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Short communications

Yasutaka Kataoka, Kazuko Shizuma, Masahiro Imanishi, Tsuneaki Yamagata, Kazuhide Tani

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Diastereoselective intramolecular C–H bond activation on a prochiral sp³ carbon by a cationic Ir(I) complex having an optically active P–N hybrid ligand Highly diastereoselective intramolecular C–H bond activation at a prochiral sp^3 carbon was achieved with a cationic iridium complex having an optically active heterochelate PN*(R) [PN*(R)=o-Ph_2PC_6H_4CH_2OCH_2]

C=NCH(R)CH₂O] ligand.



James A. Dunn, Laura E. Harrington, Michael J. McGlinchey

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The alkyne-anion promoted ring-contraction of hexachlorotropone: synthesis and structure of [trimethylsilyl(pentachlorobenzoyl) ethyne]-hexacarbonyldicobalt The reaction of hexachlorotropone with trimethylsilylethynyl-lithium leads to contraction of the seven-membered ring via a semibenzilic acid rearrangement to yield pentachlorophenyl trimethylsilylethynyl ketone, which has been characterized by X-ray crystallography as an alkyne-dicobalt hexacarbonyl cluster.



Erica Farnetti, Nazario Marsich

J. Organomet. Chem. 689 (2004) 14

Regioselective cyclotrimerization of phenylacetylenes to 1,2,4-triarylbenzenes catalyzed by iridium–diphosphine complexes The organoiridium compounds HIr(cod) (Ph₂P(CH₂)_nPPh₂) (cod=1,5-cyclooctadiene; n = 1-4) catalyze the regioselective cyclotrimerization of phenylacetylene and substituted derivatives: when n = 1 or 2 yields in the corresponding 1,2,4-triarylbenzenes up to 100 % are obtained.





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Regular papers

Zhiqiang Weng, Lip Lin Koh, T.S. Andy Hor

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Suzuki cross-coupling in aqueous media catalyzed by a 1,*I'-N*-substituted ferrocenediyl Pd(II) complex

An air-stable and crystallographically characterized 1,1'-ferrocenediyl complex $PdCl_2Fe[\eta-C_5H_4NC(H)Ph-N]_2$ (2) effectively catalyzes Suzuki cross-coupling reactions in water under non-homogeneous conditions. The products are easily isolated in generally high yields.

 $\bigwedge_{\mathbf{R}^1}^{\mathbf{X}} + \bigotimes_{\mathbf{R}^2}^{\mathbf{B}(OH)_2} \xrightarrow{cat \ \mathbf{2}, \operatorname{Cs}_2 \operatorname{CO}_3}_{\mathbf{H}_2 \operatorname{O}, \operatorname{80}^\circ \operatorname{C}, 2 \ \mathbf{h}} \operatorname{R}^1 } \mathbb{Q} - \mathbb{Q}_{\mathbf{R}^2}$

Qi Lin, Weng Kee Leong, Lu Gao

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The photochemical and thermal reactions of a triosmium cluster carrying a γ -pyrone ligand with alkynes

Reaction of $Os_3(CO)_{10}(\mu-H)(\mu-\gamma-C_5H_3O_2)$ with alkynes under thermal or photochemical conditions afforded in most cases the dinuclear complexes $Os_2(CO)_6(\mu-\gamma-C_5H_3O_2)$ (μ -LH) (L=alkyne) or the trinuclear chain complexes $Os_3(CO)_9(\mu-H)(\mu-\gamma-C_5H_3O_2)(\mu RCCHC_6H_4)$ (R=H, Ph).





Giuliana Gervasio, Domenica Marabello, Enrico Sappa, Andrea Secco

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Reaction of $Ru_3(CO)_{12}$ with but-2-yn-1,4diol in CH₃OH/KOH solution. Crystal structure of (μ -Cl) $Ru_3(CO)_9[\mu_3-\eta^4-H_2CCC(H)$ CH₂] The reaction of Ru₃(CO)₁₂ with but-2-yn-1,4-diol (HOCH₂C=CCH₂OH) in CH₃OH/ KOH followed by acidification with HCl leads to four products, one of which has been identified as (μ -Cl)Ru₃(CO)₉[μ ₃- η ⁴-H₂CCC-(H)CH₂], containing a bridging Cl atom on the open side of the cluster. The structure of the complex has been determined by X-ray analysis.



Wen-Hua Sun, Tianzhu Zhang, Leyong Wang, Yong Chen, Roland Froehlich

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Supramolecular helical architecture assembled by double-helical $[Ag_2L_2]$ units

The silver complexes with 4,4'-methylene-N, \dot{N} -bis(phenyl-2-pyridylmethylene)-bis(2,6diakylaniline)s formed, one of which was confirmed by single X-ray crystallographic analysis as the double-helical supramolecular architecture, and the double-helical [Ag₂L₂] asymmetric unit interconnected with the adjacent unit through strong hydrogen bond.



Alistair J. Usher, Gulliver T. Dalton, Nigel T. Lucas, Susan M. Waterman, Simon Petrie, Robert Stranger, Mark G. Humphrey, Anthony C. Willis

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Mixed-metal cluster chemistry. 26 [1]. Proclivity for "all-terminal" or "plane-ofbridging-carbonyls" ligand disposition in tungsten-triiridium clusters DFT calculations reveal an increasing proclivity for an all-terminal CO disposition for MIr₃(CO)₁₁η-C₅H₅) in the gas phase on proceeding from M=Cr to Mo and then W, consistent with structural studies for whoch the W-containing cluster is the only all-terminal example. They also substantiate a 'merry-go-round' mechanism for carbonyl scrambling in these systems, consistent with the fluxionality seen in the NMR studies on the W-containing example. Increasing electron donation from the ligands in the tungsten system (either from phosphine substitution or cyclopentadienyl permethylation) suffices to impose a plane of bridging carbonyls on the ground state structure.



H. Hong, T.C. Chung

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Doubly hydrogen-bridged 1,2-diphenylenediboranes derived from 9-chloro-9-borafluorene and ligand exchange reactions Cyclic 1,2-diphenylenediboranes containing a doubly hydrogen-bridged structure, including 1,2-(2,2'biphenylylene)diborane(I) and 1,2-(2,2'biphenylylene)-1,2-diethyldiborane (II), are conveniently prepared by treating 9-chloro-9-borafluorene with NaBH₄ and Na(Et)₃BH, respectively. The doubly hydrogen-bridged structure shows good thermal stability up to 50 °C, but forming a 1:2 complex with pyridine.



Richard D. Adams, Burjor Captain, Jack L. Smith Jr.

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Diacenaphtho[1,2-c:1',2'-e]-1,2-dithiin: synthesis, structure and reactivity Diacenaphtho[1,2-c:1',2'-e]-1,2-dithiin **2** was obtained from the reaction of acenaphthylene with elemental sulfur at 120 °C. Compound **2** reacts with $Pt(COD)_2$ to yield the complex $Pt(COD)(C_{24}H_{12}S_2)$ **4** by insertion of a Pt(COD) group into the S–S bond of **2**. When heated, **4** eliminates a (COD)PtS group to yield diacenaphtho[1,2-b:1',2'-d] thiophene **1**.

 $\begin{array}{c} C_{13} \\ C_{14} \\ C_{14} \\ C_{19} \\ C_{10} \\ C_{10} \\ C_{10} \\ C_{28} \\ C_{29} \\ C_{29} \\ C_{29} \\ C_{29} \\ C_{29} \\ C_{29} \\ C_{20} \\ C_{21} \\ C_{22} \\ C_{21} \\ C_{22} \\ C_{21} \\ C_{22} \\ C_{21} \\ C_{22} \\ C_{21} \\ C_{22} \\ C_{21} \\ C_{21} \\ C_{21} \\ C_{21} \\ C_{22} \\ C_{22} \\ C_{21} \\ C_{22} \\ C_{22} \\ C_{21} \\ C_{22} \\ C_{22} \\ C_{22} \\ C_{21} \\ C_{22} \\ C_{22} \\ C_{21} \\ C_{22} \\ C_{23} \\ C_{33} \\ C_{37} \\ C_{38} \\ C_{37} \\ C_{38} \\ C_{37} \\ C_{38} \\ C_{38} \\ C_{37} \\ C_{38} \\ C_{38$

Rolf U. Claessen, Andrei M. Kornilov, Kulbinder K. Banger, Silvana C. Ngo, Seiichiro Higashiya, Christopher C. Wells, Evgeny V. Dikarev, Paul J. Toscano, John T. Welch

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Investigations into the preparation of sila-βdiketones via 2-trimethylsilyl-1,3-dithianes: structural characterization of a second polymorph of bis(2,2,6,6-tetramethyl-2-sila-3,5-heptanedionato)copper(II) The sila- β -diketone, 2,2,6,6-tetramethyl-2-silaheptane-3,5-dione (tmshdH), was obtained in modest yield by the condensation of the lithium cuprate anion of 2-trimethylsilyl-1,3-dithiane anion with 1-bromo-3,3-dimethylbutan-2-one, followed by deprotection of the latent carbonyl moiety. A second polymorph of Cu(tmshd)2 was structurally characterized by X-ray diffraction techniques. Extension of this methodology to the synthesis of disilylated β -diketones was not successful; however, the solid-state structures of the bis-(1,3-dithianyl) precursors were determined, the torsion and bond angles of which evinced unusual steric and stereoelectronic effects.



I.A. Tikhonova, F.M. Dolgushin, K.I. Tugashov, O.G. Ellert, V.M. Novotortsev, G.G. Furin, M.Yu. Antipin, V.B. Shur

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Crown compounds for anions. Sandwich complexes of cyclic trimeric perfluoro-ophenylenemercury with hexacyanoferrate (III) and nitroprusside anions

Dilip Kumar Dey, Antonin Lycka, Samiran Mitra, Georgina M. Rosair

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Simplified synthesis, ¹H, ¹³C, ¹⁵N, ¹¹⁹Sn NMR spectra and X-ray structures of diorganotin(IV) complexes containing the 4-phenyl-2,4-butanedionebenzoylhydrazone (2-) ligand

Chunlin Ma, Feng Li, Qin Jiang, Rufen Zhang

Syntheses and crystal structures of di- and

triorganotin derivatives with 2,5-dimercapto-

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1,3,4-thiodiazole

Two diorganotin(IV) complexes, R₂Sn [Ph(O)C=CH-C(Me)=N-N=C(O)Ph] (R=Ph, 1; R=Me, 2) have been synthesized in methanol under mild conditions, in contrast to the more severe conditions employed in previous studies. Compounds have been characterized by IR, NMR (1H, 13C, 15N, ¹¹⁹Sn) spectra, and structures confirmed Xray crystallography. The $\delta(^{119}Sn)$ values for the complexes 1 and 2 are -151.5 and -146.8 ppm, respectively, indicating penta-coordinated tin centres.

n-Bu 3; m = 1, n = 2, R=Ph 4) and [R₂Sn(dmt)·L]_n

 $(L=0.5C_6H_6, R=CH_3 5; L=0, n = 5, R=n-Bu 6)$

have been synthesized. All complexes 1-6 were

characterized by elemental analysis, IR, ¹H NMR

and ¹³C NMR spectroscopies. And except for 3, complexes 1, 2, 4, 5 and 6 have also been determined by X-ray crystallography. The tin atoms of 1. 2. 3 and 4 are all five-coordinated. The geometries at tin atoms of complexes 1, 2, 3 and 4 are distorted trigonal bipyramidal. The tin atoms of 5 and 6 are six-coordinated and their geometries are

distorted octahedral.

A series of organotin(IV) complexes with 2,5-di-HHdmt + R₃SnCl EtONa R₃Sn(dmt) mercapto-1,3,4-thiodiazole (HHdmt) of the type $(R_n SnCl_m)_2(dmt)$ (*m* = 0, *n* = 3, R=Ph 1, PhCH₂2,

HHdmt

R = Ph 1

R = Me, 2

complex 1, R=Ph; complex 2, R=PhCH₂ complex 3, R=n-Bu R₂SnCl(dmt) + R₂SnCl₂ EtONa

[R₂Sn(dmt)₂L]_n

complex 4, R=Ph complex 5, R=CH₃, L=0.05C₆H₆; complex 6, R=*n*-Bu, L=0,n=5

Wen-Yann Yeh, Ching-I Li, Shie-Ming Peng, Gene-Hsiang Lee

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 $W(\eta^2-PhC\equiv CPh)_3(\eta^1-Ph_2PC\equiv CPPh_2)$ as a ligand to prepare homo- and hetero-nuclear cluster complexes

 $W(\eta^2 - PhC \equiv CPh)_3(\eta^1 - Ph_2PC \equiv CPPh_2)$ (2). which contains a pendant phosphine group, has been prepared. The reactions of 2 with W(CO)₄(NCMe)₂, Os₃(CO)₁₀(NCMe)₂ and Ru₃(CO)₉(NCMe)₃ afford a variety of cluster complexes 3-5.





Me



A remarkable ability of cyclic trimeric per-

fluro-o-phenylenemercury $(o-C_6F_4Hg)_3(1)$ to

bind [Fe(CN)₆]³⁻ and [Fe(CN)₅NO]²⁻ anions

with the formation of sandwich complexes $\{[(o-C_6F_4Hg)_3]_2[Fe(CN)_6]\}^{3-}$ (2) and $\{[(o-C_6F_4Hg)_3]_2[Fe(CN)_6]\}^{3-}$

 $C_6F_4Hg_{3}_2[Fe(CN)_5NO]$ ²⁻ is reported. The bonding of the anionic guest to the mercury

atoms of 1 in these unusual sandwiches is

accomplished with the participation of π -

electrons of the cyanide ligands.

+CO

Renato Rosseto, Maria D. Vargas

J. Organomet. Chem. 689 (2004) 111

Synthesis and characterisation of saturated and unsaturated triruthenium clusters containing electronically symmetrical and asymmetrical alkynes The synthesis and characterisation of μ_3 - η^2 alkynyl triruthenium clusters, [Ru₃(μ_3 - η^2 -R¹-4-C₆H₄CCR²) (μ -dppm)(μ -CO)(CO)₇] **1**, [Ru₃ (μ_3 - η^2 -R¹-4-C₆H₄CCR²)(μ -dppm)(CO)₇] **2** and [Ru₃(μ_3 - η^2 -R¹-4-C₆H₄CCR²)(μ -dppm)(PPh₃) (CO)₇] **3** containing symmetrical and asymmetrical alkynes (R¹ and R² = electron donor or electron withdrawing groups in the *para* position of the aromatic ring(s) or R² = Fc) are reported. Structures were proposed on the basis of systematic ³¹P NMR studies and correlations with X-ray structural data of related compounds available in the literature.

Pradeep Mathur, Saurav Chatterjee, Goutam K. Lahiri, Soma Chakraborty, John H. Kaldis, Michael J. McGlinchey

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Synthesis, characterisation and redox behaviour of isocyanide incorporated, chalcogen stabilised mixed-metal clusters Room temperature reaction of a benzene solution of $[Cp_2Mo_2Fe_2(CO)_7(\mu_3-E)(\mu_3-E')]$ $(EE'=Se_2(1), STe(2), SeTe(3))$ with Pr^iNC or Bu^tNC resulted in the formation of iron bonded isocyanide clusters $[Cp_2Mo_2Fe_2$ (RNC) $(CO)_6 (\mu_3-E)(\mu_3-E')], [E=E'=Se, R=Pr^i$ (5) or Bu^t (9); E=S, E'=Te, R=Prⁱ (6a, 6b) or R=Bu^t (10a, 10b); E=Se, E'=Te, R=Prⁱ (7a, 7b) or R=Bu^t (11a, 11b)] and molybdenum bonded isocyanide clusters $[Cp_2(RNC) Mo_2Fe_2(CO)_6$ $(\mu_3-E)(\mu_3-E')], [E=E'=Se, R=Prⁱ (13) or Bu^t$ (17); E=S, E'=Te, R=Prⁱ (14) or R=Bu^t, (18); E=Se, E'=Te, R=Prⁱ (15) or R=Bu^t (19)].



Honglae Sohn

J. Organomet. Chem. 689 (2004) 134

Reduction of 1-chloro-1,2,3,4,5-pentaphenylsilole: formation of silole monoanion and dianion The reduction of 1-chloro-1,2,3,4,5-pentaphenylsilole, (C₄Ph₄SiPhCl, 1) with 2 equiv lithium gave the pentaphenylsilole anion $[C_4Ph_4SiPh]^-$ (2), silole dianion $[C_4Ph_4SiPh_2]^{-1}$ (3), and hexaphenylsilole C₄Ph₄SiPh₂ (4).

Li-Cheng Song, Hua-Wei Cheng, Qing-Mei Hu, Zhi Wang

J. Organomet. Chem. 689 (2004) 139

Synthesis and characterization of the cluster complexes containing tetrahedral FeCrCo (μ_3 -S) cluster cores generated by isolobal displacement reactions. Crystal structures of (η^5 -RC₅H₄)FeCrCo(μ_3 -S)(CO)₈ (R = H, CO₂ Et) and FeCo₂(μ_3 -S)₂(CO)₉ The single and double tetrahedral clusters (η^5 -RC₃H₄)FeCrCo(μ_3 -S) (CO)₈ (**4**, R=H; **5**, R= Me; **6**, R=CO₂Et; **7**, R=C(O)Me), [η^5 -C₅H₄ CH₂(CH₂OCH₂)_nCH₂C₅H₄- η^5][FeCrCo(μ_3 -S) (CO)₈]₂ (**13**, *n* = 1; **14**, *n* = 2; **15**, *n* = 3) and [η^5 -C₃H₄C(O)CH₂]₂[FeCrCo(μ_3 -S)(CO)₈]₂ (**17**), as well as the square pyramidal cluster FeCo₂(μ_3 -S)₂(CO)₉ (**9**) have been synthesized and spectroscopically characterized. The crystal structures of clusters **4**, **6** and **9** were determined by X-ray diffraction techniques.



Masahiro Ebihara, Masami Iiba, Hiroaki Matsuoka, Chie Okuda, Takashi Kawamura

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Addition and/or oxidation in the reaction of a tricobalt cluster with silver(I) salts: synthesis, structure and solution properties of $[Co_3Cp_3-(\mu_3-CPh)_2\{\mu-Ag(X)\}]$ (X = CF₃ CO₂, NO₃) and $[Co_3Cp_3(\mu_3-CPh)_2\{\mu-Ag(NCMe)\}]PF_6$

The silver salts of weakly- or non-coordinating anions oxidize $[Co_3Cp_3(\mu_3-CPh)_2]$ in CH_2Cl_2 to form its cationic radical. Reactions with salts of coordinating anion yield the silver(I) adducts, $[Co_3Cp_3(\mu_3-CPh)_2\{\mu-Ag(X)\}]$ (for $X = CF_3CO_2^-$ and NO_3^-). Even with AgBF₄ or AgPF₆, the reaction in MeCN produces $[Co_3Cp_3(\mu_3-CPh)_2\{\mu-g(NCMe)\}]^+$.



Fatma Çetin, H. Barş Şenoğul, Sibel Gezer, Demet Astley, Stephen T. Astley

J. Organomet. Chem. 689 (2004) 154

The metal-halogen exchange reaction between *ortho*-substituted aryl halides and Ph₂CuLi · LiCN: scope and applicability for coupling reactions The possibility that haloarenes containing an *ortho* functional group may undergo metal–halogen exchange with Ph₂CuLi-LiCN to form *ortho*-substituted metallated aryl reagents and the potential of this process for subsequent reactions with electrophiles has been investigated. The procedure occurs under very convenient conditions and is potentially suitable for arenes which may contain a variety of functional groups.



Sambasivarao Kotha, Enugurthi Brahmachary

J. Organomet. Chem. 689 (2004) 158

Synthesis and reactions of silicon containing cyclic α -amino acid derivatives

A simple synthesis of a new amino acid derivative 5,6-bis(trimethylsilyl)indanylglycine via cobalt mediated [2+2+2] cycloaddition strategy is described.



Isaac de los Rios, Fabrizio Mani, Maurizio Peruzzini, Piero Stoppioni

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Bonding isomerism in the η^{\prime} -P coordination of the P₄X₃ (X = S, Se) molecules toward 16e rhodium fragments stabilized by tripodal tetradentate ligands The reaction of tetraphosphorus trichalcogenides P_4X_3 (X=S, Se) with electronically and coordinatively unsaturated 16 electron rhodium fragments affords new tetraphosphorus trichalcogenide complexes containing the intact cage bound to the metal. In the P_4Se_3 derivatives the heptatomic cage is bound to the rhodium through the apical phosphorus atom. The P_4S_3 derivatives are obtained as pairs of coordination isomers, with the cage linked to the metal either through the apical or through one of the basal P atoms, the former isomer being predominant.



Ronald Grigg, Lixin Zhang, Simon Collard, Peter Ellis, Ann Keep

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Facile generation and morphology of Pd nanoparticles from palladacycles and carbon monoxide

 $PdCy + CO(1 atm) \xrightarrow{r:t:} Pd$ nanoparticles Treatment of PdCys or palladium salts with carbon monoxide (1 atm) in DMF or toluene at room temperature results in a solution of palladium nanoparticles whose morphology depends on the PdCys or palladium salt.



Daniel Canseco-González, Valente Gómez-Benitez. Oscar Baldovino-Pantaleón, Simón Hernández-Ortega, **David Morales-Morales**

J. Organomet. Chem. 689 (2004) 174

Tandem transmetallation and oxidative addition reactions of [Sn(R)2(Ph2PC6H4-2-S)₂] with transition metal complexes of the Group 9

Reactions of [Sn(Ph)₂(Ph₂PC₆H₄-2-S)₂] with trans-[M(Cl)(CO)(PPh₃)₂] M=Ir, Rh vield the complexes $[Rh(Ph_2PC_6H_4-2-S)_2]$ (SnClPh₂)] (1) and [Ir(CO)(Ph₂PC₆H₄-2-S)₂(SnClPh₂)] (2) as final products of two consecutive processes, a transmetallation reaction and an oxidative addition process. Single crystal X-ray structure determination of both species reveals unequivocally the proposed formulations to be correct with the rhodium and iridium centers located into distorted square pyramidal and octahedral geometries, respectively.



Holger B. Friedrich, R. Alan Howie, Michael Laing, Martin O. Onani

J. Organomet. Chem. 689 (2004) 181

Transition metal-substituted paraffins: synthesis and properties of some µ-saturated heterobimetallic complexes containing Mo and W or Fe and the crystal structures of $[(\eta^{5}-C_{5}H_{5})(CO)_{3}W(CH_{2})_{3} Mo(CO)_{2}(PPh_{3})$ $(\eta^5-C_5H_5)$] and $[(\eta^5-C_5H_5)(CO)_2(PPh_3)Mo$ $(CH_2)_3Fe(CO)_2(\eta^5-C_5H_5)]$

The new heterobimetallic complexes $[(\eta^5-C_5)$ $H_5(CO)_3W(CH_2)_nMo(CO)_3(\eta^5-C_5H_5)]$ n = 3to 6; [(η⁵-C₅H₅)(CO)₃W(CH₂)_nMo(CO)₃(η⁵-C₅ $(CH_3)_5)] n = 3, 4; [(n^5-C_5H_5)(CO)_3W(CH_2)_nMo(CO)_2(PPh_iMe_{3-i})(n^5-C_5H_5)] n = 3, 4, i = 0 \text{ to } 3$ and [(η⁵-C₅H₅)(CO)₂Fe(CH₂)_nMo(CO)₂(PPh_i- $Me_{3-i}(\eta^5-C_5H_5)$ n = 3, 4, i = 0 to 3 were synthesized by direct displacement of the iodide of a metallo-iodoalkyl complex with the appropriate anion. The complexes have been fully characterised by IR, ¹H NMR, ¹³C NMR, COSY, HETCOR or HSQC and elemental analyses. The crystal and molecular structures of [Cp(CO)₃ W(CH₂)₃Mo(CO)₂(PPh₃)Cp] and [Cp(CO)₂ (PPh₃)Mo(CH₂)₃Fe(CO)₂Cp] are reported.



Prakash C. Srivastava, Sangeeta Bajpai, Smriti Bajpai, Chhabi Ram, Rajesh Kumar, Jerry P. Jasinski, Ray J. Butcher

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Telluranes: potential synthons for chargetransfer complexes (involving hypervalent Te-I bonds) and serendipitous synthesis of the first triphenyl methyl phosphonium salts containing $[C_4H_8TeI_4]^{2-}$ and $[TeI_6]^{2-}$ anions

Hypervalent Te-I bonds of telluranes serve as potential synthons to form charge-transfer complexes and cyclic tellurane $(C_4H_8TeI_2)$ oxidises PPh₃ to form the first triphenyl phosphonium salts containing [C₄H₈TeI₄]²⁻ and $[TeI_6]^{2-}$ anions.

Alberto R. Dias, M. Teresa Duarte, Anabela C. Fernandes, Susete Fernandes, Maria M. Marques, Ana M. Martins, João F. da Silva, Sandra S. Rodrigues

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Titanium ketimide complexes as α -olefin homo- and copolymerisation catalysts. X-ray diffraction structures of [TiCp'(N=C' Bu₂)Cl₂] (Cp' = Ind, Cp*)

Titanium ketimide complexes [TiCp'(N=C^{t-}Bu₂)Cl₂] (Cp'=Ind, 1; Cp*, 2; Cp, 3) were synthesised and the molecular structures of 1 and 2 were determined. The compounds were found to be very active catalysts in olefin homo- and copolymerisation leading to linear polyethylene and atatic polypropylene. Complex 3 proved to be the best catalyst for the ethylene/ α ; ω -unsaturated alcohols copolymerisation.



Hyosun Lee, Choong Hoon Lee

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The effect that 6-*tert*-butoxyhexyl functionalization has on ethylene polymerization in *ansa*-zirconocene dichlorides New *ansa*-zirconocene dichloride derivatives have been prepared, which have a 6-*t*-butoxyhexyl pendant introduced either on a Cp-ring-carbon or at the silicon and carbon *ansa*-bridging atom.





Sunkwon Lim, Bohyun Choi, Yo-sep Min, Daesig Kim, Il Yoon, Shim Sung Lee, Ik-Mo Lee

J. Organomet. Chem. 689 (2004) 224

A study on the development of CVD precursors V – syntheses and characterization of new N-alkoxy- β -ketoiminate complexes of titanium

The synthesis and characterization of various new titanium *N*-alkoxy- β -ketoiminate complexes are reported. Dimeric [Ti(O-*i*Pr)₂(*N*alkoxy- β -ketoiminate)]₂ complexes undergo disproportional rearrangement to produce Ti(O-*i*Pr)₄ and [Ti(*N*-alkoxy- β -ketoiminate)₂]. Crystal structures of monomeric [Ti(*N*-alkoxy- β -ketoiminate)₂] (MeC(O)CHC(Me)NC (Et)CH₂O (**3f**) and *t*-BuC(O)CHC(Me)NCH₂ CH(Me)O (**3k**)) are reported.

Muhammad Ashfaq, M.I. Khan, Musa Kaleem Baloch, Abdul Malik

J. Organomet. Chem. 689 (2004) 238

Biologically potent organotin(IV) complexes of 2-maleimidoacetic acid

Four new Organotin(IV) esters of 2-Maleimidoacetic acid have been synthesized and reported. These complexes were characterized by various spectroscopic techniques like ¹H, ¹³C, ¹¹⁹Sn NMR, FT IR and ^{119m}Sn Mossbauer. The spectroscopic data verifies the ladder view of the dimer structure. Bioassay screening results prove their potential as powerful biocides.



Handong D. Yin, Chuanhua Wang, Chunlin Ma, Daqi Wang

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Tim J. Brunker, Christofer Arisandy,

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Synthesis, structures and reactions of some

Andrew R. Cowley, Leigh H. Rees,

Stephen Barlow, Dermot O'Hare

metallocene alcohols

Synthesis and characterization of tri(*o*-fluorobenzyl)tin esters of heteroaromatic carboxylic acid and crystal structures of tri(*o*-fluorobenzyl)tin esters of 4-pyridinecarb- oxylic acid and 3-pyridinecarboxylic acid Reaction of tri(*o*-fluorobenzyl)tin chloride with sodium of heteroaromatic carboxylic acid in 1:1 stoichiometry yielded complexes of the type (2-*F*-Bz)₃SnOOCR (R=2-furanyl, 2furanvingl, 2-thiophenyl, 2-pyridinyl, 3-pyridinyl, 4-pyridinyl, 3-indolyl, 3-indolmethyl and 3-indolpropyl), respectively. These complexes have been characterized by elemental analyses, IR and ¹H NMR spectroscopy. The crystal structures of tri(*o*-fluorobenzyl)tin esters of 4-pyridinecarboxylic acid (**5**) and 3pyridinecarboxylic acid (**6**) were determined by single crystal X-ray diffraction.

E-1-Ferrocenyl-4,4-dimethylpent-2-ene-1-one has been synthesised from the Friedel–Crafts acylation of ferrocene with *E*-3-*tert*-butylacryloylchloride and converted to 1-ferrocenyl-3-chloro-4,4-dimethylpentan-1-one using ethereal hydrogen chloride.

O^{,H} Fe

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New divalent samarocenes for butadiene polymerisation: influence of the steric effect and the electron density on the catalytic activity Samarocenes (1)–(4) have been used associated to Al cocatalysts for stereospecific polymerisation of 1,3-butadiene. Their reactivity is discussed relatively to the nature of the cyclopentadienyl ligands. The 2/MAO system affords 1,4-polybutadiene more than 97% regular. The behaviour of 1 resembles to that of 3, whereas 2 and 4 are less active.

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