to be active for ethylene polymerization.

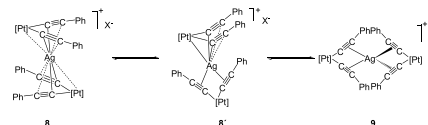


**Heinrich Lang, Amaya del Villar,
Thomas Stein, Petra Zoufalá, Tobias Rüffer,
Gerd Rheinwald**

J. Organomet. Chem. 692 (2007) 5203

Heterometallic Pt–Ag and Pt₂Ag transition metal complexes

Depending on the stoichiometry of *cis*- $[\text{Pt}](\text{C}\equiv\text{CPh})_2$ ([Pt] = (bipy')Pt, (bipy)Pt) and $[\text{AgX}]$ (X = BF₄, PF₆, ClO₄) these species react to give heterobi- and -trimetallic complexes of type $\{cis\text{-}[\text{Pt}](\mu\text{-}\sigma,\pi\text{-C}\equiv\text{CPh})_2\}_2\text{AgX}$, $[\{cis\text{-}[\text{Pt}](\mu\text{-C}\equiv\text{CPh})_2\}_2\text{Ag}]X$ and $[\{cis\text{-}[\text{Pt}](\mu\text{-}\sigma,\pi\text{-C}\equiv\text{CPh})_2\}_2\text{Ag}]X$. The molecular solid state structure of one molecule, $[\{cis\text{-}[\text{Pt}](\mu\text{-C}\equiv\text{CPh})_2\}_2\text{Ag}]X$, is reported.

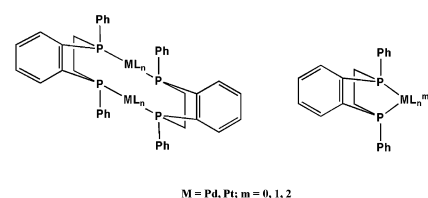


**Vincenzo De Felice, Natascia Fraldi,
Giuseppina Roviello, Francesco Ruffo,
Angela Tuzi**

J. Organomet. Chem. 692 (2007) 5211

Coordination modes of 1,2,3,4-tetrahydro-1,4-diphenyl-1,4-benzodiphosphinine (*bedip*) to Pt and Pd metal ions: Synthesis and structural characterization of mono- and bi-nuclear complexes

Versatile coordination features of 1,2,3,4-tetrahydro-1,4-diphenyl-1,4-benzodiphosphinine (*bedip*) are disclosed by preparing neutral and cationic Pt(II), Pt(IV) and Pd(II) complexes. Spectroscopic and structural characterizations are reported along with preliminary reactivity investigations.

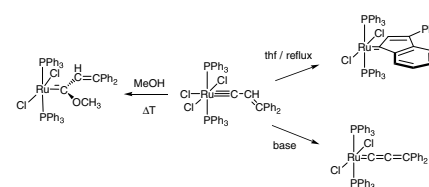


**Erika A. Shaffer, Chun-Long Chen,
Alicia M. Beatty, Edward J. Valente,
Hans-Jörg Schanz**

J. Organomet. Chem. 692 (2007) 5221

Synthesis of ruthenium phenylindenyliidene, carbyne, allenylidene and vinylmethylidene complexes from $(PPh_3)_3RuCl_2$: A mechanistic and structural investigation

A reliable synthesis of a 3-phenylindenyliidene ruthenium complex is described. An allenylidene and a carbyne intermediate of this reaction have been isolated. The carbyne intermediate was reacted with bases and nucleophiles to give allenylidene and Fischer-carbene complexes. X-ray crystal structures were obtained from eight new complexes.

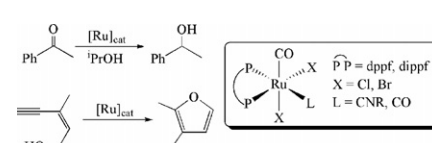


**Joachim Albers, Victorio Cadierno,
Pascale Crochet, Sergio E. García-Garrido,
José Gimeno**

J. Organomet. Chem. 692 (2007) 5234

Octahedral ruthenium(II) complexes cis,cis - $[RuX_2(CNR)(CO)(P^*P)]$ and cis,cis,cis - $[RuX_2(CO)_2(P^*P)]$ ($X = Cl, Br$; $P^*P = 1,1'$ -bis(diphenylphosphino)ferrocene, $1,1'$ -bis(diisopropylphosphino)ferrocene): Synthesis and catalytic applications in transfer hydrogenation of acetophenone and cycloisomerization of (Z) -3-methylpent-2-en-4-yn-1-ol

The catalytic activity of octahedral ruthenium(II) compounds $[RuX_2(L)(CO)(P^*P)]$ ($L = CNR, CO$) in transfer hydrogenation of acetophenone by propan-2-ol, as well as in the cycloisomerization of (Z) -3-methylpent-2-en-4-yn-1-ol into 2,3-dimethylfuran, has been studied.

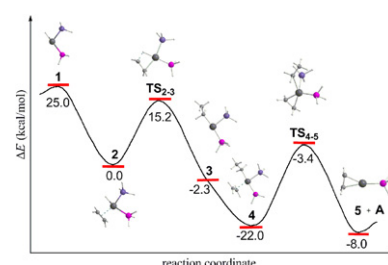


Constantinos A. Tsipis, Christos E. Kefalidis

J. Organomet. Chem. 692 (2007) 5245

Hydrosilylation, hydrocyanation, and hydroamination of ethene catalyzed by bis(hydrido-bridged)diplatinum complexes: Added insight and predictions from theory

The present contribution seeks to extend the understanding of the intricate structural and energetic details of the olefin hydrosilylation, hydrocyanation and hydroamination processes catalyzed by bis(hydrido-bridged)diplatinum complexes using electronic structure computational techniques.

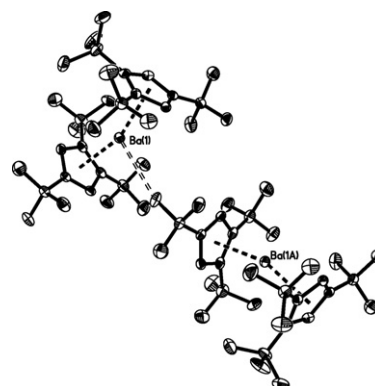


**Timo Hatanpää, Mikko Ritala,
Markku Leskelä**

J. Organomet. Chem. 692 (2007) 5256

Crystal structures and thermal properties of $Ba(1,2,4-t-Bu_3C_5H_2)_2$ and $Sr(1,2,4-t-Bu_3C_5H_2)_2$: Precursors for atomic layer deposition

$Sr(t-Bu_3C_5H_2)_2$ crystallizes as a monomer with typical bent structure. Depending on the way of crystallization two polymorphs are observed for $Ba(t-Bu_3C_5H_2)_2$. $Ba(t-Bu_3C_5H_2)_2$ forms either individual molecules with intramolecular methyl to barium close contacts or chains in which one methyl group of each $Ba(t-Bu_3C_5H_2)_2$ unit interacts with neighboring $Ba(t-Bu_3C_5H_2)_2$ unit's barium atom.

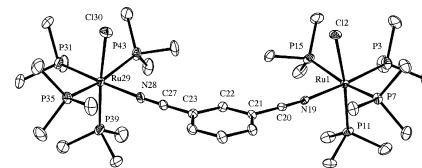


Z. Csók, C. Gandum, K. Rissanen, A. Tuzi, J. Rodrigues

J. Organomet. Chem. 692 (2007) 5263

Syntheses and characterization of novel ruthenium complexes based on 1,3-dicyanobenzene

The syntheses and full characterization of novel ruthenium complexes based on 1,3-dicyanobenzene are described. Crystal structures are reported for both [1,3-(*cis*-RuCl(P(CH₃)₃)₄-N≡C)₂C₆H₄][PF₆]₂ (**1cis**) and [1,3-(*trans*-RuCl(dppe)₂N≡C)₂C₆H₄][H₂PO₄]₂ (**3**). Ligand substitution in the homobimetallic complex (**3**) leads easily to the monometallic analogue, [1,3-(*trans*-RuCl(dppe)₂N≡C)₂C₆H₄(C≡N)][PF₆] (**4**). A heterobimetallic complex, [1,3-(*trans*-RuCl(dppe)₂N≡C)₂C₆H₄(C≡N-FeCp(dppe))][PF₆]₂ (**5**), of satisfactory purity is also obtained.

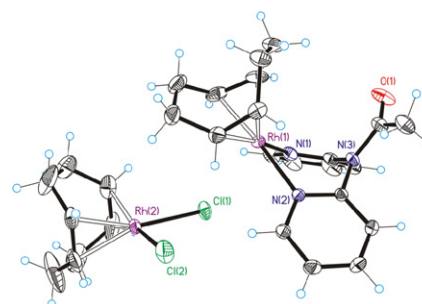


Bhasker Bantu, Klaus Wurst, Michael R. Buchmeiser

J. Organomet. Chem. 692 (2007) 5272

N-Acetyl-*N,N*-dipyrid-2-yl (cyclooctadiene) rhodium (I) and iridium (I) complexes: Synthesis, X-ray structures, their use in hydroformylation and carbonyl hydro-silylation reactions and in the polymerization of diazo-compounds

Novel *N*-Acetyl-*N,N*-dipyrid-2-yl complexes of Rh^I and Ir^I, i.e. [RhCl(CH₃CONPy₂)(COD)] (**1**) and [IrCl(CH₃CONPy₂)(COD)] (**2**) have been prepared and used in hydroformylation, carbonyl hydrosilylation reactions. compound **1** was successfully used for the polymerization of N₂CHCOOEt.

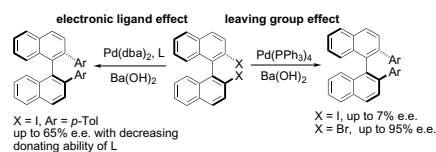


Michal Juriček, Henrich Brath, Peter Kasák, Martin Putala

J. Organomet. Chem. 692 (2007) 5279

Study on the electronic effects on stereospecificity of Suzuki coupling in chiral groove of binaphthyl

Racemization during Suzuki diarylation of enantiopure 2,2'-diiodo-1,1'-binaphthyl was found to be suppressed by electronic factors which control the rate of oxidative addition (especially to presumptive undesired Pd(IV)-intermediate): either by use of palladium complex with phosphane ligand of moderate donating ability or utilizing 2,2'-dibromo-1,1'-binaphthyl as a substrate.

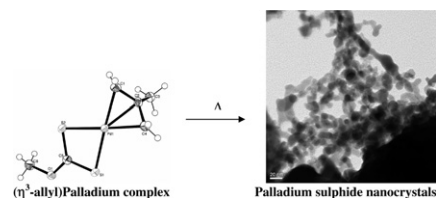


Anshu Singhal, Dimple P. Dutta, Avesh K. Tyagi, Shaikh M. Mobin, Pradeep Mathur, Ingo Lieberwirth

J. Organomet. Chem. 692 (2007) 5285

Palladium(II)/allylpalladium(II) complexes with xanthate ligands: Single-source precursors for the generation of palladium sulfide nanocrystals

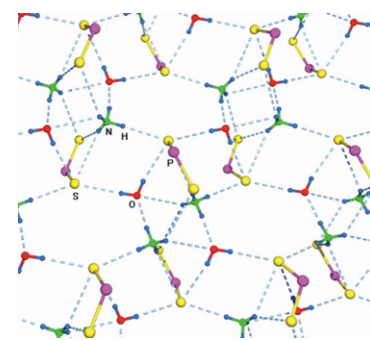
Palladium(II) complexes, [Pd(S₂X)₂] (X = COMe or CO^tPr) and η³-allylpalladium(II) complexes with xanthate ligands, [(η³-CH₂(CH₃)CR₂)Pd(S₂X)] (R = H or Me; X = COMe, COEt, CO^tPr) have been prepared, structurally characterized and their suitability as single-source precursors for generation of PdS nanostructures has been investigated. The complexes are useful precursors for generation of PdS nanocrystals either by furnace decomposition or solvothermalysis in dioctyl ether.



María del C. Hernández-Galindo, Vojtech Jancik, Mónica M. Moya-Cabrera, Rubén A. Toscano, Raymundo Cea-Olivares
J. Organomet. Chem. 692 (2007) 5295

2D hydrogen bond networks in the crystals of $[(\text{NH}_4 \cdot \text{H}_2\text{O})_2][(\text{RO})(\text{Fc})\text{P}(\text{S})_2]_2$ (R = 3-(BzO)-Bz, 4-(*n*-Bu)-Bz, Bz = benzyl)

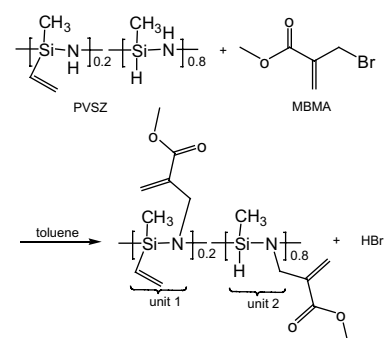
The two chemically and crystallographically different systems contain nearly identical unique 2D network formed by wide hydrogen bonding between water molecules, ammonium ions and $[(\text{RO})(\text{Fc})\text{P}(\text{S})_2]^-$ units (R = derivative of benzyl). These systems are valuable sources of information regarding the sulfur acceptor properties in hydrogen bonding.



Yi-He Li, Xiao-Dong Li, Dong-Pyo Kim
J. Organomet. Chem. 692 (2007) 5303

Acrylation of polyvinylsilazane with allyl bromide for an UV photosensitive inorganic polymer

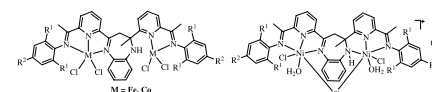
A new synthetic route for the acrylated polyvinylsilazane, as an inorganic polymer photoresist with a relatively high UV sensitivity, was developed using a highly efficient electrophilic substitution reaction between the secondary amine and the allyl bromide.



Shu Zhang, Wen-Hua Sun, Xiaofei Kuang, Igor Vystorop, Jianjun Yi
J. Organomet. Chem. 692 (2007) 5307

Unsymmetric bimetal(II) complexes: Synthesis, structures and catalytic behaviors toward ethylene

A series of unsymmetric bimetal (II) (Fe, Co and Ni) complexes ligated by 2-methyl-2,4-bis(6-iminopyridin-2-yl)-1*H*-1,5-benzodiazepines were synthesized and characterized. These iron(II) complexes were found to exhibit good activities for ethylene oligomerization and polymerization in the presence of MMAO, so were cobalt analogues. The nickel complexes mainly dimerize ethylene with considerable activity.

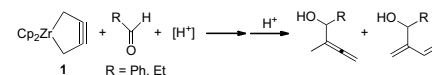


Notes

Noriyuki Suzuki, Takaaki Watanabe, Takuji Hirose, Teiji Chihara
J. Organomet. Chem. 692 (2007) 5317

Nucleophilic reactivity of 1-zirconacyclopent-3-yne: Carbon-carbon bond formation with aldehydes

1-Zirconacyclopent-3-yne (**1**), a stable five-membered cycloalkyne, reacted with aldehydes in the presence of proton sources to give allenylated and/or dienylated alcohol.



Antonio Arcadi, Maria Alfonsi, Fabio Marinelli

J. Organomet. Chem. 692 (2007) 5322

Silver-catalyzed direct couplings of 2-substituted furans with cyclic 1,3-dicarbonyls

Silver salts are more efficient than a variety of Lewis acids and *p*-TsOH in promoting direct alkenylation of 2-substituted furans by their reaction with 1,3-dicarbonyls.

