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Journal of Organometallic Chemistry

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Contents

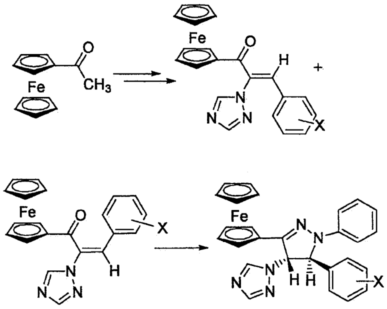
Regular Papers

Jianxin Fang, Zhong Jin, Zengming Li, Wei Liu

J. of Organomet. Chem. 674 (2003) 1

Synthesis, structure and antibacterial activities of novel ferrocenyl-containing 1-phenyl-3-ferrocenyl-4-triazolyl-5-aryl-dihydropyrazole derivatives

A series of substituted ferrocene-containing dihydropyrazole heterocyclic compounds have been prepared from acetylferrocene and their structures were characterized by spectra data and X-ray.

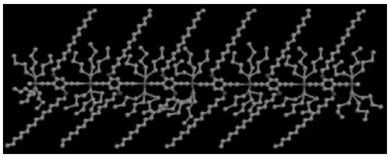


I. Fratoddi, C. Battocchio, A. Furlani, P. Mataloni, G. Polzonetti, M.V. Russo

J. of Organomet. Chem. 674 (2003) 10

Study of chemical structure and conjugation length in organometallic Pt(II) oligomers and polymers containing 1,4-diethynylbenzene derivatives as bridging units

The synthesis and spectroscopic characterisation of platinum containing organometallic rigid rod oligomers and polymers is reported. Well-defined oligomers of general formula—[PtL$_2$(–C≡C–pC$_6$H$_4$(2,5-R)$_2$–C≡C–)]$_n$, where L = PPh$_3$, PBu$_3$; R = H, OC$_4$H$_9$ or OC$_{16}$H$_{33}$ were isolated and X-ray photoelectron spectroscopy technique provided information about the chain length and the nature of end-groups.

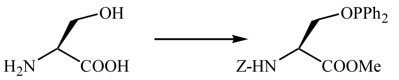


Patrycja W. Galka, Heinz-Bernhard Kraatz

J. of Organomet. Chem. 674 (2003) 24

Synthesis and study of amino acid based phosphinite ligands

The preparation of a series of amino acid derived diphenylphosphinites is reported from commercially available amino acid precursors. These ligands readily complex to Pd(II) and Pt(II) giving the corresponding metal complexes.



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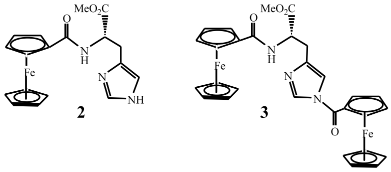
Himadri S. Mandal, Heinz-Bernhard Kraatz

J. of Organomet. Chem. 674 (2003) 32

Ferrocene-histidine conjugates: *N*-ferrocenoyl-histidyl(im*N*-ferrocenoyl)methylester: synthesis and structure

New ferrocenoyl histidyl conjugates *N*-Fc-His-OMe (**2**) and *N*-Fc-His(ε-*N*-Fc)-OMe (**3**) are prepared from H-His-OMe. The electrochemistry of **3** exhibits two fully reversible one-electron oxidations, which are due to the stepwise oxidation of the two ferrocenoyl groups.

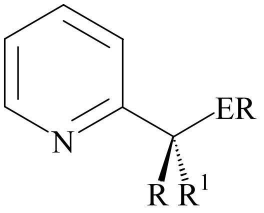


Brian W. Skelton, Vicki-Anne Tolhurst, Allan H. White, Alan M. Williams, Adele J. Wilson

J. of Organomet. Chem. 674 (2003) 38

Synthesis and spectroscopic studies of organometallic Mn(I) complexes containing the novel mixed donor ligands 2-{Me-SeCH$_{(2-n)}$(SiMe$_3$)$_n$}C$_5$H$_4$N ($n = 0$–2)

Substitution at the α-carbon and variation of the Group 16 centre and terminal substituent of the chalcogenoether can vary the electronic properties of the metal centre in manganese carbonyl bromide complexes containing the ligands **L**. ^{77}Se{^{1}H}- and ^{55}Mn-NMR spectroscopies and IR spectroscopy have been used to investigate the solution characteristics of these compounds.



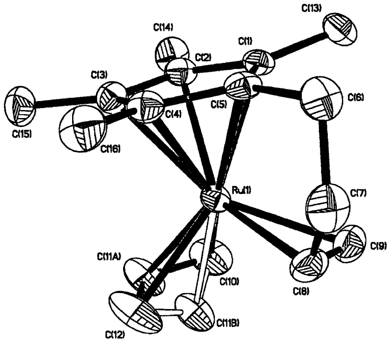
R, R^1 = H or SiMe$_3$

Aurora Castro, Michael L. Turner, Peter M. Maitlis

J. of Organomet. Chem. 674 (2003) 45

Synthesis and solid-state structure of [(η^2:η^5-C$_5$Me$_4$CH$_2$CH$_2$CH=CH$_2$)Ru(η^3-C$_3$H$_5$)]

The synthesis and solid state structure of a new pendant-arm functionalised cyclopentadienyl ruthenium complex [(η^2:η^5-C$_5$Me$_4$CH$_2$CH$_2$CH=CH$_2$)Ru(η^3-C$_3$H$_5$)], is reported.

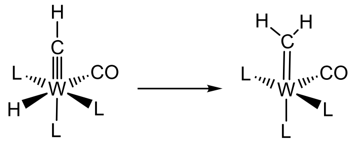


Heiko Jacobsen

J. of Organomet. Chem. 674 (2003) 50

Ligand influences on hydrogen migration in transition metal hydrido–carbyne complexes

Density Functional BP86 calculations for complexes WH(CH)(CO)(PH$_3$)$_3$ and WH(CH)(CO)$_2$(PH$_3$)$_2$ elucidate the mechanism of intramolecular hydride migration and carbyne to carbene interconversion. The role of additional π-donor or π-acceptor ligands is analyzed in a comparison with the isoelectronic osmium systems OsHCl$_2$(CMe)(PH$_3$)$_2$ and OsCl$_2$(CHMe)(PH$_3$)$_2$.

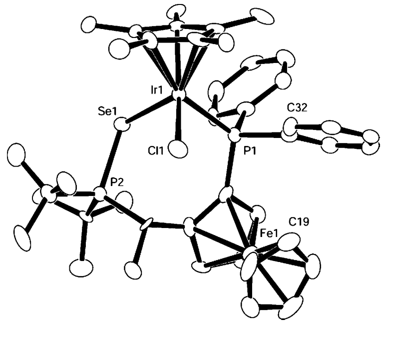


Sandra Evans, J.W. Faller, Jonathan Parr

J. of Organomet. Chem. 674 (2003) 56

Half-sandwich complexes of ruthenium, rhodium and iridium with a chiral bisphosphine monoselenide

Half-sandwich complexes of ruthenium(II), rhodium(III) and iridium(III) comprising the new chiral ligand (*S*)-(+)-1-[(*R*)-2-(diphenylphosphino)ferrocenyl]ethyldi-*t*-butylphosphine monoselenide have been prepared and characterised. This ligand is the first example of a chiral bisphosphine monoselenide prepared by direct monoselenation of a commercially available chiral bisphosphine.

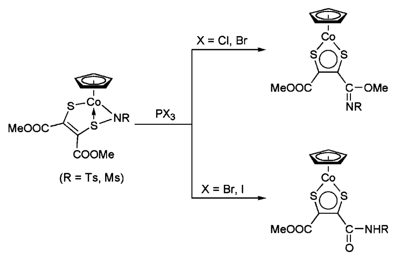


Mitsushiro Nomura, Chikako Takayama, Gerardo C. Janairo, Toru Sugiyama, Yasuo Yokoyama, Masatsugu Kajitani

J. of Organomet. Chem. 674 (2003) 63

Imido-transfer reactions to carbonyl moiety induced by the reactions of imido-bridged cobaltadithiolene complexes with trivalent phosphorus halides

The reactions of imido-bridged cobaltadithiolene complexes, $[CpCo\{S_2C_2(COOMe)_2\}(NR)]$ (R = Ts, Ms), with PCl_3 gave the novel imine complexes $[CpCo\{S_2C_2(COOMe)(C{=}NROMe)\}]$. In the case of PI_3, the novel amide complexes $[CpCo\{S_2C_2(COOMe)(CONHR)\}]$ were formed. PBr_3 showed an intermediate reactivity value in between that of PCl_3 and that of PI_3

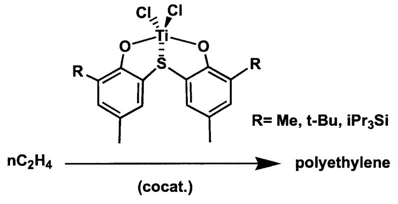


Hiroshi Kawamura-Kuribayashi, Tatsuya Miyatake

J. of Organomet. Chem. 674 (2003) 73

A theoretical study of the ligand effect of thiobisphenoxytitanium complex catalyst on the catalytic activity for ethylene polymerization

The effect of ortho-substituents (R = Me, ^{t}Bu and ^{i}Pr$_3$Si) of phenoxy groups in thiobisphenoxytitanium complex catalyst on the catalytic activity of ethylene polymerization was analyzed by applying ab initio molecular orbital theory and density functional theory. Additionally, the β-H elimination reaction and the chain transfer reaction to monomer were also analyzed.

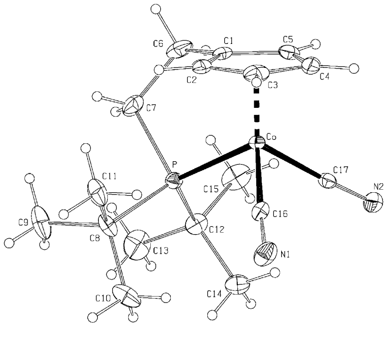


Alf Kakoschke, Li Yong, Rudolf Wartchow, Holger Butenschön

J. of Organomet. Chem. 674 (2003) 86

Reaction of a cyclopentadienylcobalt(I) phosphane chelate with trimethylsilyl chloride and some pseudohalides: unanticipated formation of new cyclopentadienylcobalt(II) and (III) chelates

Reaction of a cobalt(I) chelate with trimethylsilyl chloride, azide, isocyanate, and isothiocyanate leads to (pseudo)halo cobalt (II) chelates and hexamethyldisilane. With trimethylsilyl cyanide, however, the cobalt (III) chelate forms.

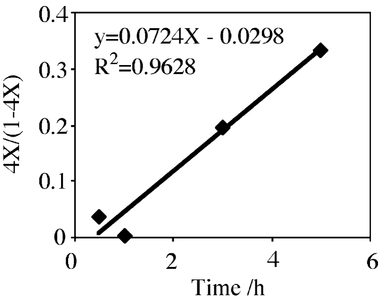


Itsuhiro Hatanaka, Naho Mitsuyasu, Guochuan Yin, Yuzo Fujiwara, Tsugio Kitamura, Katsumi Kusakabe, Teizo Yamaji

J. of Organomet. Chem. 674 (2003) 96

The mechanic study of the Pd-catalyzed synthesis of diphenylcarbonate with heteropolyacid as a cocatalyst

The reaction to synthesize diphenyl carbonate (DPC) by an oxidative carbonylation of phenol with CO and O_2 has been found to proceed through the second-order of phenol concentration. The activation energy E_a, ΔS and ΔH are 27.0 kcal mol^{-1}, -6.43 cal mol^{-1} and 26.3 kcal mol^{-1}, respectively.

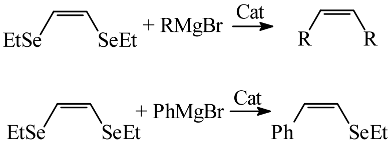


Alexander V. Martynov, Vladimir A. Potapov, Svetlana V. Amosova, Nataliya A. Makhaeva, Irina P. Beletskaya, Laszlo Hevesi

J. of Organomet. Chem. 674 (2003) 101

Cross-coupling of (*Z*)-1,2-bis(ethylseleno)ethene with the Grignard reagents

The nickel-catalyzed cross-coupling of (*Z*)-1,2-bis(ethylseleno)ethene with the alkyl magnesium bromides proceeds with substitution of both ethylseleno groups to afford symmetrical alkenes, (*Z*)-RCH=CHR, in high yield with complete retention of configuration. In the case of phenyl magnesium bromide the monoarylation occurs to form (*Z*)-2-ethylseleno styrene, EtSeCH=CHPh.



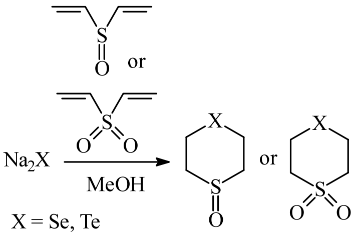
R = Pr, Bu, Octyl, Ph
Cat = $NiCl_2$(dppe), $NiCl_2$(dppp)

Vladimir A. Potapov, Svetlana V. Amosova, Irina V. Doron'kina, Ol'ga V. Korsun

J. of Organomet. Chem. 674 (2003) 104

A synthesis of 1-thia-4-chalcogenacyclohexane-1-oxides and 1,1-dioxides

The addition of selenide and tellurides anions to divinyl sulfoxide and sulfone in methanol affords: 1-thia-4-chalcogenacyclohexane-1-oxides and 1,1-dioxides.



Bikash Kumar Panda, Kaushik Ghosh, Swarup Chattopadhyay, Animesh Chakravorty

J. of Organomet. Chem. 674 (2003) 107

Chemistry of a new family of aryl ruthenium species incorporating α-diimine chelation and a pendant imine-phenol function

By reacting **A** with the 2,2′-bipyridine, 1,10-phenanthroline and 2-(2-pyridyl)benzthiazole, ruthenium aryl salts of type **B** incorporating α-diimine chelation have been synthesized and structurally characterized. The reaction is attended with prototropic shift and rotation around the Ru–C(aryl) bond. The species of type **B** display back-bonding, MLCT absorption and fluorescence.