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Journal of Organometallic Chemistry

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Communication

Jered C. Garrison, Richard S. Simons, Claire A. Tessier, Wiley J. Youngs

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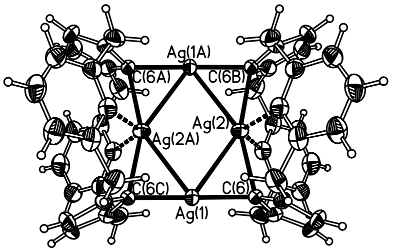
Synthesis and structural characterization of a $[Ag_4]^{4+}$ cluster stabilized by a mixed-donor *N*-heterocyclic carbene linked cyclophane and the first reported synthesis of a *N*-heterocyclic carbene complex in water

The synthesis and structural characterization of a planar Ag_4^{4+} cluster being stabilized by a *N*-heterocyclic carbene ligand system, as well as synthesis of a dimeric silver *N*-heterocyclic carbene complex in water and the conversion of the Ag_4^{4+} cluster to the dimeric species with light.



Regular Papers

Wanzhi Chen, Fenghui Liu

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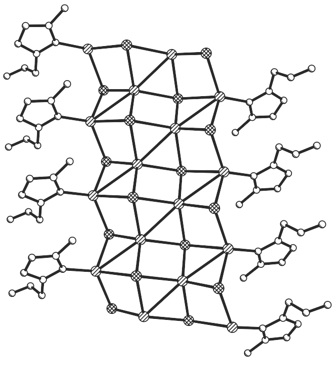
Synthesis and characterization of oligomeric and polymeric silver-imidazol-2-ylidene iodide complexes

Oligomeric and polymeric silver-imidazol-2-ylidene iodide complexes $[Ag(carben)_2][Ag_2I_4]$, $[Ag(carbene)_2][Ag_4I_6]$, and $[Ag(carbene)][AgI_2]$ were prepared and characterized. The silver atoms in these complexes are held together by multiple iodide bridges and weak Ag···Ag interaction.



Matthew Laskoski, Gaby Roidl, Holly L. Ricks, Jason G.M. Morton, Mark D. Smith, Uwe H.F. Bunz

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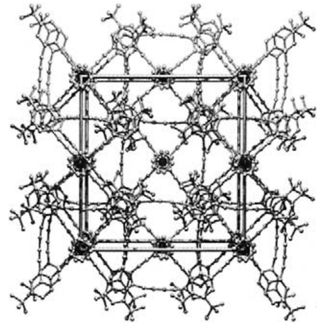
Butterfly topologies: new expanded carbon-rich organometallic scaffolds

Starting from either (tetraethynylcyclobutadiene)cyclopentadienylcobalt or [1,2-diethynyl-3,4-(2-dioxanyl)cyclobutadiene]cyclopentadienylcobalt a sequence of copper and Pd-catalyzed couplings of the Eglinton and the Heck–Cassar–Sonogashira–Hagihara type furnishes five bow-tie shaped doubly annelated dehydroannulenes. Single crystal X-ray structures of two of the smaller butterflies are reported and their surprising solid-state packing is discussed herein.



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**Matthew Laskoski, Winfried Steffen,
Jason G.M. Morton, Mark D. Smith,
Uwe H.F. Bunz**

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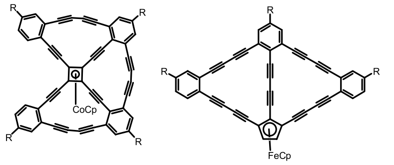
Synthesis and structural characterization of organometallic cyclynes: novel nanoscale, carbon-rich topologies**

The synthesis and structural characterization of a series of large polycyclic aromatic compounds is described in this contribution. These large scaffolds carry either a cyclobutadiene(cyclopentadienyl)cobalt or a ferrocene as central unit around which the carbon rich dehydrobenzo-annulenes are assembled as shown.

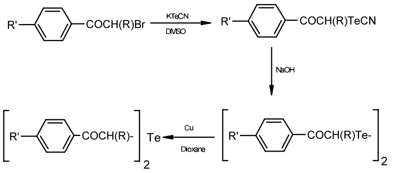


**Ali Z. Al-Rubaie, Lina Z. Yousif,
Ammar K. Al-Ba'aj**

J. of Organomet. Chem. 673 (2003) 40

A new synthetic method for diphenacyl telluride
Synthesis of some new organotellurium compounds containing Ar–COCH(R) groups via α-tellurocynatoketones

Organotellurocyanates containing Ar–COCH(R) groups were prepared by reacting KTeCN with α-bromoketones in DMSO. Treatment of Ar–COCH(R)TeCN with NaOH afforded ditellurides. Refluxing ditellurides with copper in dioxane gave tellurides. Dihalo and trihalo derivatives were prepared. Treatment of the tellurides and their dichlorides with MCPBA gave alkyl aryl ketones.



**Chip Nataro, Alison N. Campbell,
Michelle A. Ferguson,
Christopher D. Incarvito,
Arnold L. Rheingold**

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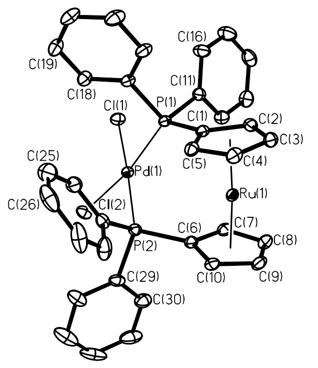
Group 10 metal compounds of 1,1′-bis(diphenylphosphino)ferrocene (dppf) and 1,1′-bis(diphenylphosphino)ruthenocene: a structural and electrochemical investigation. X-ray structures of [MCl_2(dppr)] (M = Ni, Pd)

The electrochemistry of 1,1′-bis(diphenylphosphino)ferrocene (dppf), 1,1′-bis(diphenylphosphino)ruthenocene (dppr) and a series of [MCl_2(dppr)] (M = Ni, Pd and Pt) compounds was investigated. In addition, the X-ray structures of [$NiCl_2$(dppr)] and [$PdCl_2$(dppr)] were determined and compared to the dppf analogues.



**Ridha Ben Said, Khansaa Hussein,
Bahoueddine Tangour,
Sylviane Sabo-Etienne,
Jean-Claude Barthelat**

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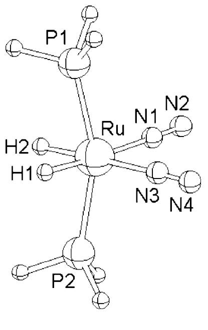
A density functional theory study of dinitrogen bonding in ruthenium complexes

Dinitrogen ruthenium complexes were theoretically studied by means of DFT technique. Several isomers of $RuH_2(N_2)(PH_3)_2$, $RuH_2(N_2)_2(PH_3)_2$ and $RuH_2(H_2)(N_2)(PH_3)_2$ were studied. The most stable isomer for each series is characterized by a *trans* position of the phosphines with the dinitrogen ligand *trans* to one hydride. The dinitrogen moiety adopts an end-on bonding mode and is weakly elongated from free N_2.



**Elizabeth E. Scott, Erling T. Donnelly,
Mark E. Welker**

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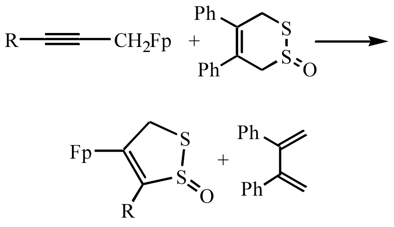
Preparation of substituted transition-metal (η^1-propargyl complexes and their [3+2] cycloaddition reactions with sulfur dioxide and disulfur monoxide. Transition-metal–carbon bond cleaving reactions of the cycloadducts which yield oxathiolene oxides and dithiolene oxides

The preparations of several new cyclopentadienyl iron dicarbonyl η^1-2-alkynyl complexes are reported. Their [3+2] cycloaddition reactions with sulfur dioxide and disulfur monoxide yielded transition-metal substituted 1,2-oxathiolene-2-oxides and 1,2-dithiolene-1-oxides, respectively. The transition-metal was cleaved from the oxathiolene-oxide and dithiolene-oxide containing complexes to produce new sulfur heterocycles.



Chungkyun Kim, Hyojeong Kim

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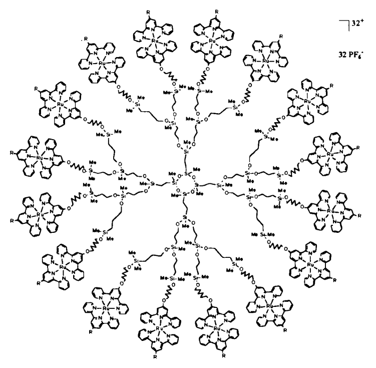
2,2′:6′,2″-Terpyridine and bis(2,2′:6′,2″-terpyridine)ruthenium(II) complex on the dendritic periphery

2,2′:6′,2″-Terpyridine end-functionalized dendritic carbosilane, its ruthenium complex(III) and bis(2,2′:6′,2″-terpyridine) ruthenium(II) complex on the dendritic periphery were prepared.



**Kunio Mochida, Hiromi Shimizu,
Tsuyoshi Kugita, Masato Nanjo**

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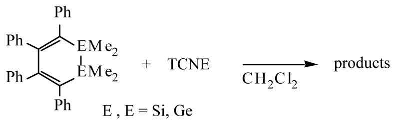
Electron-transfer reactions of 1,2-dimetallacyclohexa-3,5-dienes with TCNE

The thermal reaction of 1,2-disila(digerma)cyclohexa-3,5-diene with TCNE mainly gave 4-amino-5,6-dicyano-2,2,11,11-tetramethyl-1,8,9,10-tetraphenyl-3-aza-2,11-disila(digerma)tricyclo[6.2.1.0^{3,7}]undeca-4,6,9-triene. On the other hand, 1-germa-2-silacyclohexacyclohexa-3,5-diene reacted with TCNE to give 4-amino-5,6-dicyano-2,2,11,11-tetramethyl-1,8,9,10-tetraphenyl-3-aza-11-germa-2-silatricyclo[6.2.1.0^{3,7}]undeca-4,6,9-triene and 4-amino-5,6-dicyano-2,2,11,11-tetramethyl-1,8,9,10-tetraphenyl-3-aza-11-germa-2-silatricyclo[6.3.0^{1,8}.0^{3,7}]undeca-4,6,9-triene.



Stefan K. Spitzmesser, Vernon C. Gibson

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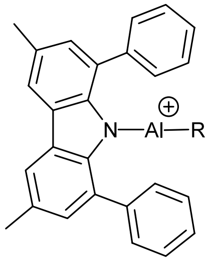
Dialkylaluminium complexes derived from 1,8-diphenyl-3,6-dimethylcarbazole: a new sterically hindered monodentate ligand system

Reaction of Li(1,8-diphenyl-3,6-dimethylcarbazolide) with R_2AlCl (R = Me, Et), followed by treatment of the products with $B(C_6F_5)_3$, $[CPh_3][B(C_6F_5)_4]$ or $[H(OEt_2)_2]$-$[B\{3,5\text{-}(CF_3)_2C_6H_3\}_4]$, gives rise to novel two-coordinate cationic alkylaluminium species which readily abstract Ar^F from the counter-anion. The cationic aluminium complexes oligomerise ethylene to C_4–C_{10} olefinic products.



R = Me, Et

Patricio Romero, Mauricio Valderrama, Raúl Contreras, Daphne Boys

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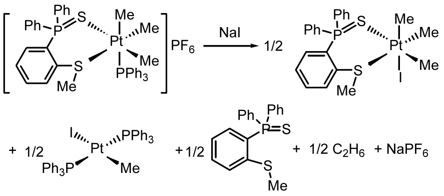
C–Pt(IV) activation in new trimethylplatinum(IV) complexes: nucleophilic attack at metal–carbon bond

The synthesis and characterisation of new neutral and cationic $Me_3Pt(IV)$ complexes of the types $[Me_3PtI\{\eta^2\text{-}MeSC_6H_4P(E)Ph_2\text{-}S,S\}]$ (E = S(**1**), Se(**2**)) and $[Me_3Pt(\eta^2\text{-}MeSC_6H_4P(E)Ph_2\text{-}E,S)L]PF_6$ [E = S, L = PPh_3 (**3**), Py (**4**). E = Se, L = Py (**5**)] are described. The crystal structure of the complex $[Me_3Pt(\eta^2\text{-}MeSC_6H_4P(E)Ph_2\text{-}E,S)(Py)]\text{-}PF_6\cdot CH_2Cl_2$ is determined by single-crystal X-ray diffraction methods. Reactions of complexes **3** and **4** reveal a nucleophilic attack of the iodide ligand to one of the methyl groups bonded to the platinum centre generating a series of side subsequent reactions.



Gregory Smith, Rui Chen, Selwyn Mapolie

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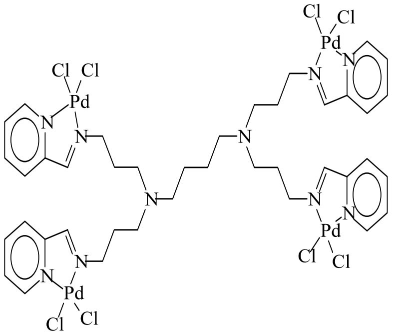
The synthesis and catalytic activity of a first-generation poly(propylene imine) pyridylimine palladium metallodendrimer

The first generation poly(propylene imine) dendrimer, $[DAB(NH_2)_4]$ has been modified by the reaction of the amino end groups with 2-pyridinecarboxaldehyde to yield a poly(propylene imine) pyridylimine ligand. Complexation reactions with $PdCl_2(COD)$ give rise to a new metal-containing dendrimer, which was used as a catalyst precursor, activated by methylaluminoxane for ethylene polymerization.



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