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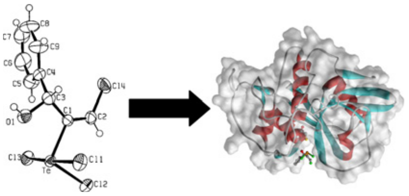
Regular papers

Rodrigo L.O.R. Cunha,
Julio Zukerman-Schpector, I. Caracelli,
João V. Comasseto

J. Organomet. Chem. 691 (2006) 4807

Revisiting the addition reaction of $TeCl_4$ to alkynes: The crystal structure and docking studies of 1-chloro-2-trichlorotelluro-3-phenylpropen-2-ol

The reaction of addition of $TeCl_4$ to alkynes is discussed. The title compound is a potent cysteine protease inhibitor and shows a peculiar supramolecular α-helix arrangement in the solid state and was used in docking studies using human cathepsin B.

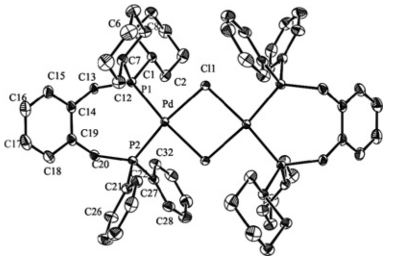


Antonella Leone, Sebastian Gischig,
Giambattista Consiglio

J. Organomet. Chem. 691 (2006) 4816

Carbonylation studies of Pd-methyl complexes modified with 1,4-C_s-symmetrical diphosphine ligands

Neutral palladium methyl chloride **2a**–**d** [$PdCH_3(P^\wedge P')Cl$] and cationic palladium methyl acetonitrile mono-triflate **3a**–**d** [$PdCH_3(P^\wedge P')(CH_3CN)$]($CF_3SO_3$) complexes were carbonylated. A mixture of isomers resulted after the carbonylation reaction.

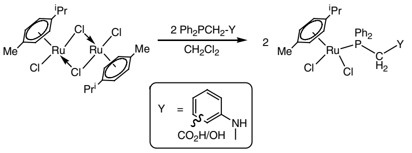


Sandra E. Dann, Sean E. Durran,
Mark R.J. Elsegood, Martin B. Smith,
Paul M. Staniland, Salem Talib,
Sophie H. Dale

J. Organomet. Chem. 691 (2006) 4829

Supramolecular chemistry of half-sandwich organometallic building blocks based on $RuCl_2$(*p*-cymene)Ph_2PCH_2Y

A series of mononuclear, half-sandwich ruthenium(II) complexes, $RuCl_2$(*p*-cymene)-Ph_2PCH_2Y [Y = -NHC_6H_4(2-CO_2H), -NH-C_6H_4(3-CO_2H), -NHC_6H_3(3-CO_2H)(6-OCH_3), -NHC_6H_4(4-CO_2H), -NHC_6H_3(2-CO_2H)(4-OH), -NHC_6H_3(3-OH)(4-CO_2H), -NHC_6H_3(2-CO_2H)-(5-CO_2H) and -OH], have been prepared and studied by multinuclear NMR spectroscopy, single crystal and powder X-ray diffraction. The crystal structures (nine examples) illustrate a diverse array of H-bonded supramolecular assemblies.



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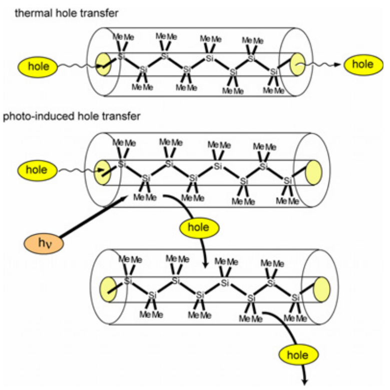
doi:10.1016/S0022-328X(06)00795-9

Hiroto Tachikawa, Hiroshi Kawabata

J. Organomet. Chem. 691 (2006) 4843

Electronic structures of permethyloligosilane radical cations at the ground and low-lying excited states

The electronic structures at the ground and low-lying excited states of permethyloligosilane radical cations, $\mathrm{Si}_n(\mathrm{CH}_3)_{2n+2}{}^+$ (n = 4–7), have been investigated using DFT and ab initio calculations. Models of hole transport in oligosilane radical cation are proposed on the basis of theoretical results. The hole transport ay thermal condition and hole transport caused by photo-irradiation have been proposed.

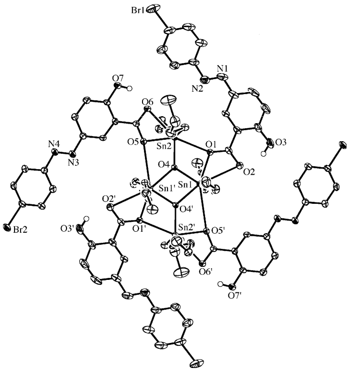


Tushar S. Basu Baul, Wandondor Rynjah, Eleonora Rivarola, Antonin Lyčka, Michal Holčapek, Robert Jirásko, Dick de Vos, Ray J. Butcher, Anthony Linden

J. Organomet. Chem. 691 (2006) 4850

Synthesis and characterization of bis-[dicarboxylatotetraorganodistannoxane] units involving 5-[(*E*)-2-(aryl)-1-diazenyl]-2-hydroxybenzoic acids: An investigation of structures by X-ray diffraction, NMR, electrospray ionisation MS and assessment of in vitro cytotoxicity

Di-*n*-butyltin(IV) complexes of the type $\{[^n\mathrm{Bu}_2\mathrm{Sn(LH)}]_2\mathrm{O}\}_2$ (LH = 5-[(*E*)-2-(aryl)-1-diazenyl]-2-hydroxybenzoate) have been prepared and characterized by NMR, ESI-MS, IR and ^{119m}Sn Mössbauer spectroscopy. The crystal structures of $\{[^n\mathrm{Bu}_2\mathrm{Sn}(\mathrm{L}^1\mathrm{H})]_2\mathrm{O}\}_2$ (**1**), $\{[^n\mathrm{Bu}_2\mathrm{Sn}(\mathrm{L}^4\mathrm{H})]_2\mathrm{O}\}_2$ (**4**), $\{[^n\mathrm{Bu}_2\mathrm{Sn}(\mathrm{L}^5\mathrm{H})]_2\mathrm{O}\}_2$ (**5**) and $\{[^n\mathrm{Bu}_2\mathrm{Sn}(\mathrm{L}^6\mathrm{H})]_2\mathrm{O}\}_2$ (**6**) were determined. The in vitro cytotoxicity of **1** and **4** against human tumor cell lines is reported.

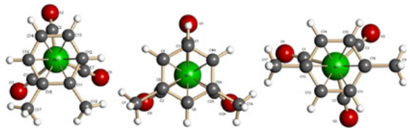


Michael P. DeMartino, Stephen M. Read, Arnold L. Rheingold

J. Organomet. Chem. 691 (2006) 4863

Intra- vs. intermolecular configurations in the three-legged, piano-stool compounds (*o*, *m* and *p*-xylene)Mo(CO)$_3$

The three (η^6-xylene)Mo(CO)$_3$ complexes have been prepared and crystallographic characterized to study the rotational relationship of the arene ring to the Mo(CO)$_3$ undercarriage of these three-legged, piano-stool complexes. When viewed as a group, and with additional consideration given to other related systems, it is concluded that, despite theoretical claims otherwise, there is no consistent pattern seen.

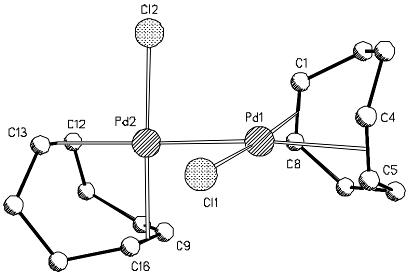


Matthias Schwalbe, Dirk Walther, Heike Schreer, Jens Langer, Helmar Görls

J. Organomet. Chem. 691 (2006) 4868

A new synthesis for thermolabile low-valent palladium complexes by electron transfer reactions from nickel(0) to palladium(II) compounds

The nickel(0) complex [Ni(bpy)(cod)] (bpy: 2.2′-bipyridine, cod: cycloocta-1.5-diene) was used as a mild reducing reagent for the synthesis of the extremely reactive low-valent palladium complexes $[\mathrm{Pd}_2\mathrm{X}_2(\mathrm{cod})_2]$ (**1**: X = Cl, **2**: X = Br), Pd(cod)$_2$ (**3**) and Pd(norbornene)$_3$ (**4**). Compounds **1**–**4** were structurally characterized by ^{1}H NMR spectroscopy and X-ray analyses.

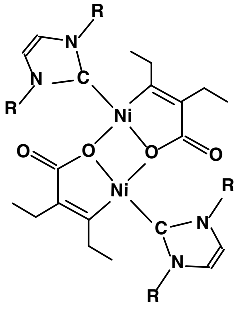


Jens Langer, Dirk Walther, Helmar Görls

J. Organomet. Chem. 691 (2006) 4874

Saturated and unsaturated nickelalactones with N-heterocyclic carbene ligands: Synthesis and structures

Nickelalactones with N-heterocyclic carbene ligands $[(py)(im^{mes})Ni(CH_2CH_2COO)]$ (**1**), $[(im^{mes})Ni(CH_2CH_2COO)]_2$ (**2**) $[(im^{t\text{-but}})Ni(C(Et){=}C(Et)\text{-}COO)]_2$ (**3**), $[(im^{mes})Ni(C(Et){=}C(Et)\text{-}COO)]_2$ (**4**) and $[(im^{mes})Ni(CH_2\cdots C(CH_3)\cdots C(CH_3)\text{-}CH_2\text{-}COO)]$ (**5**) (im^{mes}): 1, 3-dimesityimidazol-2-ylidene, $im^{t\text{-but}}$: (1,3-di-*t*-butylimidazol-2-ylidene) were synthesized and structurally investigated. $[(im^{mes})_2Ni$ reacted with 2,3-dimethylbutadiene and CO_2 under oxidative coupling of the two dienes followed by insertion of CO_2 to form the dimeric complex **6**.



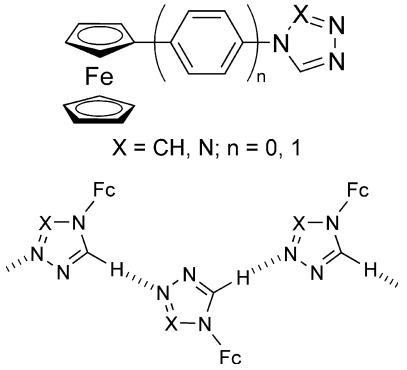
3: R = t-but
4: R = mes

Tomoyuki Mochida, Hirotaka Shimizu, Shinya Suzuki, Takahiro Akasaka

J. Organomet. Chem. 691 (2006) 4882

Synthesis and properties of azole-substituted ferrocenes

4-Ferrocenyltriazole, 4-(4-ferrocenylphenyl)-triazole, 4-ferrocenyltetrazole, and 4-(4-ferrocenylphenyl)tetrazole have been prepared. Redox potentials and decomposition temperatures were evaluated and all the compounds were crystallographically characterized; in most cases, weak intermolecular CH···N hydrogen bonds (H···N dist. = 2.3–2.5 Å) were formed between the azole moieties. Two polymorphs were found for 4-ferrocenyltetrazole, formed with either CH···N or π–π interactions.

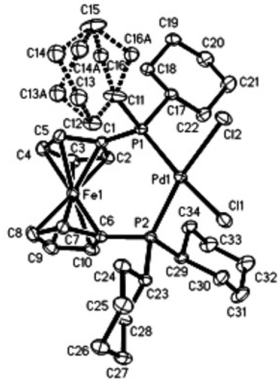


Laura E. Hagopian, Alison N. Campbell, James A. Golen, Arnold L. Rheingold, Chip Nataro

J. Organomet. Chem. 691 (2006) 4890

Synthesis and electrochemistry of late transition metal complexes containing 1,1′-bis(dicyclohexylphosphino)ferrocene (dcpf). The X-ray structure of $[PdCl_2(dcpf)]$ and Buchwald–Hartwig catalysis using $[PdCl_2\text{-}(bisphosphinometallocene)]$ precursors

Various $[PdCl_2(bisphosphinometallocene)]$ complexes were examined as catalyst precursors for the Buchwald–Hartwig reaction. Correlations between ligand bite angle, electrochemical data and catalyst efficiency were explored.

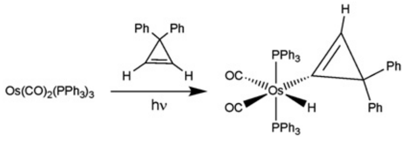


George R. Clark, Warren R. Roper, Deborah M. Tonei, L. James Wright

J. Organomet. Chem. 691 (2006) 4901

C–H Activation of 3,3-diphenylcyclopropene in the reaction with $Os(CO)_2(PPh_3)_3$: 3,3-diphenylcyclopropenyl, 2,2-diphenylcyclopropyl, and 3-phenylindenyl complexes of osmium(II)

In a new pathway for the reaction of 3,3-diphenylcyclopropene with low-valent metal complexes, the reaction with $Os(CO)_2(PPh_3)_3$ leads to a C–H activation process giving the 3,3-diphenylcyclopropenyl complex, $OsH\text{-}[C_3H(Ph\text{-}2)_2](CO)_2(PPh_3)_2$. This complex is thermally unstable and readily rearranges to the 3-phenylindenyl complex, $OsH[C_9H_6(Ph\text{-}3)](CO)_2(PPh_3)_2$.

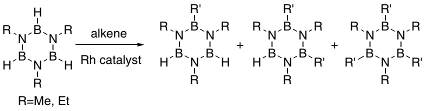


Yasunori Yamamoto, Kazuo Miyamoto, Junko Umeda, Yasutaka Nakatani, Tetsuya Yamamoto, Norio Miyaura

J. Organomet. Chem. 691 (2006) 4909

Synthesis of *B*-trisubstituted borazines via the rhodium-catalyzed hydroboration of alkenes with *N*,*N*′,*N*″-trimethyl or *N*,*N*′,*N*″-triethylborazine

A complex prepared from dppb or DPEphos (1 equiv.) to $RhH(CO)(PPh_3)_3$ gave the best catalyst for ethylene and $(t\text{-}Bu)_3P$ (4 equiv.) and $[Rh(coe)_2Cl]_2$ was used for terminal or internal alkenes.

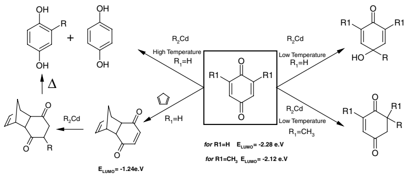


Mehdi Ghandi, Mansour Shahidzadeh

J. Organomet. Chem. 691 (2006) 4918

Experimental and semiemprical studies of chemical reactivity of dialkylcadmium reagents addition to α,β-enones

The establishment of a correlation scale between the substrate LUMO energy and the reactivity including addition type and mechanism either a single electron transfer (SET) or a polar in addition reaction of dialkylcadmium reagent to α,β-enone system will be presented in this article.



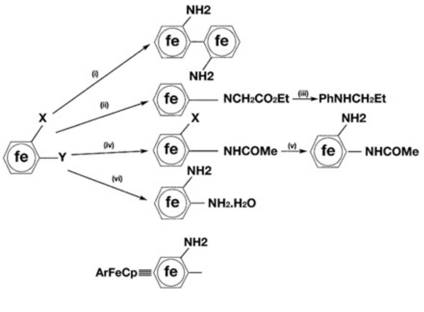
R.M.G. Roberts

J. Organomet. Chem. 691 (2006) 4926

Synthesis of (η^6-arene)(η^5-cyclopentadienyl) iron (II) complexes with heteroatom and carbonyl substituents Part II, Amino substituents

Synthesis of arene-cyclopentadienyl iron (II) complexes having amino and amido substituents using microwave-mediated reactions and conventional methods, including rapid arylation of aminoacids.

(i) Ferrocene, $ALCl_3$, graphite, Devarda's alloy, microwave (X = F, Y = NH_2)
(ii) $[EtO_2CCH_2NH_3][Cl]$, Et_3N, graphite, DMF, microwave (X = H, Y = F)
(iii) KOtBu, microwave
(iv) Ac_2O (X = F,Cl), Y = NH_2
(v) [NH4][OH]
(vi) $(Me_3Si)_2NH$, PhOH, DMSO (X = F, Y = NH_2)

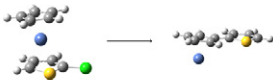


G. Innorta, S. Torroni

J. Organomet. Chem. 691 (2006) 4931

Reactions of $C_5H_5M^+$ (M = Fe, Ni) with substituted thiophenes

Gas phase HR elimination and formation of a new C–C bond involving ligated Cp ring.

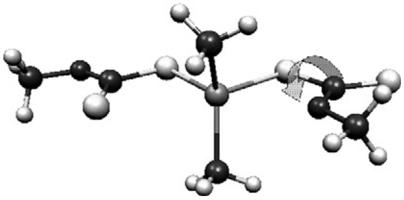


Joaquín Barroso-Flores, J.A. Cogordan

J. Organomet. Chem. 691 (2006) 4937

Influence of intramolecular Sn–chalcogen interactions on the conformational preferences for three diorganotin(IV) xanthates

The electronic effects ruling the *O*-Me-xanthate coordination preferences in three diorganotin(IV) xanthates are investigated. Computations at the RHF level of theory using different kinds of basis sets were carried out. NBO calculations and the inclusion of correlation energy through calculations at the MP4 level are included as well. Secondary bonding turns out to be one of the main factors in the stabilization of each conformer. The inclusion of relativistic effects within the pseudopotential yields results in agreement with previous experimental observations.

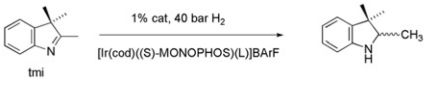


J.W. Faller, Suzanna C. Milheiro, Jonathan Parr

J. Organomet. Chem. 691 (2006) 4945

Imine hydrogenation catalyzed by iridium complexes comprising monodentate chiral phosphoramidites and N-donor ligands

The relatively inexpensive chiral monodentate phosphoramidite (*S*)-MONOPHOS may be used in combination with pyridines to prepare iridium complexes effective for catalysis of asymmetric imine hydrogenation with comparable enantioselectivity to some catalysts containing more costly chiral bidentate phosphines.

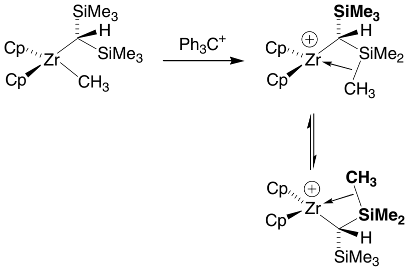


Edward J. Stoebenau III, Richard F. Jordan

J. Organomet. Chem. 691 (2006) 4956

Synthesis, structure and properties of the $Cp_2Zr\{CH(SiMe_3)_2\}^+$ cation

The generation and properties of the $Cp_2Zr\{CH(SiMe_3)_2\}^+$ cation are described. X-ray crystallographic and low temperature NMR results show that $Cp_2Zr\{CH(SiMe_3)_2\}^+$ contains an agostic Zr–μ-Me–Si interaction in the solid state and in solution.

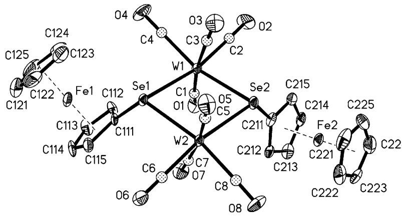


Mark R. Burgess, Su Jing, Christopher P. Morley, Carsten Thöne

J. Organomet. Chem. 691 (2006) 4963

Reactions of diferrocenyl dichalcogenides with $[W(CO)_5(THF)]$: X-ray crystal structures of Fc_2Te_2 and $[W_2(\mu\text{-}SeFc)_2(CO)_8]$ (Fc = $[Fe(\eta^5\text{-}C_5H_5)(\eta^5\text{-}C_5H_4)]$)

Treatment of $[W(CO)_5THF]$ with diferrocenyl diselenide, Fc_2Se_2, yielded the novel metal–metal bonded tungsten(I) complex, $[W_2(\mu\text{-}SeFc)_2(CO)_8]$ (**1**: Fc = ferrocenyl, $[Fe(\eta^5\text{-}C_5H_5)(\eta^5\text{-}C_5H_4)]$). The corresponding tellurium derivative could not be prepared by an analogous route. The structures of **1** and Fc_2Te_2 have been determined by X-ray crystallography.

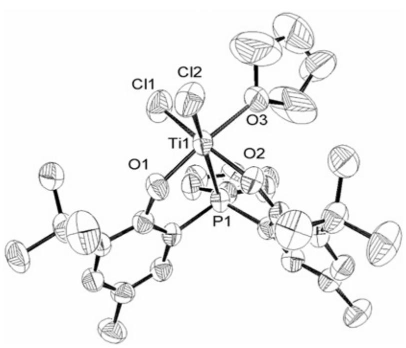


Hidenori Hanaoka, Yuka Imamoto, Takahiro Hino, Yoshiaki Oda

J. Organomet. Chem. 691 (2006) 4968

Synthesis and characterization of phosphorous-bridged bisphenoxy titanium complexes and their application to ethylene polymerization

Phosphorous-bridged bisphenoxy titanium complex **4a** was obtained by treatment of *n*-BuLi with phosphorous-bridged bisphenol (**3a**) followed by $TiCl_4(THF)_2$ in THF. THF-free complexes **5a**–**5d** were synthesized more conveniently by the direct reaction of MOM-protected ligands (**2a**–**2d**) with $TiCl_4$ in toluene. Ethylene polymerization behavior of the complexes was investigated.

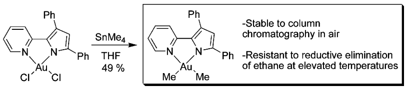


Stéphanie Schouteeten, Olivia R. Allen, Aireal D. Haley, Grace L. Ong, Gavin D. Jones, David A. Vicic

J. Organomet. Chem. 691 (2006) 4975

A robust dimethylgold(III) complex stabilized by a 2-pyridyl-2-pyrrolide ligand

The bidentate ligand 2-(3,5-diphenyl-1H-pyrrol-2-yl)pyridine (**8**) reacts with aqueous solutions of $NaAuCl_4$ with a formal loss of HCl to yield the ligated dichlorogold(III) complex (**11**) in high yields. Complex **11** is a convenient precursor to the corresponding dimethylgold(III) complex (**12**).



-Stable to column chromatography in air

-Resistant to reductive elimination of ethane at elevated temperatures

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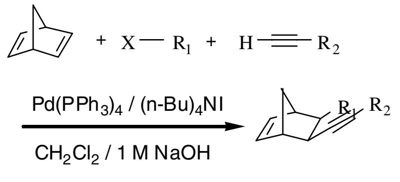
Yu-Cheng Chang, Chun-Jung Kuo, Chen-Shun Li, Charng-Hsing Liu

J. Organomet. Chem. 691 (2006) 4982

Palladium-catalyzed three-component coupling reaction of organic halides, norbornadiene and terminal alkynes

A three-component coupling reaction of organic halides, including aryl halides, methyl iodine, alkenyl iodine and bromoalkynes, with norbornadiene and terminal alkynes catalyzed by a palladium complex and a phase transfer agent in the presence of aqueous NaOH gave 5,6-disubstituted norbornene derivatives in good yields.



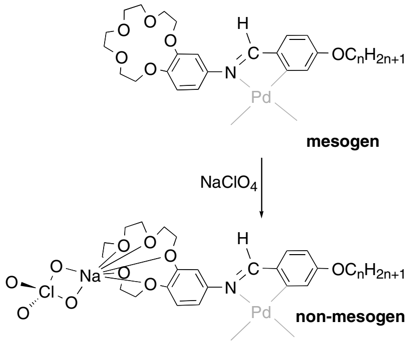
X = Br, I
R_1 = methyl, alkenyl, aryl, alkynyl

Javier Arias, Manuel Bardají, Pablo Espinet

J. Organomet. Chem. 691 (2006) 4990

Palladium(II) metallomesogens of crown ether derivatized imines, and their sodium adducts

Orthopalladation induces liquid crystal behavior in non-mesogenic imines containing one alkoxy chain and one crown ether moiety. The mesogenic properties are lost upon complexation with a sodium salt. All the compounds show extraction properties towards sodium picrate, better for the organometallic derivatives than for the free imines.

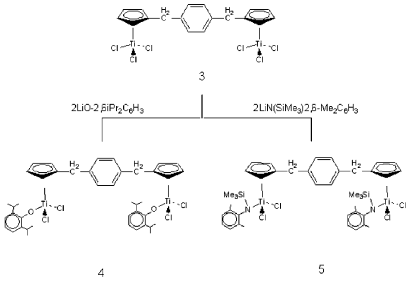


Seok Kyun Noh, Woosung Jung, Hyunsook Oh, Yong Rok Lee, Won Seok Lyoo

J. Organomet. Chem. 691 (2006) 5000

Synthesis and styrene polymerization properties of dinuclear half-titanocene complexes with xylene linkage

The new dinuclear half-sandwich complexes of titanium with xylene bridge, $[Ti(\eta^5\text{-cyclopentadienyl})Cl_2L]_2[CH_2–C_6H_4–CH_2]$ (L = Cl (**3**), L = O-2,6-iPr$_2$C$_6$H$_3$ (**4**), L = N(SiMe$_3$)-(2,6-Me$_2$C$_6$H$_3$) (**5**)), have been synthesized by the reaction of the complex **3** with the corresponding lithium salts of aryloxy and anilide. Structure of these complexes has been characterized by ^{1}H and ^{13}C NMR. It was found that all three half-titanocenes were effective catalyst for the generation of SPS (syndiotactic polystyrene). Xylene bridged dinuclear catalyst (**4**) with aryloxy substituent exhibited very high activity (458 kg of SPS/(mol of [Ti])h), at 40 °C, whereas the analogous hexamethylene bridged dinuclear half-titanocene catalyst (**7**) showed a lower activity (80.7 kg of SPS/(mol of [Ti])h) under the same conditions.

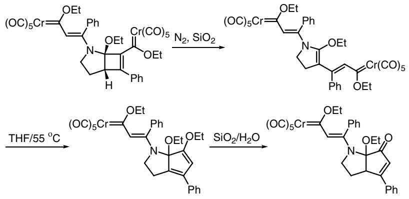


Zhaoyan Zheng, Zhengkun Yu, Liandi Wang, Wei He, Zishuang Liu, Xiuwen Han

J. Organomet. Chem. 691 (2006) 5007

Biscarbene complexes from the reactions of *O*-ethyl lactim and 1-alkynyl Fischer carbene complexes of chromium and tungsten

A chromium biscarbene complex with an azabicyclo[3.2.0]heptene core from the reaction of *O*-ethyl lactim ~(CH$_2$)$_3$–N═C(OEt)~ with 1-alkynyl Fischer carbene complex $(OC)_5Cr{=}C(OEt)C{\equiv}CPh$ underwent SiO$_2$-promoted rearrangement, thermal annelation and stepwise oxidation under controlled conditions.

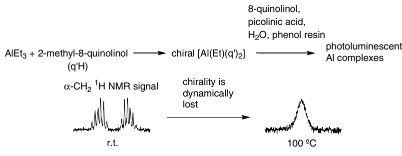


Takayuki Iijima, Takakazu Yamamoto

J. Organomet. Chem. 691 (2006) 5016

Synthesis of reactive [Al(Et)(q′)$_2$] (q′ = 2-methyl-8-quinolinolato) serving as a precursor of light emitting aluminum complexes: Reactivity, optical properties, and fluxional behavior of the aluminum complexes

Reaction of AlEt$_3$ with 2-methyl-8-quinolinol gave ethylbis(2-methyl-8-quinolinolato)aluminum complex [Al(Et)(q′)$_2$] (**1**). The complex **1** gave photoluminescent Al complexes by reactions with phenols, picolinic acid, and H$_2$O. The α-CH$_2$ hydrogens in the Et group of **1** was diastereotropic as revealed by ^{1}H NMR spectroscopy because of the presence of a chiral center at Al. The chirality at Al was dynamically lost at elevated temperature in CDCl$_2$CDCl$_2$ and DMSO-d_6, as indicated by temperature dependent ^{1}H NMR spectroscopy. Structures of some of the obtained Al complexes were confirmed by single-crystal X-ray crystallography. These Al complexes showed photoluminescence peaks at 492–507 nm in CHCl$_3$ with quantum yields of 7–23%.

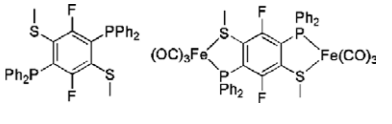


Natcharee Kongprakaiwoot, Rudy L. Luck, Eugenijus Urnezius

J. Organomet. Chem. 691 (2006) 5024

New binucleating ligand with two [P,S] chelation pockets on a single phenyl ring: Syntheses and X-ray structures of 1,4-bis(diphenylphosphino)-2,5-difluoro-3,6-bis(methylthio)benzene and of bimetallic complex (CO)$_3$Fe(μ-[(PPh$_2$)(SMe)-C$_6$F$_2$(SMe)(PPh$_2$)])Fe(CO)$_3$

New binucleating ligand, 1,4-bis(diphenylphosphino)-2,5-difluoro-3,6-bis(methylthio)-benzene was obtained via sequential generations of organodilithio reagents from 1,4-dibromo-2,5-difluorobenzene. It contains two phosphine-thioether ([P,S]) chelation pockets positioned on the opposite sides of a single phenyl ring. Bimetallic complex was obtained upon reaction of the ligand with Fe(CO)$_3$ fragments.

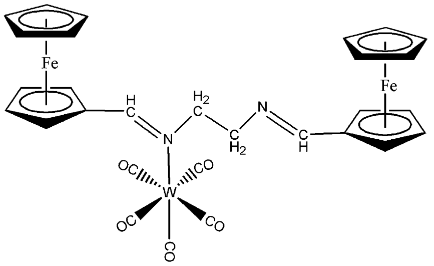


F. Sanem Koçak, Cüneyt Kavakli, Ceyhun Akyol, Ahmet M. Önal, Saim Özkar

J. Organomet. Chem. 691 (2006) 5030

Synthesis and electrochemistry of Group 6 tetracarbonyl (*N*,*N*′-bis(ferrocenylmethylene) ethylenediamine)metal(0) complexes

N,*N*′-Bis(ferrocenylmethylene)ethylenediamine-(bfeda) yields $M(CO)_4$(bfeda) complexes (M = Cr, Mo, W) which could be isolated and characterized by elemental analysis, MS, IR, and NMR spectroscopy. In the case of tungsten, $W(CO)_5$(bfeda) is formed as intermediate and then undergoes the ring closure reaction yielding the ultimate product $W(CO)_4$(bfeda). The electrochemical behavior of the $M(CO)_4$(bfeda) complexes was studied by using cyclic voltammetry and differential pulse voltammetry. It was shown that an electron is transferred from iron to the central metal atom.

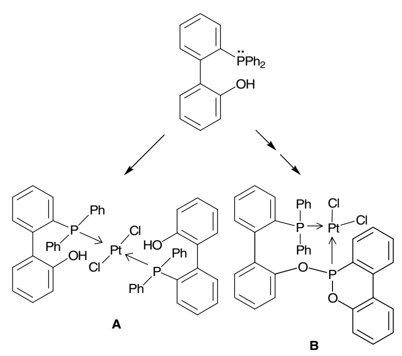


György Keglevich, Andrea Kerényi, Helga Szelke, Krisztina Ludányi, Tamás Körtvélyesi

J. Organomet. Chem. 691 (2006) 5038

2-Diphenylphosphino-2′-hydroxybiphenyl-based P-ligands and their platinum(II) complexes

Platinum complexes (**A** and **B**) incorporating 2-diphenylphosphino-2′-hydroxybiphenyl or its *O*-dibenzo[*c*.*e*][1,2]oxaphosphorine derivative, are described whose stereostructure was evaluated by stereospecific NMR couplings and quantum chemical calculations. Atrop isomerism of the bidental P-ligand was observed under chromatography that was justified by calculations.

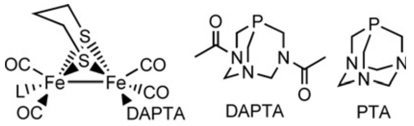


Yong Na, Mei Wang, Kun Jin, Rong Zhang, Licheng Sun

J. Organomet. Chem. 691 (2006) 5045

An approach to water-soluble hydrogenase active site models: Synthesis and electrochemistry of diiron dithiolate complexes with 3,7-diacetyl-1,3,7-triaza-5-phosphabicyclo[3.3.1]nonane ligand(s)

Three diiron dithiolate complexes with DAPTA ligand(s) were prepared and spectroscopically characterized as Fe-only hydrogenase active site models. The electrochemical properties of **1**–**3** were studied in CH_3CN and CH_3CN/H_2O mixtures. The water solubility of **2** and **3** is sufficient for electrochemical studies in pure water.



L = CO, **1**; DAPTA, **2**; PTA, **3**

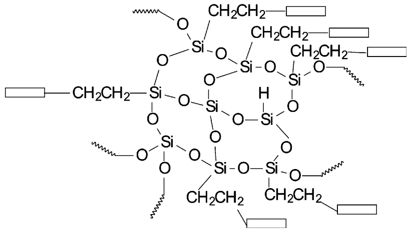
Notes

Tomasz Ganicz, Tadeusz Pakuła, Włodzimierz A. Stańczyk

J. Organomet. Chem. 691 (2006) 5052

Novel liquid crystalline resins based on MQ siloxanes

Low molecular weight siloxane polymers with liquid crystal properties may be synthesised by hydrosilylation of mesogenic alkenes with readily available MQ resins containing Si–H bonds; they constitute a new group of versatile materials

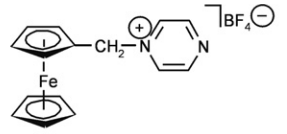


Ulrich Siemeling, Sabine Tomm,
Clemens Bruhn

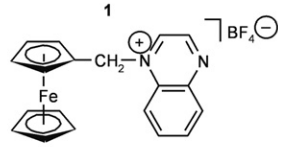
J. Organomet. Chem. 691 (2006) 5056

Synthesis, properties and crystal structures of ferrocene derivatives containing pyrazinium and quinoxalinium units

Ferrocene derivatives which contain redox-active heterocyclic substituents were prepared and investigated by electrochemistry, UV–Vis spectroscopy and single-crystal X-ray diffraction.



1



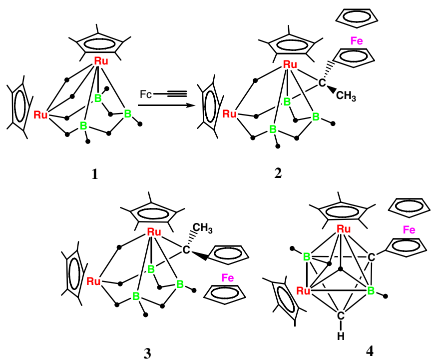
2

Hong Yan, Bruce C. Noll, Thomas P. Fehlner

J. Organomet. Chem. 691 (2006) 5060

Reaction of *nido*-1,2-$(Cp^{*}RuH)_2B_3H_7$ with ethynylferrocene to yield new metallacarboranes

Addition of ethynylferrocene to *nido*-1,2-$(Cp^{*}RuH)_2B_3H_7$ (**1**) at ambient temperature leads to *nido*-1,2-$(Cp^{*}Ru)_2$(1,5-μ-C{Fc}-Me)B_3H_7 (**2**, **3**) and *closo*-4-Fc-1,2-$(Cp^{*}RuH)_2$-4,6-$C_2B_2H_3$ (**4**). Compounds **2** and **3** represent a pair of geometric isomers with a *nido* structure where the regiochemistry of the alkyne reduction conforms to the Markovnikoff rule, while **4** is an octahedral structure where the inserted alkyne is on an open face of the *closo* cluster.

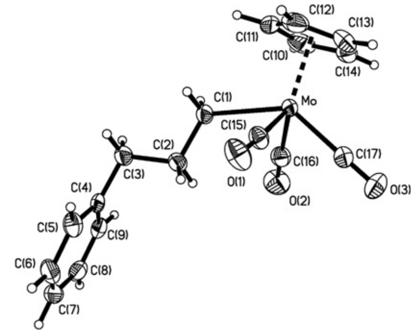


Donna S. Amenta, Aimee D. Morton,
John W. Gilje, Frank T. Edelmann,
Axel Fischer, Steffen Blaurock

J. Organomet. Chem. 691 (2006) 5065

The preparation and crystal structure of $(\eta^5\text{-}C_5H_5)(CO)_3Mo(CH_2)_3C_6H_5$

The reaction of $(\eta^5\text{-}C_5H_5)Mo(CO)_3^-$ with *p*-$CH_3C_6H_4S(O)_2O(CH_2)_3C_6H_5$ produces $(\eta^5\text{-}C_5H_5)(CO)_3Mo(CH_2)_3C_6H_5$. The alkyl chain adopts a staggered conformation, the Mo–C(1)–C(2)–C(3)–C(4) unit is nearly coplanar, and the alkyl chain eclipses the *trans*-carbonyl group on Mo. NMR evidence indicates that this conformation is preserved in solution.

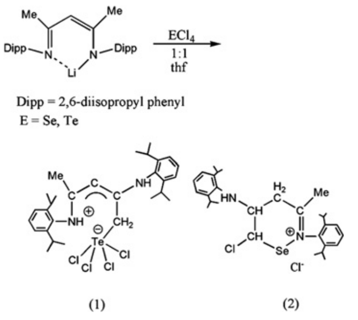


Audra F. Gushwa, Josh G. Karlin,
Ray A. Fleischer, Anne F. Richards

J. Organomet. Chem. 691 (2006) 5069

Reactions of β-diketiminates with selenium and tellurium halides

The reactions of nacnacLi (nacnac = $[\{N(C_6H_3{}^{i}Pr_2 2,6)C(Me)\}_2CH]^-$) with $TeCl_4$ and $SeCl_4$ afforded the complexes [nacnac-$TeCl_4$], compound (**1**), and nacnac $SeCl^+Cl^-$, compound (**2**), in moderate yields. Both were characterized by X-ray crystallography. Compounds **1** and **2** both show C–H activation of the ligand backbone. In the case of tellurium, no LiCl displacement or nitrogen chelation is observed and an ionic $TeCl_4$ complex is isolated. By contrast, under similar reaction conditions, the reaction with $SeCl_4$, affords a cationic Se(II) complex with loss of four chlorines and rearrangement of the chloride atom to the nacnac ligand.



Jun-Dong Wang, Mei-Jin Lin, Shao-Feng Wu, Yun Lin

J. Organomet. Chem. 691 (2006) 5074

1,15-Bis-(2′,2′,4′-trimethyl-3′-pentoxy)phthalocyanine, a *trans*-form nonperipheral disubstituted phthalocyanine synthesized by the ‘cross condensation’ method

The crystal structure of **1**, 15-bis-(2′,2′,4′-trimethyl-3′-pentoxy)phthalocyanine was determined what confirmed the ‘cross condensation’ method for the ABAB type phthalocyanine and the *trans*-form arrangement of the two substituents suggested that the alkoxy group also affected the condensation mechanism.