ELSEVIER

Available online at www.sciencedirect.com

SCIENCE DIRECT®

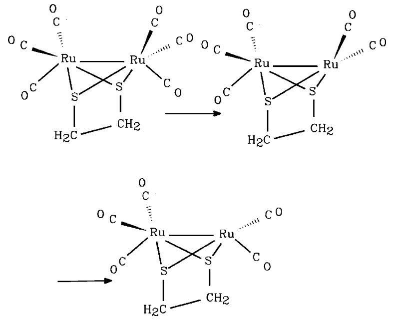
Volume 689, issue 19, 22 September 2004

Journal of Organometallic Chemistry

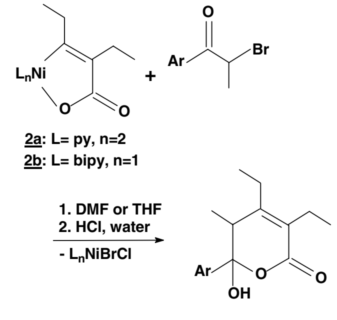
www.elsevier.com/locate/jorganchem

Contents

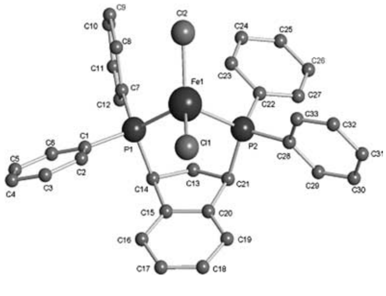
Communication



Regular papers



8



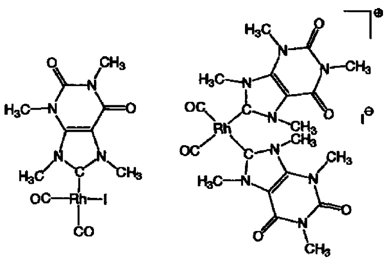
Elsevier B.V.
doi:10.1016/S0022-328X(04)00569-8

Jan Schütz, Wolfgang A. Herrmann

J. Organomet. Chem. 689 (2004) 2995

Purine-based carbenes at rhodium and iridium

Carbenes derived from methyl-caffeine and 7,9-dimethylhypoxanthine are attached to catalysis-related metals like rhodium and iridium. Several mono- and bis-carbene complexes of the type $[M(L)(L_{Carbene})_2]I$ and $M(L)(L_{Carbene})(I)$ (M = Rh, Ir, $L_{Carbene}$ = 1,3,7,9-tetramethylxanthine-8-ylidene, 7,9-dimethylhypoxanthine-8-ylidene, L = η^4-1,5-COD, CO) (COD = 1,5-cyclooctadiene) are characterized and their analytical data compared.

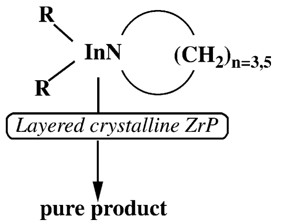


Iryna Grafova, Riccardo Vivani, Andrei Grafov, Franco Benetollo

J. Organomet. Chem. 689 (2004) 3000

Cyclic dialkylindium amides: new structural information and ultra-purification using inorganic and inorgano–organic layered materials

Cyclic dimethyl- and diethylindium amides were synthesised, characterised, and ultra-purified by an original sorption treatment using advanced inorganic and inorgano–organic crystalline layered materials. X-ray structure of pyrrolidinodimethylindium was determined.

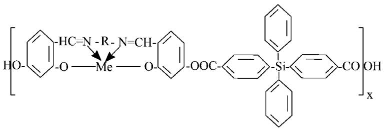


Maria Cazacu, Mihai Marcu, Angelica Vlad, Gheorghe I. Rusu, Mihaela Avadanei

J. Organomet. Chem. 689 (2004) 3005

Chelate polymers. VI. New copolymers of the some siloxane containing bis(2,4-dihydroxybenzaldehyd-imine)Me^{2+} with bis(*p*-carboxyphenyl)diphenylsilane

New complex polymeric structures containing metal chelate sequences alternating with silane units of the type: have been synthesized and characterized by IR, UV, ^1H NMR, TGA, DSC, GPC, and elemental analysis. The siloxane and silane presences in such structures confer a good solubility. The electrical conductivity of both chelate monomers and their polymers are investigated, all compounds showing typical semiconducting behaviors.



with: R: $(CH_2)_3(CH_3)_2SiOSi(CH_3)_2(CH_2)_3$,

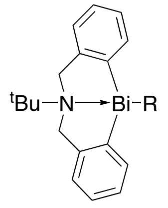
Me: Cu (II), Ni (II), Co (II), Cd (II)

Shigeru Shimada, Osamu Yamazaki, Toshifumi Tanaka, Yohichi Suzuki, Masato Tanaka

J. Organomet. Chem. 689 (2004) 3012

Synthesis and structure of 5,6,7,12-tetrahydrodibenz[c,f][1,5]azabismocines

Hypervalent organobismuth compounds with 13 different substituents have been synthesized, among which molecular structures have been determined for 12 compounds by X-ray diffraction.



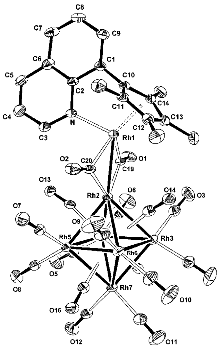
R = Alkyl, Aryl, Alkenyl, Alkynyl, Halogens, SPh

Markus Enders, Gerald Kohl, Hans Pritzkow

J. Organomet. Chem. 689 (2004) 3024

Rhodium-carbonyl complexes with a quinolyl functionalized Cp-ligand: synthesis and photochemical activation

Photochemical activation of dicarbonyl-(8-quinolylcyclopentadienyl)-rhodium in the presence of $Rh_6(CO)_{16}$ leads to a new Rh_6-cluster with a $Cp^QRh(I)$-substituent. In this compound, the quinoline nitrogen is coordinated to the rhodium(I) atom.

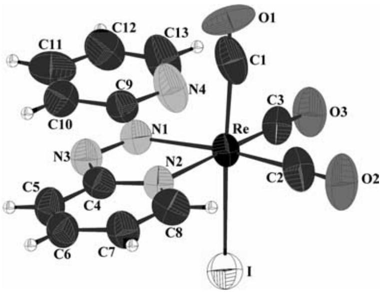


Stéphanie Frantz, Jan Fiedler,
Ingo Hartenbach, Thomas Schleid,
Wolfgang Kaim

J. Organomet. Chem. 689 (2004) 3031

A complete series of tricarbonylhalidorhenium(I) complexes $(abpy)Re(CO)_3$-(Hal), Hal = F, Cl, Br, I; abpy = 2,2′-azobispyridine: Structures, spectroelectrochemistry and EPR of reduced forms

The first systematic study of a complete halide series $[(N\hat{}N)Re(CO)_3(Hal)]^{0/-}$ shows similarities in structures and most spectroscopic properties, however, distinct differences are revealed by EPR which is very sensitive to the electronic structure.

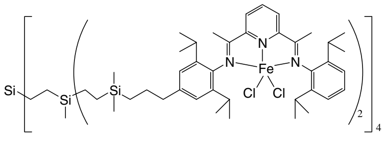


Zhan-Jiang Zheng, Jie Chen,
Yue-Sheng Li

J. Organomet. Chem. 689 (2004) 3040

The synthesis and catalytic activity of poly(bis(imino)pyridyl) iron(II) metallodendrimer

The first and second generation metallodendrimers were synthesized via hydrosilylation and complexation reactions. These polynuclear iron complexes were used as catalyst precursors, activated by modified methylaluminoxane for ethylene polymerization.

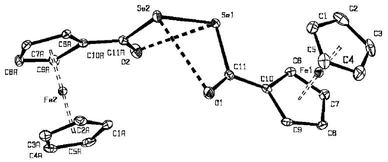


Sangit Kumar, Santosh K. Tripathi,
Harkesh B. Singh, Gotthelf Wolmershäuser

J. Organomet. Chem. 689 (2004) 3046

Synthesis, reactivity, electrochemical and crystallographic studies of diferrocenoyl diselenide and ferrocenoyl selenides

A series of selenol esters incorporating ferrocene has been synthesized. Their thiol peroxidase-like activity and electrochemistry have been studied. Diferrocenoyl diselenide and a ferrocenoyl selenol ester have also been characterized by single crystal X-ray diffraction.

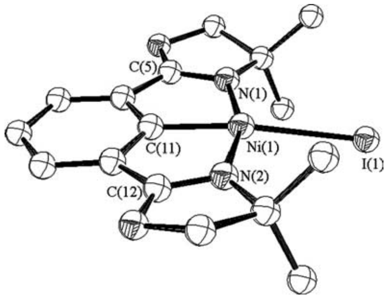


John S. Fossey, Christopher J. Richards

J. Organomet. Chem. 689 (2004) 3056

Synthesis and X-ray crystal structure analysis of the first nickel bisoxazoline pincer complex

The reaction in toluene between 2-iodo-1,3-bis(4′,4′-dimethyl-2′-oxazolinyl)benzene and Ni(COD)$_2$ gave [2,6-bis(4′,4′-dimethyl-2′-oxazolinyl)phenyl-N,C^1,N′]iodonickle(II) isolated in 70% yield. The structure of this novel nickel bisoxazoline pincer complex was confirmed by a X-ray crystal structure analysis.

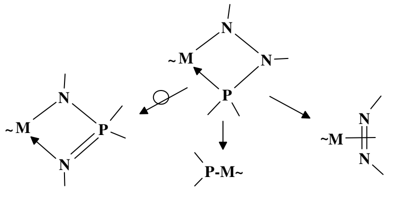


Yana V. Fedotova, Alexander N. Kornev, Vyacheslav V. Sushev, Yurii A. Kursky, Tatiana G. Mushtina, Natalia P. Makarenko, Georgy K. Fukin, Gleb A. Abakumov, Lev N. Zakharov, Arnold L. Rheingold

J. Organomet. Chem. 689 (2004) 3060

Phosphinohydrazines and phosphinohydrazides M(–N(R)–N(R)–PPh$_2$)$_n$ of some transition and main group metals: synthesis and characterization

Phosphinohydrazide ligands, possessing relatively week P–N and N–N bonds undergo rearrangements and transformations in the coordination sphere of late transition metals (Co, Ni, Cu). The products composition is strongly dependent on nature of a metal, its oxidation state and ligand environment. Early and middle transition metals or non-transition metals form stable phosphinohydrazides M[N(Ar)N(Ar)PPh$_2$]$_n$ {M = Li, Zn, Ge(II), Mn(II), Cr(III), Fe(II)}.

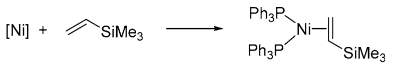


Hieronim Maciejewski, Agnieszka Sydor, Maciej Kubicki

J. Organomet. Chem. 689 (2004) 3075

The synthesis and characterisation of some nickel(0) complexes with π-bounded vinylsilicon ligands; the molecular structure of [Ni{P(C$_6$H$_5$)$_3$}$_2${η^2-CH$_2$CHSi(CH$_3$)$_3$}]

A simple one pot synthesis from the readily available starting materials [Ni(cod)$_2$] or [Ni(PPh$_3$)$_2$C$_2$H$_4$] and vinyl derivatives of organosilicon compounds provides an essentially quantitative route to the series of nickel complexes with vinyl-siloxane, -silane and -silazane ligands.



where [Ni] = [Ni(PPh$_3$)$_2$C$_2$H$_4$] or [Ni(cod)$_2$] + PPh$_3$

Enrique Meléndez, Vilmarí López, Thomas Concolino, Arnold L. Rheingold

J. Organomet. Chem. 689 (2004) 3082

Structure and redox behavior of Ru(II)-diene complexes

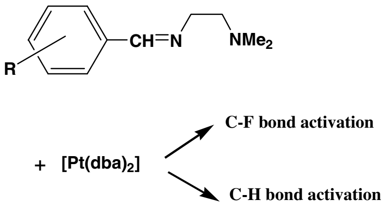
A series of Ru(acac)$_2$(η^4-diene) complexes containing *cis* and *trans*-diene coordination have been investigated by cyclic voltammetry to correlate structural bonding and conformation patterns of diene ligands with redox behaviors. While the Ru–C(diene) bond distances showed no difference for the η^4-*cis*- and η^4-*trans*-diene coordination by X-ray diffraction, electrochemical analysis is able to pinpoint these differences.

Margarita Crespo, Jaume Granell, Mercè Font-Barda, Xavier Solans

J. Organomet. Chem. 689 (2004) 3088

Intramolecular oxidative addition of C–F and C–H bonds to [Pt(dba)$_2$]. Crystal structure of [PtCl{Me$_2$NCH$_2$CH$_2$NCH-(2,4,5-C$_6$HF$_3$)}]

Cyclometallated platinum (II) compounds [PtX(Me$_2$NCH$_2$CH$_2$NCHR)] (X = Br, Cl) containing a terdentate [C,*N*,*N′*] ligand were obtained from the reactions of [Pt(dba)$_2$] with ligands RCHNCH$_2$CH$_2$NMe$_2$ (**1a**–**1f**) in which R is a fluorinated aryl ring, followed by reaction with lithium halides. The process involves intramolecular oxidative addition of either C–F or C–H bonds.

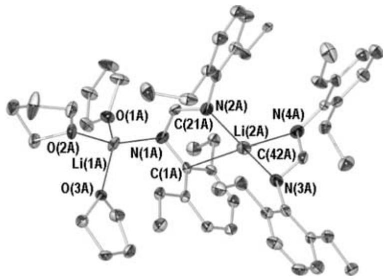


Marcus L. Cole, Aaron J. Davies, Cameron Jones, Peter C. Junk

J. Organomet. Chem. 689 (2004) 3093

Lithium and sodium *N*,*N′*-di(2,6-dialkylphenyl)formamidinate complexes

A study has been undertaken of the lithium and sodium metallation of *N*,*N′*-di-(aryl)formamidines with alkyl groups at the 2- and 6-aryl position. In selected instances, this invokes the first lithium and sodium amidinate/guanidinate complexes to exhibit metal–arene contacts.



Note

P. Govindaswamy, Hemant P. Yennawar, Mohan Rao Kollipara

J. Organomet. Chem. 689 (2004) 3108

Synthesis, characterization and molecular structure of the [(η^6-C$_6$Me$_6$)Ru(μ-N$_3$)(N$_3$)]$_2$ complex and its reactions with some monodentate ligands

The reaction of [(η^6-C$_6$Me$_6$)Ru(μ-Cl)Cl]$_2$ **1** with sodium azide in different concentrations yields orange-coloured complexes [{(η^6-C$_6$Me$_6$)Ru(μ-N$_3$)(N$_3$)}$_2$] **2** and [{(η^6-C$_6$Me$_6$)-Ru(μ-N$_3$)(Cl)}$_2$] **3**. These compounds undergo a variety of substitution reactions with neutral ligands to afford monomeric complexes.