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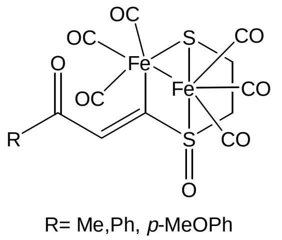
Ruben A. Toscano,
Cecilio Alvarez-Toledano

J. Organomet. Chem. 689 (2004) 885

Novel dinuclear iron(0) complexes from α,β-unsaturated ketones β-positioned with sulfide and sulfoxide groups

The reaction of $Fe_2(CO)_9$ with α,β-unsaturated ketones analogues containing β-positioned sulfoxide group **2a**–**2d** afforded dinuclear Fe(0) complexes **3a**–**3d** and **5** which were characterized by IR, mass spectrometry, H and C NMR spectroscopy, the structures of **3a**, **3c** and **5** were established by X-ray diffraction analysis.

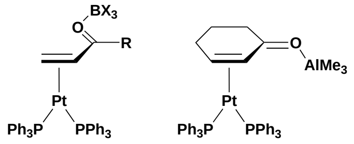


Masaki Morita, Katsuharu Inoue,
Tomohiro Yoshida, Sensuke Ogoshi,
Hideo Kurosawa

J. Organomet. Chem. 689 (2004) 894

Reaction of η^2-enone and enal-platinum(0) complexes with Lewis acidic compounds

The reaction of η^2-enone and enal complexes of platinum(0) with Lewis acidic compounds BX_3 ($X = F, C_6F_5$) and $AlMe_3$ gave adducts formed by coordination of boron or aluminum to oxygen of the carbonyl group.



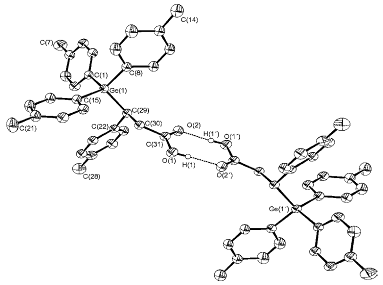
Imtiaz-ud-Din, M. Mazhar, Khalid M. Khan,
M.F. Mahon, K.C. Molloy

J. Organomet. Chem. 689 (2004) 899

Studies of bimetallic carboxylates: their synthesis, characterization, biological activity and X-ray structure

The synthesis and structural characterization of novel triorganogermyl substituted diorganotindicarboxylates are hereby reported. The X-ray crystal structure of the precursor $(p\text{-}CH_3C_6H_4)_3GeCH(p\text{-}CH_3C_6H_4)CH_2COOH$ demonstrated tetrahedral geometry around germanium and delineated a dimeric H-bonded structure for the compound. These germanium substituted diorganotin carboxylates were sythesized by the condenstion reaction of diorganotin oxides ($R^4 = n\text{-}C_4H_9, n\text{-}C_8H_{17}$) and tiorganogermyl (substitued) propanoic acids in 1:2 mol ratio respectively.

$$R^1_3GeCH(R^2)CH_2COOH \xrightarrow{R^4_2SnO} \underset{\text{biological activity}}{[R^1_3GeCH(R^2)CH_2COO]_2SnR^4_2}$$



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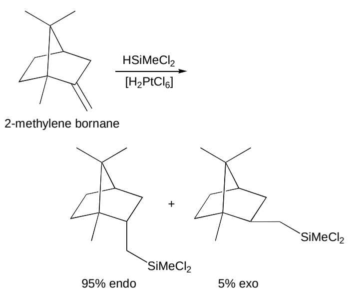
Jens Beckmann, Dainis Dakternieks, Andrew Duthie, Susan L. Floate, Richard C. Foitzik, Carl H. Schiesser

J. Organomet. Chem. 689 (2004) 909

Chiral organochlorosilanes derived from terpenes: diastereoselective hydrosilylation of methylene bicyclo[2.2.1]heptanes with $HSiMe_nCl_{n-2}$ ($n = 0$–2)

The hydrosilylation of α-fenchene, 2-methylene bornane, camphene and 3-methylene fenchane with chlorosilanes $HSiMe_nCl_{n-2}$ ($n = 0$–2) occurred with varying degrees of diastereoselectivity providing anti-Markovnikov product mixtures, in which the *endo*-isomers dominate over the *exo*-isomers. These mixtures were oxidized to give the corresponding terpene alcohols. 3-Methylene fenchane undergoes a rearrangement into 2-methylene bornane prior to hydrosilylation.

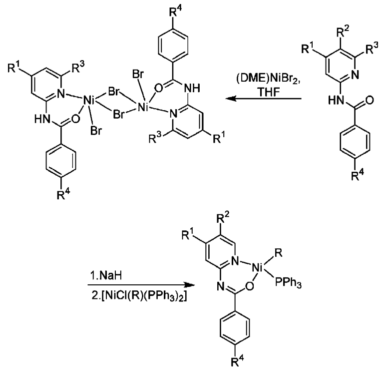


Wen-Hua Sun, Wen Zhang, Tielong Gao, Xiubo Tang, Liyi Chen, Yan Li, Xianglin Jin

J. Organomet. Chem. 689 (2004) 917

Synthesis and characterization of *N*-(2-pyridyl)benzamide-based nickel complexes and their activity for ethylene oligomerization

Nickel complexes containing *N*-(2-pyridyl)benzamide ligands were synthesized and characterized. X-ray analyses reveal a dimetallic structure with two bridging bromine atoms in complexes **12** and **14** and a Grubbs type nickel core in complexes **17**, **19** and **23**. These complexes show moderate to high catalytic activities of ethylene oligomerization, among which the neutral nickel complex **18** shows the activity up to 4.94×10^5 g mol^{-1} h^{-1}.

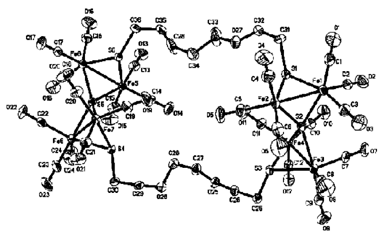


Li-Cheng Song, Jin-You Wang, Feng-Hua Gong, Jia Cheng, Qing-Mei Hu

J. Organomet. Chem. 689 (2004) 930

Synthesis and characterization of new acyclic polyethers and macrocyclic crown ethers containing double-butterfly Fe_4S_3 cluster cores. Crystal structures of $\{[Fe_2(CO)_6]_2(\mu_4\text{-}S)\}_2[\mu\text{-}SCH_2(CH_2OCH_2)_2CH_2S\text{-}\mu_2]$ and $\{[Fe_2\text{-}(CO)_6]_2(\mu_4\text{-}S)\}_2[\mu\text{-}SCH_2(CH_2OCH_2)_2\text{-}CH_2S\text{-}\mu][\mu\text{-}SCH_2(CH_2OCH_2)_3CH_2S\text{-}\mu]$

Two series of clusters $\{(\mu\text{-}RS)[Fe_2(CO)_6]_2(\mu_4\text{-}S)\}_2(\mu\text{-}SZS\text{-}\mu)$ [**1**–**5**: R = CH_2CO_2Et, PhHg, PhC=NPh; Z = $CH_2(CH_2OCH_2)_{2-3}CH_2$] and $\{[Fe_2(CO)_6]_2(\mu_4\text{-}S)\}_2(\mu\text{-}SZS\text{-}\mu)(\mu\text{-}SYS\text{-}\mu)$ [**6**–**11**: Z, Y = $CH_2(CH_2OCH_2)_{2-4}CH_2$] were prepared by "one pot" reactions of the $[Et_3NH]$ salts of dianions $[(\mu\text{-}CO)Fe_2\text{-}(CO)_6]_2(\mu\text{-}SZS\text{-}\mu)$ with various halides. Two crystal structures are described.

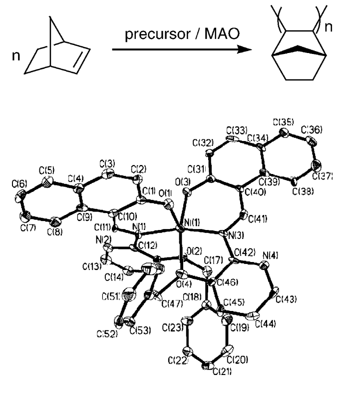


Fei Chang, Dongheng Zhang, Guiyun Xu, Haijian Yang, Jitai Li, Haibin Song, Wen-Hua Sun

J. Organomet. Chem. 689 (2004) 936

Synthesis and characterization of new bis(1-aryliminomethylenylnaphthalen-2-oxy)nickel complexes and their catalytic behavior for vinyl polymerization of norbornene

Syntheses of nickel complexes of 1-aryl iminomethylenylnaphthalen-2-ol derivatives and their X-ray structure determination. The nickel complexes containing 1-aryliminomethylnaphthalen-2-ol derivatives were synthesized. High activities of catalysts and polymeric yields are found in the process of norbornene vinyl polymerization with catalytic system of these complexes and MAO.

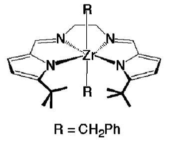


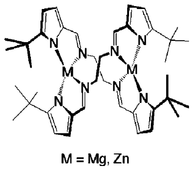
Lan-Chang Liang, Pei-Ying Lee, Wang-Ling Lan, Chen-Hsiung Hung

J. Organomet. Chem. 689 (2004) 947

Coordination chemistry of a multidentate pyrrolylaldiminate ligand. X-ray crystal structure of double-helical bis-μ-[N,N'-ethylenedi(5-*tert*-butyl-pyrrol-2-ylaldiminate)]-dimagnesium

Divergent coordination modes of a tetradentate pyrrolylaldiminate ligand result in the formation of a mononuclear zirconium complex and dinuclear magnesium and zinc derivatives; the double helical magnesium compound has been structurally characterized by X-ray crystallography.



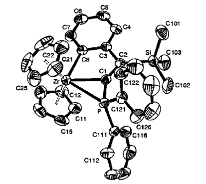


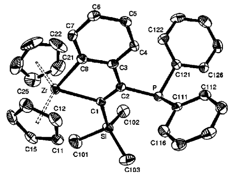
Yamna El Harouch, Victorio Cadierno, Alain Igau, Bruno Donnadieu, Jean-Pierre Majoral

J. Organomet. Chem. 689 (2004) 953

Investigation in the coupling of zirconocene complexes and trimethylsilyl(diphenylphos-phino)acetylene. P–C bond cleavage chemistry from protonolysis reactions

The regioselectivity of the coupling reactions of the internal acetylenic derivative $Ph_2P–C{\equiv}C–SiMe_3$ (**2**) and the benzyne complex $[Cp_2Zr(\eta^2\text{-}C_6H_4)]$ (**1**) resulted preferentially in the formation of the zirconaindene metallacycle with the metal α-carbanions stabilized by the trimethylsilyl group. We have been able to structurally characterize the two regiosomers.



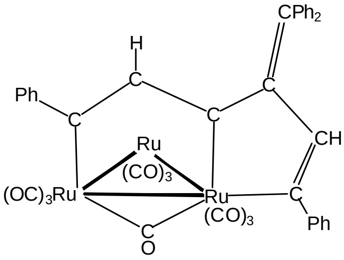


Michael I. Bruce, Andrew C. Meier, Brian W. Skelton, Allan H. White, Natasha N. Zaitseva

J. Organomet. Chem. 689 (2004) 965

Syntheses and molecular structures of $Ru_3(\mu\text{-}H)(\mu_3\text{-}CPh_2CCC{\equiv}CPh)(CO)_9$ and $Ru_3\{\mu_3\text{-}CPhCHCC({=}CPh_2)CH{=}CPh\}(\mu\text{-}CO)(CO)_8$

The reaction between $Ru_3(\mu\text{-}H)\{\mu_3\text{-}C_2CPh_2(OH)\}(CO)_9$ and $HC{\equiv}CPh$, carried out in the presence of $HBF_4{\cdot}Me_2O$, afforded the cluster complexes $Ru_3(\mu\text{-}H)(\mu_3\text{-}CPh_2\text{-}CCC{\equiv}CPh)(CO)_9$ and $Ru_3\{\mu_3\text{-}CPhCHCC\text{-}({=}CPh_2)CH{=}CPh\}(\mu\text{-}CO)(CO)_8$ (**6**), both of which were characterised by single-crystal X-ray studies.



(6)

Markus Allmendinger, Manuela Zintl, Robert Eberhardt, Gerrit A. Luinstra, Ferenc Molnar, Bernhard Rieger

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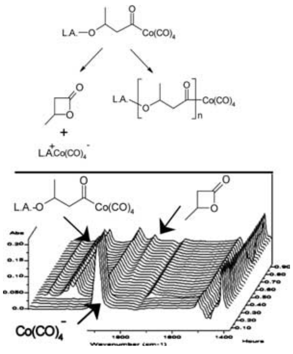
Online ATR-IR investigations and mechanistic understanding of the carbonylation of epoxides – the selective synthesis of lactones or polyesters from epoxides and CO

In situ ATR-IR spectroscopy is applied as a powerful tool to gain insight into rates and product distributions of epoxide carbonylation reactions with $[\text{Lewis acid}]^+[Co(CO)_4]^-$ salts as catalysts. It is shown that β-alkoxy-acyl-cobalttetracarbonyl species are key intermediates while the further reaction pathway – formation of lactone or polyester – is influenced by the nature of the Lewis acid.

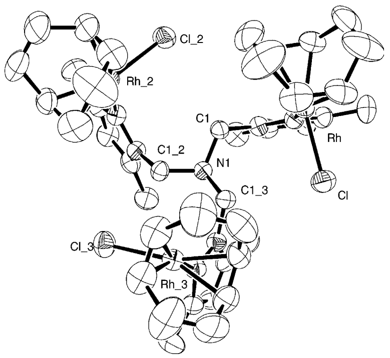


Gemma Zamora, Josefina Pons, Xavier Solans, Mercè Font-Bardia, Josep Ros

J. Organomet. Chem. 689 (2004) 980

Study of the reactivity of tris(pyrazolyl)-amine and bis(pyrazolyl)amine ligands toward Rh(I). Crystal structure of $[Rh_3Cl_3(cod)_3$***tdma***$]\cdot CH_3CN$ (***tdma*** = tris[(3,5-dimethyl-1-pyrazolyl) methyl]amine), a C_3-symmetric compound

Rh(I) compounds $[Rh_2Cl_2(cod)_2$**L**$]$ (**L** = tris[(1-pyrazolyl)methyl]amine (**tpma**), tris[2–pyrazolyl)-ethyl]amine (**tpea**), tris[2-(3,5-dimethyl-1-pyrazolyl) ethyl]amine (**tdea**), bis[2-(1-pyrazolyl)ethyl]amine (**bpea**), and bis[2-(3,5-dimethyl-1-pyrazolyl) ethyl]amine (**bdea**), and $[Rh_3Cl_3(cod)_3$**tdma**$]$ (**tdma** = tris[3,5-dimethyl-1-pyrazolyl)methyl]amine, have been prepared, and characterised. The ^1H NMR spectra and molar conductance of $[Rh_2Cl_2(cod)_2$**L**$]$ complexes suggested the presence of 1:1 electrolyte species $[Rh(cod)$**L**$]^+[RhCl_2(cod)]^-$ in solution. The crystal structure of $[Rh_3Cl_3(cod)_3$**tdma**$]$ was resolved by X-ray diffraction. The molecular structure is unusual and consist of a ligand **tdma** coordinated to three "RhCl(cod)" units with a C_3-symmetry.



Reinout Meijboom, Matthew J. Overett, John R. Moss

J. Organomet. Chem. 689 (2004) 987

Chloromethylsilane functionalised dendrimers: synthesis and reactivity

Reaction of dendrimers containing (chloromethyl)dimethylsilane functionalities with $K[CpFe(CO)_2]$ and $K[CpRu(CO)_2]$ resulted in the $CpFe(CO)_2$- and $CpRu(CO)_2$-functionalised dendrimers. A number of other reactions of the (chloromethyl)dimethylsilane functionalised dendrimers are also described.