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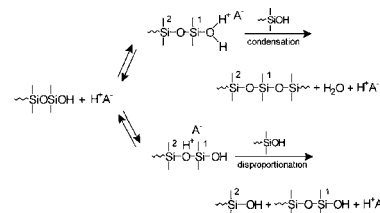
Regular papers

**Agnieszka Grzelka, Julian Chojnowski,
Marek Cypryk, Witold Fortuniak,
Peter C. Hupfield, Richard G. Taylor**

J. Organomet. Chem. 689 (2004) 705

Polysiloxanol condensation and disproportionation in the presence of a superacid

Condensation of hydroxyl-terminated oligosiloxanes catalysed by tetrakis(pentafluorophenyl)borate is accompanied by disproportionation (intermolecular exchange of the dimethylsiloxane unit). Both processes show similar kinetic laws and values of activation parameters. The kinetics are explained by the formation of a reactive complex of silanol with borate being in fast preequilibrium with an unreactive complex.

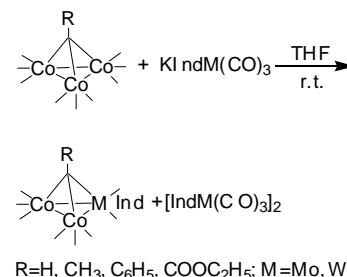


**Wei-Qiang Zhang, Bao-Hua Zhu, Bin Hu,
Yu-Hua Zhang, Quan-Yi Zhao,
Yuan-Qi Yin, Jie Sun**

J. Organomet. Chem. 689 (2004) 714

Studies of metal exchange reactions: the synthesis and structures of heteronuclear metal clusters containing the indenyl ligand (μ_3 -CR) $\text{Co}_2\text{M}(\text{CO})_8(\eta^5\text{-Ind})$ (R = H, CH₃, C₆H₅, COOC₂H₅; M = Mo, W)

The novel tetrahedral clusters (μ_3 -CR) $\text{Co}_2\text{M}(\text{CO})_8(\eta^5\text{-Ind})$ containing the indenyl ligand were isolated from reactions of tricobalt clusters (μ_3 -CR) $\text{Co}_3(\text{CO})_9$ and $\text{K}(\eta^5\text{-Ind})\text{M}(\text{CO})_3$ under mild conditions. The crystal structures of cluster compounds containing indenyl ligand were established by single crystal X-ray diffraction methods and show structural evidence for "slippage" of the indenyl ring.

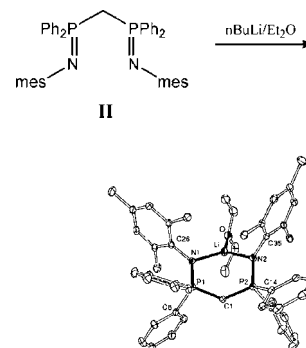


**Michael S. Hill, Peter B. Hitchcock,
Sophia M.A. Karagouni**

J. Organomet. Chem. 689 (2004) 722

Group 1 and 13 complexes of aryl-substituted bis(phosphinimino)methyls

A series of mesityl-substituted bis(phosphinimino)methyl complexes of lithium, aluminium and gallium have been synthesised either by direct metallation of the methane ligand **II** or by metathesis of a lithium derivative with the appropriate group 13 metal trihalide.

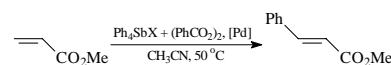


**Dmitry V. Moiseev, Vera A. Morugova,
Aleksey V. Gushchin, Andrey S. Shavirin,
Yury A. Kursky, Victor A. Dodonov**

J. Organomet. Chem. 689 (2004) 731

Tetraphenylantimony carboxylates in the cascade Pd-catalyzed C-phenylation reaction of methyl acrylate in the presence of peroxide

A system including tetraphenylantimony(V) derivative and peroxide has been studied in the Pd-catalyzed C-phenylation reaction of methyl acrylate. Three phenyl groups of the initial organoantimony compounds are involved in the C-phenylation under mild conditions. Organoantimony intermediates have been isolated from the reaction.

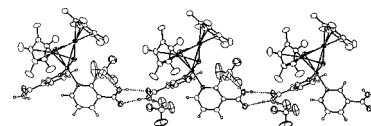


**Tomoko Fujimura, Hidetake Seino,
Masanobu Hidai, Yasushi Mizobe**

J. Organomet. Chem. 689 (2004) 738

One- or two-dimensional organometallic arrays containing PdIr₂(μ₃-S)₂ mixed-metal sulfido cluster units connected via the nicotinamide or isonicotinamide ligands on their Pd sites through hydrogen-bonding interactions

Cationic mixed-metal sulfido clusters [(PdL₂){(C₅Me₅)Ir}₂(μ₃-S)₂][BF₄]₂ were obtained as purple crystals, in which the PdIr₂S₂ cores are self-assembled to form one-dimensional chains for L = nicotinamide or two-dimensional sheets for L = isonicotinamide through hydrogen-bonding interactions.

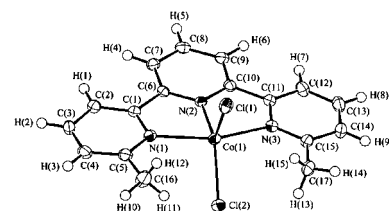


**Yoshinori Sato, Yuushou Nakayama,
Hajime Yasuda**

J. Organomet. Chem. 689 (2004) 744

Controlled vinyl-addition-type polymerization of norbornene initiated by several cobalt complexes having substituted terpyridine ligands

A series of cobalt(II) complexes having terpyridine derivatives such as terpyridine (**1**), 4,4,4''-t-Bu₃-terpyridine (**2**), 5,5''-Me₂-terpyridine (**3**), 6,6''-Me₂-terpyridine (**4**) and 6,6''-(3,5-Me₂C₆H₃)₂-terpyridine (**5**) was synthesized. Upon activation with d-MAO (dried-methylaluminoxane), these complexes catalyzed vinyl-addition-type polymerization of norbornene to give polymers with controlled molecular weights and relatively narrow molecular weight distributions.

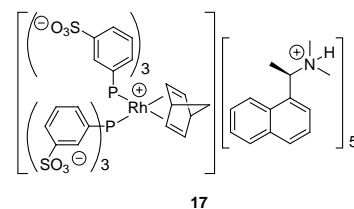


**Romano Dorta, Linda Shimon,
David Milstein**

J. Organomet. Chem. 689 (2004) 751

Rhodium complexes with chiral counterions: achiral catalysts in chiral matrices

The synthesis and characterization of highly charged achiral rhodium complexes in association with chiral counterions, such as compound **17**, are presented. Furthermore, such complexes were tested as catalyst precursors for the hydrogenation of prochiral dehydro-aminoacids under homogeneous and heterogeneous silica-supported and self-supported conditions.

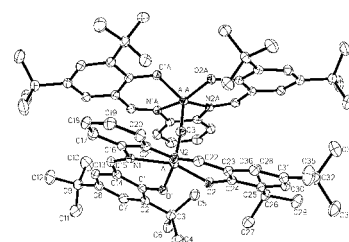


**Yuzhong Wang, Sonali Bhandari,
Sean Parkin, David A. Atwood**

J. Organomet. Chem. 689 (2004) 759

Five-coordinate organoaluminum acetylides and crystal structure of the hydrosylate, [Salophen(^tBu)Al]₂O

Reactions of LiC≡CPh with L(Bu)AlCl (where L = Salen (**1**), Salpen (**2**), Salophen (**3**), Salomphen (**4**)) give five coordinate aluminum acetylides (**5–8**). In the presence of trace amounts of water, aluminum hydroxides are formed, which further condense to form hydrosylates. The crystal structure of the hydrosylate, [Salophen(^tBu)Al]₂O (**9**) is shown.

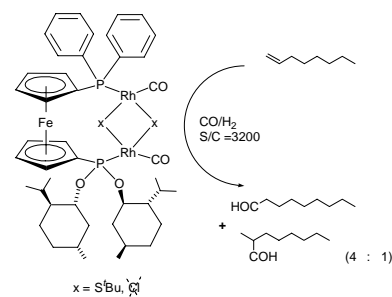


**Jean-Cyrille Hierso, Francis Lacassin,
Roland Broussier, Régine Amardeil,
Philippe Meunier**

J. Organomet. Chem. 689 (2004) 766

Synthesis and characterisation of a new class of phosphine-phosphonite ferrocenediyl dinuclear rhodium complexes

The easy access to mixed ferrocenediyl ligands allows to synthesise a new enantiopure phosphine-menthylphosphonite ferrocenediyl and novel dinuclear rhodium complexes. One example of this new class of unsymmetrical “A frame” dinuclear rhodium complexes, characterised by multinuclear C, ³¹P and ¹⁰³Rh NMR is presented. Preliminary tests have shown an activity improvement in the hydroformylation of oct-1-ene using the phosphine-menthylphosphonite ferrocenediyl auxiliary compared to known phosphine-phosphonite ligands.

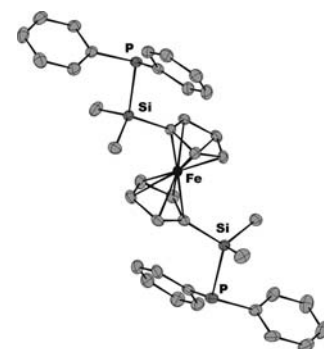


**Karl S. Coleman, Simon Turberville,
Sofia I. Pascu, Malcolm L.H. Green**

J. Organomet. Chem. 689 (2004) 770

Silicon containing ferrocenyl phosphane ligands

New ferrocenyl phosphane ligands incorporating Si–P linkages, [(η-C₅H₄SiMe₂PR₂)₂Fe], where R = Ph and Me, and their corresponding metal complexes are described.

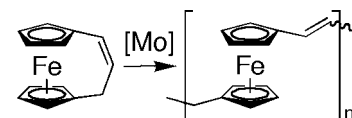


**Christofer Arisandy, Andrew R. Cowley,
Stephen Barlow**

J. Organomet. Chem. 689 (2004) 775

1,1'-(1-Propene-1,3-diyl)-ferrocene: modified synthesis, crystal structure, and polymerisation behaviour

Two dehydro[3](1,1)ferrocenophanes, 1,1'-(1-propene-1,3-diyl)-ferrocene and 1,1'-(3-phenyl-1-propene-1,3-diyl)-ferrocene, were synthesised under Shapiro conditions from the tosylhydrazones of the corresponding α-oxo-[3](1,1)ferrocenophanes. The structure of 1,1'-(1-propene-1,3-diyl)-ferrocene shows a ring tilt of 11.3°; reaction with a molybdenum-based ROMP initiator led to a mixture of insoluble material and a mixture of soluble apparently cyclic oligomers.

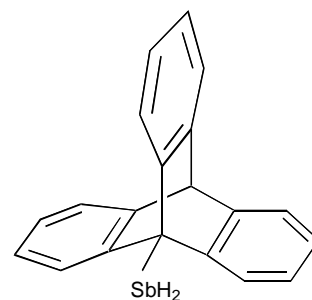


**Robert J. Baker, Markus Brym,
Cameron Jones, Mark Waugh**

J. Organomet. Chem. 689 (2004) 781

9-Triptyceny complexes of group 13 and 15 halides and hydrides

The reactions of 9-lithiotriptycene with group 13 (Al, Ga and In) and group 15 (P, As, Sb and Bi) trihalides have been investigated. These have given rise to a variety of mono-triptyceny element dihalide complexes, two of which, [(tript)ECl₂], E = As or Sb, tript = 9-triptyceny, can be reduced to the corresponding primary pnictanes, [(tript)-EH₂]. The X-ray crystal structures of six of the prepared complexes are discussed.

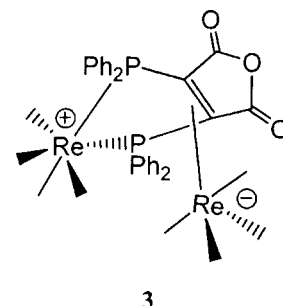


**Simon G. Bott, Kaiyuan Yang,
Michael G. Richmond**

J. Organomet. Chem. 689 (2004) 791

Unusual chemical reactivity in the reactions of Re₂(CO)₈(μ-H)(μ-η¹,η²-CH=CHBu) with 2,3-bis(diphenylphosphino)maleic anhydride (bma) and Re₂(CO)₈(bma) with Ni(cod)₂: X-ray diffraction structures of Re₂(CO)₈(bma), zwitterionic Re(CO)₄[Re(CO)₄(bma)], and the phosphido-bridged complex Re₂(CO)₈[μ-η¹,η¹-C=C(PPh₂)C(O)OC(O)](μ-PPh₂)

The reaction between the activated dirhenium compound Re₂(CO)₈(μ-H)(μ-η¹,η²-CH=CHBu) and the diphosphine ligand 2,3-bis(diphenylphosphino)maleic anhydride (bma) furnishes the dirhenium complexes Re₂(CO)₈(bma) (2) and Re(CO)₄[Re(CO)₄(bma)] (3). The former compound was found to react with added Ni(cod)₂ to produce the phosphido-bridged species Re₂(CO)₈[μ-η¹,η¹-C=C(PPh₂)C(O)OC(O)](μ-PPh₂) (4). Compounds 2–4 have been fully characterized in solution and the molecular structures of all three dirhenium complexes have been established by X-ray crystallography.

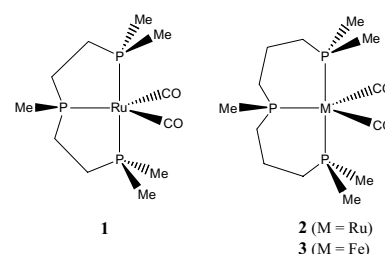


**Piotr Jaunky, Helmut W. Schmalte,
Montserrat Alfonso, Thomas Fox,
Heinz Berke**

J. Organomet. Chem. 689 (2004) 801

Oxidative addition capability of triphosphine iron and ruthenium complexes with methyl iodide

The ruthenium and iron dicarbonyl complexes 1–3 bearing strong donor tridentate phosphine ligands were prepared and fully characterised and their structures have been established by X-ray diffraction studies. The reactivity of these complexes towards oxidative addition of MeI, CO insertions and deprotonation reactions on the resulting acetyl species have been investigated.

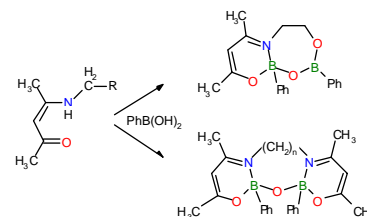


**Mario Sánchez, Obdulia Sánchez,
Herbert Höpfl, Maria-Eugenia Ochoa,
Dolores Castillo, Norberto Farfán,
Susana Rojas-Lima**

J. Organomet. Chem. 689 (2004) 811

New boronates prepared from 2,4-pentanedione derived ligands of the NO₂ and N₂O₂ type – comparison to the complexes obtained from the corresponding salicylaldehyde derivatives

Three novel dinuclear monomeric boron complexes have been prepared from tridentate and tetradentate ligands derived from 2,4-pentanedione. A comparison of their structures with those obtained from the corresponding salicylaldehyde derivatives showed that the general pattern of reactivity is identical, but that there may be differences with respect to the molecular composition and structure.

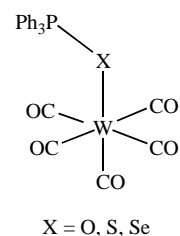


**Julian B. Cook, Brian K. Nicholson,
Derek W. Smith**

J. Organomet. Chem. 689 (2004) 860

A structural, spectroscopic and theoretical study of the triphenylphosphine chalcogenide complexes of tungsten carbonyl, $[W(XPPH_3)(CO)_5]$, X = O, S, Se

The W–X–P angles for X = O, S, Se in $[W(XPPH_3)(CO)_5]$ have been measured using X-ray crystal structure determinations, and analysed by EHMO methods. More acute angles are associated with increased relative importance of σ bonding.

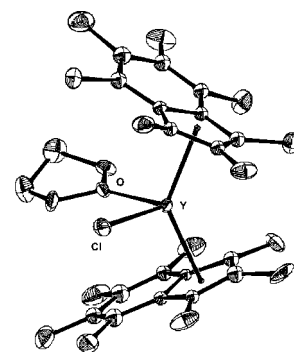


John Gavenonis, T. Don Tilley

J. Organomet. Chem. 689 (2004) 870

Synthesis and reactivity of bis(heptamethylindenyl) yttrium (Ind^*_2Y) complexes containing alkyl and hydride ligands: crystal structure of $Ind^*_2YCl(THF)$

Alkyl and hydride complexes of bis(heptamethylindenyl) yttrium (Ind^*_2Y) are reported. The THF-stabilized methyl complex $Ind^*_2YMe(THF)$ (**3**) reacted with $PhSiH_3$ to give $Ind^*_2YH(THF)$ (**4**) and $PhMeSiH_2$. Treatment of the base-free alkyl complex $Ind^*_2YCH(SiMe_3)_2$ (**6**) with $PhSiH_3$ yielded $CH_2(SiMe_3)_2$ and a mixture of yttrium-containing products. In the presence of THF, compound **6** reacted with H_2 to give **4**.



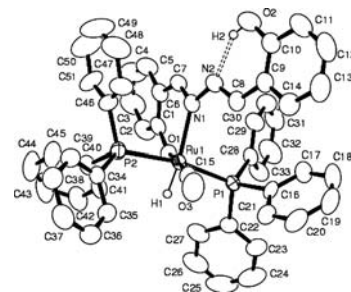
Note

**Manoj Trivedi, Manish Chandra,
Daya Shankar Pandey, M. Carmen Puerta,
Pedro Valerga**

J. Organomet. Chem. 689 (2004) 879

Mononuclear hydridocarbonyl ruthenium complexes incorporating N_2O_2 bis-chelating ligands

The reactions of Ru(II) complex was carried out with N, O donor bis-chelating ligands, led in the formation of neutral mononuclear complexes. Molecular structure of the representative complex $[RuH(CO)(PPh_3)_2(Hbsh)]$ has been determined by single crystal X-ray analysis.



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