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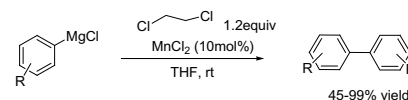
Communications

Zhiming Zhou, Weizhe Xue

J. Organomet. Chem. 694 (2009) 599

Manganese-catalyzed oxidative homo-coupling of aryl Grignard chlorides

Manganese-catalyzed homo-coupling of aryl magnesium chlorides to give biphenyls was successfully achieved using manganese chloride as catalyst. A variety of aryl magnesium chlorides were efficiently converted into the corresponding symmetrical biaryls using 10 mol% MnCl_2 as catalyst in the presence of a stoichiometric amount of 1,2-dichloroethane.

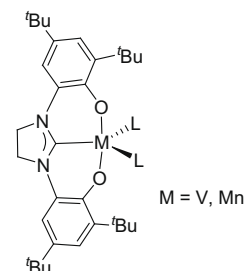


Stéphane Bellemin-Laponnaz, Richard Welter, Lydia Brelot, Samuel Dagorne

J. Organomet. Chem. 694 (2009) 604

Synthesis and structure of V(V) and Mn(III) NHC complexes supported by a tridentate bis-aryloxyde-N-heterocyclic carbene ligand

A novel tridentate *O,C,O*-bis-aryloxyde-N-heterocyclic carbene proligand was efficiently synthesized in a two-step procedure. Preliminary studies suggest that this new ligand may exhibit a quite versatile coordination chemistry as it was found to form robust and air-stable NHC-based V(V) and Mn(III) metal complexes.



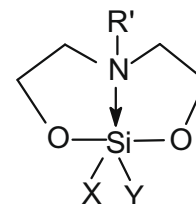
Regular Papers

Alexander A. Korlyukov, Konstantin A. Lyssenko, Mikhail Yu. Antipin, Ekaterina A. Grebneva, Aleksander I. Albanov, Olga M. Trofimova, Eleonora A. Zel'bst, Mikhail G. Voronkov

J. Organomet. Chem. 694 (2009) 607

Si-Fluoro substituted quasisilatrane (N → Si) $\text{FYSi}(\text{OCH}_2\text{CH}_2)_2\text{NR}$

The title compounds were obtained by the reaction of fluorosilanes XYSiF_2 with diethanolamines or their *O*-trimethylsilyl derivatives. The quasisilatrane 3, 5 and 9 were characterized by the multinuclear NMR spectroscopy, X-ray diffraction method and quantum chemical calculations.



X = Y = F (**3**); X = Ph, Y = F (**5**);
X = Me, Y = F (**9**)

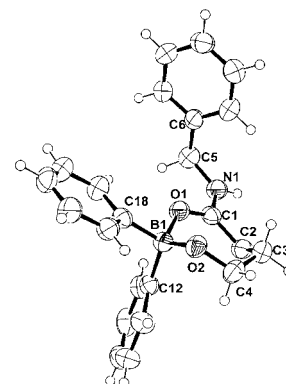
**Raúl Salas-Coronado,
Raúl Colorado-Peralta,
Sonia A. Sánchez-Ruiz,
Rosalinda Contreras,
Angelina Flores-Parra**

J. Organomet. Chem. 694 (2009) 616

Seven membered ring chelates derived from γ -hydroxyamides and triphenyltin or diphenylboron

New diphenylboron and triphenyltin compounds derived from γ -hydroxy-amides were prepared. The crystalline structure

of (R)-4-hydroxy-2-methyl-N-[(R)-1-phenyl-ethyl]-butyramide is reported, as well as that of the first example of a X-ray diffraction analysis of a crystalline structure where a diphenylborinic ester forms a seven membered chelate diphenylborinic acid 3-benzylcarbamoyl-propyl ester. Structural studies of tin and boron esters were performed by NMR. The C=O internal coordination to tin atoms, affording seven membered rings, was observed by ^{119}Sn NMR experiments at low temperature.

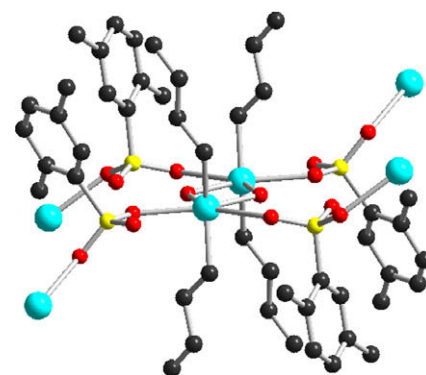


**Ramesh Kapoor, Anand Gupta,
Paloth Venugopalan,
Ajay Pal Singh Pannu,
Maninder Singh Hundal, Pratibha Kapoor**

J. Organomet. Chem. 694 (2009) 623

Structural studies of diorganotin(IV) sulfonates: The synthesis of $[(n\text{-C}_4\text{H}_9)_2\text{Sn}\{\text{OSO}_2\text{C}_6\text{H}_3(\text{CH}_3)_2\text{-2,5}\}_2]$ and $[(n\text{-C}_4\text{H}_9)_2\text{Sn}\{\text{OSO}_2\text{R}\}_2 \cdot 2(\text{hexamethylphosphoric triamide})]$ [R = CH₃, 4-C₆H₄CH₃, 2,5-C₆H₃(CH₃)₂, 2,4,6-C₆H₂(CH₃)₃] and crystal structures of $[(n\text{-C}_4\text{H}_9)_2\text{Sn}(\mu\text{-OH})(\text{OSO}_2\text{C}_6\text{H}_3(\text{CH}_3)_2\text{-2,5})_2]$ and $(n\text{-C}_4\text{H}_9)_2\text{Sn}\{\text{OSO}_2\text{R}\}_2 \cdot 2(\text{hexamethylphosphoric triamide})]$ [R = 4-C₆H₄CH₃, 2,5-C₆H₃(CH₃)₂, 2,4,6-C₆H₂(CH₃)₃]

Reaction of $(n\text{-C}_4\text{H}_9)_2\text{SnO}$ with 2,5-dimethylbenzenesulphonic acid yields $[(n\text{-C}_4\text{H}_9)_2\text{Sn}\{\text{OSO}_2\text{C}_6\text{H}_3(\text{CH}_3)_2\text{-2,5}\}_2]$ which on crystallization yields a dimeric compound $[(n\text{-C}_4\text{H}_9)_2\text{Sn}(\mu\text{-OH})(\text{OSO}_2\text{C}_6\text{H}_3(\text{CH}_3)_2\text{-2,5})_2]$ containing bridging hydroxyl groups between Sn atoms and covalently bonded sulfonate anions.

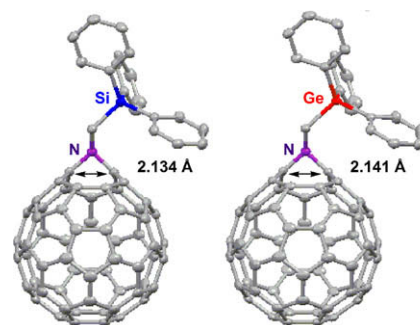


**Houjin Hachiya, Toshiyuki Kakuta,
Makoto Takami, Yoshio Kabe**

J. Organomet. Chem. 694 (2009) 630

Syntheses and crystal structures of azafulleroid and aziridinofullerene bearing silyl or germyl benzene

We have demonstrated the X-ray crystal structures of two azafulleroids with the help of silyl and germylphenyl-C₆₀ effective interactions. POAV analysis leads to a strong enhancement of homoconjugation in the bridged annulene moiety.



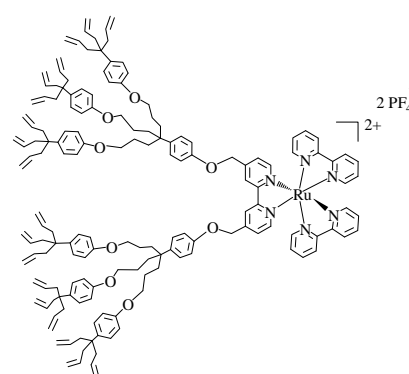
X-ray crystal structures of two azafulleroid ([5,6]open)

Claire Jahier, Sylvain Nlate

J. Organomet. Chem. 694 (2009) 637

Dendritic polyallyl and polyferrocenyl bipyridine ligands: Synthesis, MALDI-TOF characterization and ruthenium(II) complexation studies

Dendritic polyallyl- and polyferrocenyl bipyridine ligands were synthesized by the coupling of 4,4'-bis(bromomethyl)-2,2'-bipyridine with AB3 and AB9 dendrons. The complexation studies indicates that in contrast to the bulky ferrocenyl ligand, the allyl counterparts react with $\text{Ru}(\text{bpy})_2\text{Cl}_2$ to give the corresponding complexes. These compounds were successfully characterized by MALDI-TOF mass spectrometry.

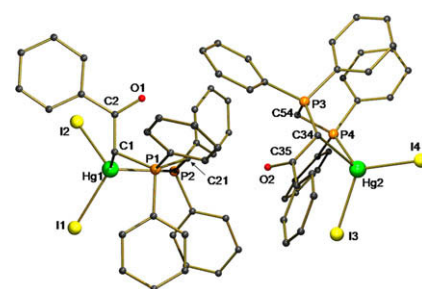


**Mothi Mohamed Ebrahim,
Krishnaswamy Panchanatheswaran,
Antonia Neels, Helen Stoeckli-Evans**

J. Organomet. Chem. 694 (2009) 643

Mercury(II) complexes of stabilized phosphine–phosphonium ylide derived from bis(diphenylphosphino)methane: Synthesis, spectra and crystal structures

The reaction of a mixed phosphine–phosphonium ylide, $\text{PPh}_2\text{CH}_2\text{PPh}_2=\text{C}(\text{H})\text{C}(\text{O})\text{Ph}$ with mercury(II) halides in methanol under mild conditions yielded the P, C-chelated complexes, $[\text{HgX}_2(\text{PPh}_2\text{CH}_2\text{PPh}_2\text{C}(\text{H})\text{C}(\text{O})\text{Ph})]$ where $\text{X} = \text{Cl}$ (2), Br (3), I (4). The five-membered chelate rings in the two independent molecules present in the asymmetric unit of **4** adopt ‘envelope’ and ‘twist’ conformations.

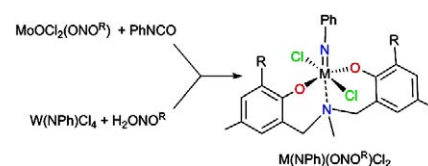


**Ari Lehtonen, Hynek Balcar,
Reijo Sillanpää**

J. Organomet. Chem. 694 (2009) 649

Aminobis(phenolate)s of imidomolybdenum(VI) and -tungsten(VI)

Air-stable imidotungsten(VI) and imidomolybdenum(VI) complexes with tridentate aminobis(phenolate) ligands were prepared. A tungsten derivative $[\text{W}(\text{NPh})(\text{ONO}^{\text{R}})\text{Cl}_2]$ reacts further with MeMgI to yield air- and moisture-stable organometallic compound *cis*- $[\text{W}(\text{NPh})(\text{ONO}^{\text{R}})(\text{Me})_2]$.

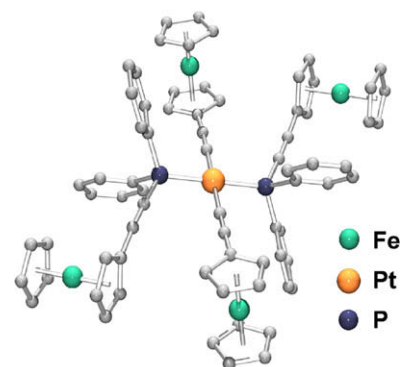


**Alexander Jakob, Petra Ecorchard,
Michael Linseis, Rainer F. Winter,
Heinrich Lang**

J. Organomet. Chem. 694 (2009) 655

Synthesis, solid state structure and spectro-electrochemistry of ferrocene-ethynyl phosphine and phosphine oxide transition metal complexes

The synthesis of compounds $(\text{Fc}\equiv\text{C})_n\text{-Ph}_{3-n}\text{P}$ ($\text{Fc} = (\eta^5\text{-C}_5\text{H}_5)(\eta^5\text{-C}_5\text{H}_4)\text{Fe}$) and their complexation behavior toward PtCl_2 , AuCl and $\text{AuC}\equiv\text{CMc}$ ($\text{Mc} = \text{Fc}$, Rc ; $\text{Rc} = (\eta^5\text{-C}_5\text{H}_5)(\eta^5\text{-C}_5\text{H}_4)\text{Ru}$) is described. The structure of six molecules in the solid state and the spectro-electrochemical properties of *trans*- $[\{(\text{Fc}\equiv\text{C})\text{Ph}_2\text{P}\}_2\text{Pt}(\text{C}\equiv\text{CFc})_2]$, $[\{(\text{Fc}\equiv\text{C})\text{Ph}_2\text{P}\}\text{AuC}\equiv\text{C-Mc}]$, $[\{(\text{Fc}\equiv\text{C})\text{Ph}_2\text{P}\}\text{AuCl}]$, and $[\{(\text{Ph}_3\text{P})\text{AuC}\equiv\text{CFc}]$ for comparison, are reported.

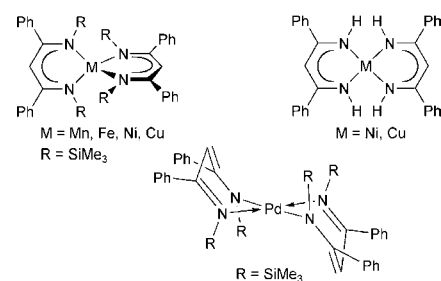


**Peter B. Hitchcock, Michael F. Lappert,
Mikko Linnolahti, Rafaël Sablong,
John R. Severn**

J. Organomet. Chem. 694 (2009) 667

Synthesis and structures of the transition metal(II) β -diketiminates $[\text{ML}_2]$ ($\text{M} = \text{Mn}$, Fe , Ni , Cu , Pd), $[\text{ML}'_2]$ ($\text{M} = \text{Ni}$, Cu) and $[\text{M}(\eta^3\text{-C}_3\text{H}_5)\text{L}]$ ($\text{M} = \text{Ni}$, Pd); L or $\text{L}' = \{[\text{N}(\text{SiMe}_3 \text{ or } \text{H})\text{C}(\text{Ph})_2\text{CH}]$

The X-ray analysis of the homoleptic metal(II) β -diketiminates showed three structural types: (i) pseudo-tetrahedral complexes with planar rings formed by the metal atom M and the $\kappa^2\text{-N,N'}$ -coordinated ligand ($\text{M} = \text{Mn}$, Fe , Ni , Cu), (ii) square-planar complexes with planar metal–ligand rings ($\text{M} = \text{Ni}$, Cu), and (iii) a square-planar complex with boat-shaped M-L rings ($\text{M} = \text{Pd}$).

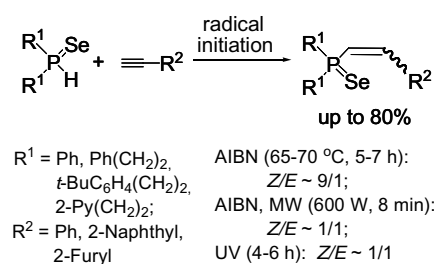


Boris A. Trofimov, Nina K. Gusarova, Svetlana N. Arbuzova, Nina I. Ivanova, Alexander V. Artem'ev, Pavel A. Volkov, Igor' A. Ushakov, Svetlana F. Malysheva, Vladimir A. Kuimov

J. Organomet. Chem. 694 (2009) 677

Stereoselective free-radical addition of secondary phosphine selenides to aromatic acetylenes

Reported herein are the stereoselective free-radical additions (AIBN, 65–70 °C) of secondary phosphine selenides to aromatic and heteroaromatic acetylenes. UV irradiation of the reactants distorts stereoselectivity due to isomerization of the primary Z-adducts. Microwave activation of the process allows the reaction time to be reduced significantly.



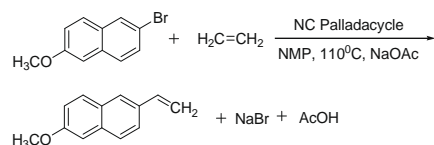
Shashi B. Atla, Ashutosh A. Kelkar, Vedavati G. Puranik, Wolfgang Bensch, Raghunath V. Chaudhari

J. Organomet. Chem. 694 (2009) 683

NC palladacycles in the Heck arylation of ethylene: Synthesis, structure and their reactivity

New NC palladacycles have been prepared and used in the arylation of ethylene with industrially important substrate 2-bromo-

6-methoxynaphthalene to give 2-vinyl-6-methoxynaphthalene, an intermediate for the synthesis of anti-inflammatory drug naproxen. The structures of new palladacycles have been determined by single crystal X-ray diffraction studies. The NC palladacycles exhibit excellent catalytic activity with TOF > 4000 h⁻¹. Finally the NC palladacycles have also been demonstrated in the arylation of ethylene with 3-bromo-benzophenone and 4-bromo-isobutylbenzene, the precursors of Ketoprofen and Ibuprofen, respectively.

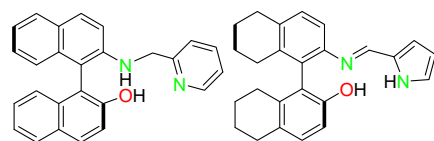


Qiuwen Wang, Li Xiang, Haibin Song, Guofu Zi

J. Organomet. Chem. 694 (2009) 691

Synthesis, structure, and catalytic activity of binuclear lanthanide complexes with chiral NOBIN-based NNO ligands

Two new binuclear lanthanide amides with chiral NNO ligands have been prepared. They are active catalysts for the asymmetric hydroamination/cyclization of aminoalkenes and the ring-opening polymerization of *rac*-lactide, affording cyclic amines in excellent conversions with moderate ee values and isotactic-rich polylactides, respectively.

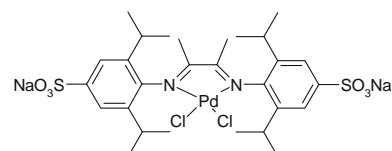
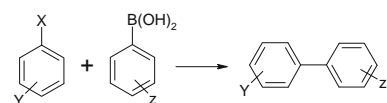


Jin Zhou, Xuming Guo, Changzheng Tu, Xiaoyan Li, Hongjian Sun

J. Organomet. Chem. 694 (2009) 697

Aqueous Suzuki coupling reaction catalyzed by water-soluble diimine/Pd(II) systems

A series of water-soluble diimine ligands were applied for the Suzuki reaction of arylbromide in different media. Low loading of catalyst (0.01 mol%) were necessary for the coupling reaction to proceed in water or water/ethanol. The catalytic system was found to tolerate a broad range of functional groups.

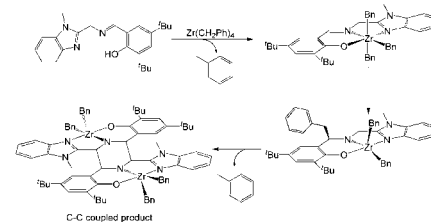


**Renan Cariou, Vernon C. Gibson,
Atanas K. Tomov, Andrew J.P. White**

J. Organomet. Chem. 694 (2009) 703

Group 4 metal complexes bearing new tridentate (NNO) ligands: Benzyl migration and formation of unusual C–C coupled products

A series of Group 4 metal complexes bearing new phenoxy(benzimidazolyl)-imine, -amine and -amide ligands has been synthesized. Derivatives containing benzyl ligands undergo benzyl migration and an unusual C–C coupling process to afford binuclear species in which the metals are linked by a central piperazine unit. Deuterium labelling experiments have been employed to determine the mechanistic pathways for these reactions.

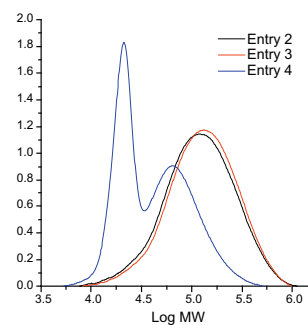


**Carolina Valdebenito,
María Teresa Garland, Raul Quijada,
Rene Rojas**

J. Organomet. Chem. 694 (2009) 717

Acetamidine complexes as catalysts for ethylene polymerization

New (N)-imidoylamidine nickel complexes polymerize ethylene in good yield and afford a polymer of high molecular weight ($80\text{--}169 \times 10^3 \text{ g mol}^{-1}$) and a monomodal molecular weight distribution (M_w/M_n 1.8). Variation of the polymerization conditions (increasing polymerization temperature) results in a bimodal molecular weight distribution, likely indicating the activation of a secondary active site.



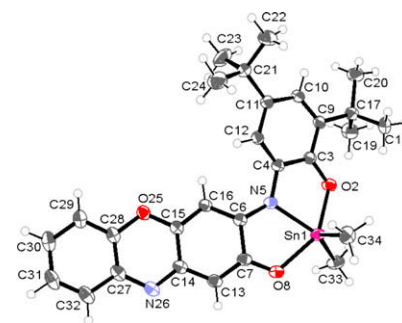
GPC analysis of the polyethylene isolated from:
catalysts **3a** + **3b/MAO**; 2 - 4 bar, 60-70 °C.

**Carlos Camacho-Camacho,
Adriana Esparza-Ruiz,
Aurora Vásquez-Badillo, Heinrich Nöth,
Angelina Flores-Parra,
Rosalinda Contreras**

J. Organomet. Chem. 694 (2009) 726

Fused hexacyclic tin compounds derived from 3-(3,5-di-*t*-butyl-2-hydroxy-phenylimino)-3H-phenoxazin-2-ol

The template synthesis of dimethyl (**1**) and diphenyl tin (**2**) compounds [N→Sn] 3-(2-oxo-phenylimino)-3H-phenoxazin-2-oxo-tin (**1**) is reported. They are fused delocalized planar hexacyclic systems bearing a penta-coordinated diorganyl tin and were identified by NMR, IR, TOF mass spectra and, for **1**, by X-ray diffraction analysis.

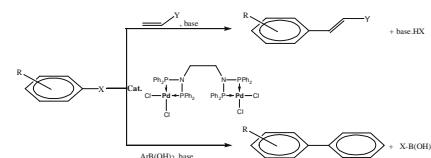


**Osman Akba, Feyyaz Durap,
Murat Aydemir, Akın Baysal,
Bahattin Gümgüm, Saim Özkar**

J. Organomet. Chem. 694 (2009) 731

Synthesis and characterizations of *N,N,N',N'*-tetrakis (diphenylphosphino)-ethylenediamine derivatives: Use of palladium(II) complex as pre-catalyst in Suzuki coupling and Heck reactions

Metal complexes {Ni (II), Pd (II) and Pt (II)} and oxidation products (sulfide and selenide) of *N,N,N',N'*-tetrakis(diphenylphosphino)ethylenediamine, [(Ph₂P)₂NCH₂CH₂N(PPh₂)₂] (**1**) have been prepared and characterized. The catalytic behaviour of the Pd(II) complex was investigated in the Suzuki coupling and Heck reactions.

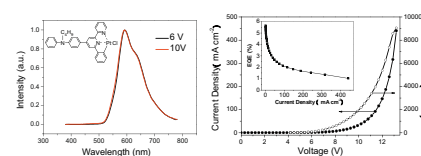


**Dongfang Qiu, Jiang Wu, Zhiyuan Xie,
Yanxiang Cheng, Lixiang Wang**

J. Organomet. Chem. 694 (2009) 737

Synthesis, photophysical and electrophosphorescent properties of mononuclear Pt(II) complexes with arylamine functionalized cyclometalating ligands

Novel orange phosphorescent emitter: The neutral-charged C[∧]N[∧]N Pt(II) halide with arylamine functionalized cyclometalating ligand displays an efficient phosphorescent emission with a current efficiency of 11.3 cd A⁻¹ and no apparent voltage-dependence from 6 V to 10 V.

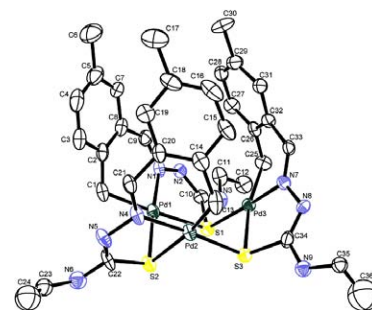


**Luis Adrio, José M. Antelo,
Jesús J. Fernández, King Kuok (Mimi) Hii,
M^a Teresa Pereira, José M. Vila**

J. Organomet. Chem. 694 (2009) 747

[Pd{2-CH₂-5-MeC₆H₃C(H)=NN=C(S)NH-Et}]₃: An unprecedented trinuclear cyclometallated palladium(II) cluster through induced flexibility in the metallated ring

The trinuclear cyclometallated palladium(II) compound (2), with σ carbon(sp³)-metal bonding, contains a non-planar hexagonal metallated ring plus a central six-membered core of alternating palladium and sulfur atoms.

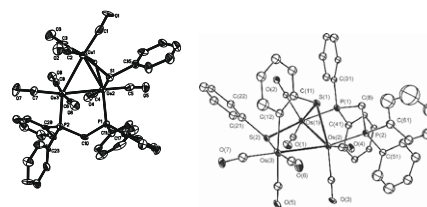


**Arun K. Raha, Shishir Ghosh,
Shariff E. Kabir, Brian K. Nicholson,
Derek A. Tocher**

J. Organomet. Chem. 694 (2009) 752

Cleavage of Ge-S and C-H bonds in the reaction of electron-deficient [Os₃(CO)₈(μ -H)(μ -3-Ph₂PCH₂P(Ph)C₆H₄)] with Ph₃GeSPh: Generation of thiophenol derivatives [Os₃(CO)₈(μ -H)(μ -SPh)(μ -dppm)] and [Os₃(CO)₇(μ -H)(μ -SPh)(μ -3-SC₆H₄)(μ -dppm)]

Reaction of the electron-deficient [Os₃(CO)₈(μ -H)(μ -3-Ph₂PCH₂P(Ph)C₆H₄)] (1) with Ph₃GeSPh at 80 °C led to two triosmium compounds, [Os₃(CO)₈(μ -H)(μ -SPh)(μ -dppm)] (2) and [Os₃(CO)₇(μ -H)(μ -SPh)(μ -3-SC₆H₄)(μ -dppm)] (3). Compound 3 represents a rare example of a structurally characterized orthometallated arylthiolate ligand on a triosmium cluster.

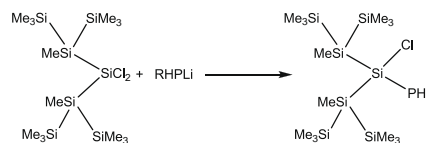


A. Dzambasky, J. Baumgartner, K. Hassler

J. Organomet. Chem. 694 (2009) 757

Phosphanes with bulky oligosilyl substituents

By reaction of the dichloroheptasilane [(SiMe₃)₂MeSi]₂SiCl₂ with the bulky phosphanes RHPLi with R either supermesityl or hypersilyl, the sterically hindered oligosilyl-substituted phosphanes [(SiMe₃)₂MeSi]₂SiCIPHR have been prepared. Subsequent lithiation afforded the unusually stable phosphanides [(SiMe₃)₂MeSi]₂SiCIPLiR which showed no bias for LiCl-elimination.

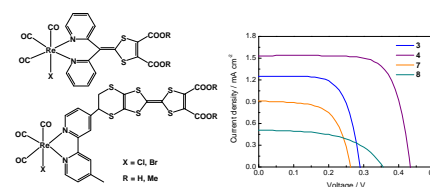


Ya Chen, Wei Liu, Jian-Shi Jin, Bin Liu, Zhi-Gang Zou, Jing-Lin Zuo, Xiao-Zeng You

J. Organomet. Chem. 694 (2009) 763

Rhenium(I) tricarbonyl complexes with bispyridine ligands attached to sulfur-rich core: Syntheses, structures and properties

Rhenium(I) tricarbonyl complexes with bispyridine ligands incorporating with delocalized sulfur-rich units, $\text{Re}(\text{CO})_3(\text{Medpydt})\text{X}$ and $\text{Re}(\text{CO})_3(\text{MebpyTTF})\text{X}$, have been prepared. Hydrolysis of the above complexes affords the analogue products with carboxylate derivatives. Complexes 3–6 exhibit blue to red emissions. The performance of some typical complexes as photosensitizers for anatase TiO_2 solar cells has been preliminarily investigated.

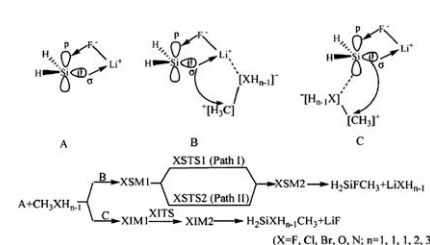


Yuhua Qi, Dacheng Feng, Rui Li, Shengyu Feng

J. Organomet. Chem. 694 (2009) 771

Theoretical study on the substitution and insertion reactions of silylenoid H_2SiLiF with $\text{CH}_3\text{XH}_{n-1}$ ($\text{X} = \text{F}, \text{Cl}, \text{Br}, \text{O}, \text{N}; n = 1, 1, 1, 2, 3$)

The substitution reactions of H_2SiLiF (A) with $\text{CH}_3\text{XH}_{n-1}$ ($\text{X} = \text{F}, \text{Cl}, \text{Br}, \text{O}, \text{N}; n = 1, 1, 1, 2, 3$) proceed via two reaction paths, forming the same product H_2SiFCH_3 . The insertion reactions of A with $\text{CH}_3\text{XH}_{n-1}$ form $\text{H}_2\text{SiXH}_{n-1}\text{CH}_3$. The substitution reactions occur more readily than the insertion reactions for A with $\text{CH}_3\text{XH}_{n-1}$ systems.

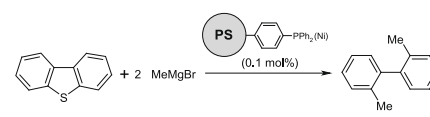


Jorge Torres-Nieto, Juventino J. García

J. Organomet. Chem. 694 (2009) 780

Catalytic desulfurization of dibenzothiophene using nickel supported on cross-linked polystyrene- PPh_3 catalysts

Nickel catalysts supported on polystyrene- PPh_3 (0.1 mol% Ni) were used for the desulfurization of dibenzothiophene (DBT) quantitatively yielding 2,2'-dimethylbiphenyl as the sulfur-free product.

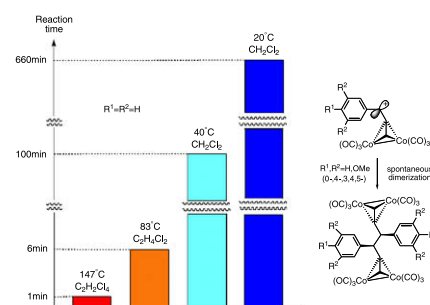


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High-temperature reaction of a $\text{Co}_2(\text{CO})_6$ -complexed propargyl cation

The novel high-temperature reaction of $\text{Co}_2(\text{CO})_6$ -propargyl cations (up to 147 °C), occurring in the spontaneous and stereoselective (90–97% *d,l*-) manner and yielding the radical dimers, *d,l*-3,4-diaryl-1,5-hexadiynes, is described.



Note

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Two coordination modes of TCNE in the ruthenium amidinates: The first example providing experimental evidence for κ^1 -N to η^2 -C rearrangement

A stable ruthenium amidinate having a " κ^1 -N"-coordinated TCNE, $\text{Cp}^*\text{Ru}(\kappa^2\text{-N}(\text{tBu})=\text{C}(\text{Mes})\text{N}(\text{tBu}))(\kappa^1(\text{N})\text{-TCNE})$ (**2c**), is synthesized by treatment of $\text{Cp}^*\text{Ru}(\kappa^2\text{-N}(\text{tBu})=\text{C}(\text{Mes})\text{N}(\text{tBu}))$ (**1c**) with TCNE, and the charge transfer nature is supported by ESR analysis. Close analogy in IR and UV-Vis spectroscopy of **2c** with the intermediary species formed from the Ph analogue of **1c** suggests that this intermediary product is " κ^1 -N TCNE" ruthenium amidinate, which is rearranged to the " η^2 -C TCNE" complex.

