

## Contents

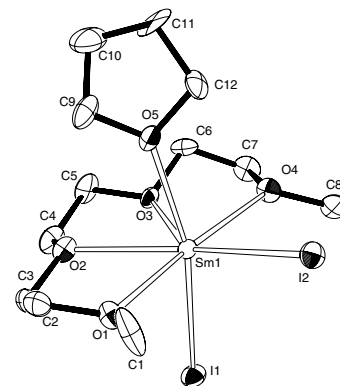
### Regular papers

**Marcus Vestergren, Björn Gustafsson,  
Anna Johansson, Mikael Håkansson**

*J. Organomet. Chem.* 689 (2004) 1723

Synthesis, crystal structure, and chirality of divalent lanthanide reagents containing tri- and tetraglyme

Six new divalent lanthanide complexes using triglyme (trigly) and tetraglyme (tetgly) as achiral ligands have been prepared, using a facile synthetic method, in search for enantioselective solid-state reagents.

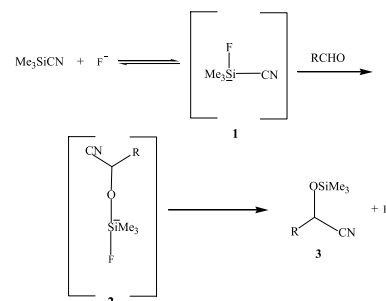


**Sung Soo Kim, Gurusamy Rajagopal,  
Dae Ho Song**

*J. Organomet. Chem.* 689 (2004) 1734

Mild and efficient silylcyanation of ketones catalyzed by cesium fluoride

An efficient method of addition of trimethylsilylcyanide to ketones by employing cesium fluoride as catalyst has been described.

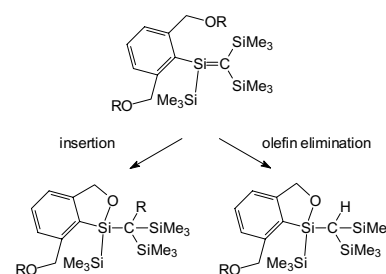


**Constantin Mamat, Martin Mickoleit,  
Helmut Reinke, Hartmut Oehme**

*J. Organomet. Chem.* 689 (2004) 1739

Intramolecularly donor-stabilized silenes: Part 5. Generation and conversion of 1-[2,6-bis(alkoxymethyl)phenyl]- and 1-(8-alkoxynaphthyl)-1,2,2-tris(trimethylsilyl)silenes

1-[2,6-bis(alkoxymethyl)phenyl]-1,2,2-tris(trimethylsilyl)silenes were generated by the reaction of (dichloromethyl)tris(trimethylsilyl)silane with 2,6-bis(alkoxymethyl)phenyllithium derivatives, but proved to be unstable. The silenes stabilized by either insertion reactions of the Si&z.dbnd6;C unit into the carbon oxygen bond of one ether group or by elimination of a respective olefin to give in both cases 2-oxa-1-silaindane derivatives.

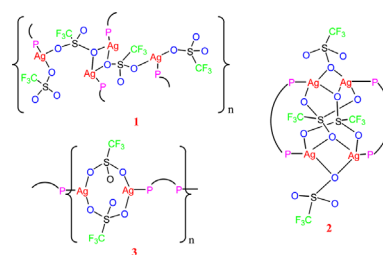


**Xiu Lian Lu, Weng Kee Leong,  
T.S. Andy Hor, Lai Yoong Goh**

*J. Organomet. Chem.* 689 (2004) 1746

Coordination polymers and supramolecular structures in Ag(I)triflate–dppf systems (dppf=1,1'-bis(diphenylphosphino)ferrocene)

The interaction of Ag triflate and dppf under different conditions led to the isolation of a coordination polymer (1), a tetra-silver complex (2) and an infinite linear polymer (3). These form supramolecular structures, stabilized by weak hydrogen-bonding interactions.

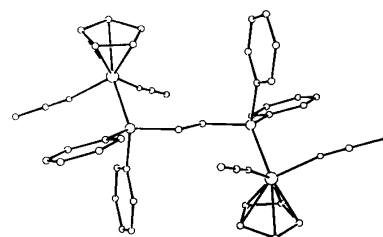


**Massimo Di Vaira,  
Stefano Seniori Costantini, Fabrizio Mani,  
Maurizio Peruzzini, Piero Stoppioni**

*J. Organomet. Chem.* 689 (2004) 1757

Reaction of  $[\text{CpRu}(\text{CH}_3\text{CN})_3]\text{PF}_6$  with bidentate ligands: structural characterization of  $[\{\text{CpRu}(\text{CH}_3\text{CN})_2\}_2(\mu-\eta^{1:1}\text{-dppe})](\text{PF}_6)_2$  [dppe = 1,2-bis(diphenylphosphino)ethane]

The reaction of  $[\text{CpRu}(\text{CH}_3\text{CN})_3]\text{PF}_6$  with the bidentate ligands L–L = 1,2-bis(diphenylphosphino)ethane, dppe, and (1-diphenylarsino-2-diphenylphosphino)ethane, dpadppe, affords mononuclear and dinuclear complexes of formulae  $[\text{CpRu}(\eta^2\text{-L-L})(\text{CH}_3\text{CN})]\text{PF}_6$ ,  $[\{\text{CpRu}(\text{CH}_3\text{CN})_2\}_2(\mu-\eta^{1:1}\text{-L-L})](\text{PF}_6)_2$  and  $[\{\text{CpRu}(\text{CH}_3\text{CN})\}_2(\mu-\eta^{1:1}\text{-L-L})_2](\text{PF}_6)_2$  (L–L = dppe, dpadppe). The crystal structure of  $[\{\text{CpRu}(\text{CH}_3\text{CN})_2\}_2(\mu-\eta^{1:1}\text{-dppe})](\text{PF}_6)_2$  has been determined by X-ray diffraction analysis. The complex exhibits a dppe ligand bridging two CpRu(CH<sub>3</sub>CN)<sub>2</sub> fragments.

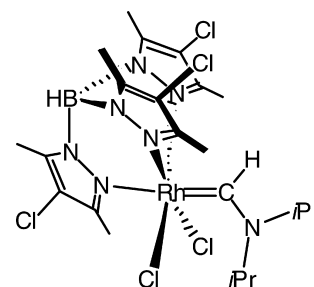


**Emmanuelle Teuma, François Malbosc,  
Michel Etienne, Jean-Claude Daran,  
Philippe Kalck**

*J. Organomet. Chem.* 689 (2004) 1763

A one-pot method to prepare the carbene complex  $[\text{Tp}^{\text{Me}_2, \text{Cl}}\text{RhCl}_2(\text{CHNiPr}_2)]$  from  $[\text{Tp}^{\text{Me}_2, \text{Cl}}\text{Rh}(\text{CO})_2]$ ,  $\text{CHCl}_3$ , and  $\text{NH}i\text{Pr}_2$

$[\text{Tp}^{\text{Me}_2, \text{Cl}}\text{Rh}(\text{CO})_2]$  reacts with chloroform to give  $[\text{Tp}^{\text{Me}_2, \text{Cl}}\text{RhCl}(\text{CHCl}_2)(\text{CO})]$  resulting from the oxidative addition of a C–Cl bond. Further reaction with diisopropylamine gives the X-ray characterized aminocarbene complex  $[\text{Tp}^{\text{Me}_2, \text{Cl}}\text{RhCl}_2(\text{CHNiPr}_2)]$ , also available in a one-pot reaction.

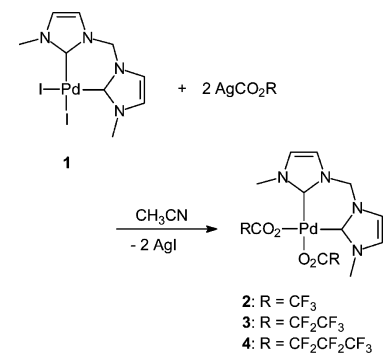


**Han Vinh Huynh, Duc Le Van,  
F. Ekkehardt Hahn, T.S. Andy Hor**

*J. Organomet. Chem.* 689 (2004) 1766

Synthesis and structural characterization of mixed carbene-carboxylate complexes of palladium(II)

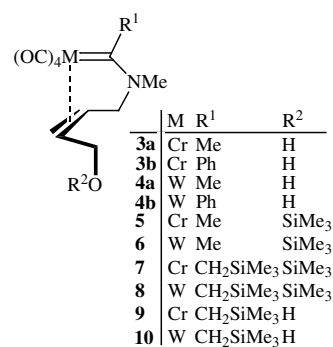
Mixed carbene-carboxylate complexes of palladium were obtained from the reaction of the dicarbene dihalide precursor 1 with  $\text{AgO}_2\text{CR}$ , where  $\text{R} = \text{CF}_3$ ,  $\text{CF}_2\text{CF}_3$  and  $\text{CF}_2\text{CF}_2\text{CF}_3$ . In all three novel complexes (2–4), the palladium center is coordinated by a *cis*-chelating dicarbene and two monodentate fluorocarboxylate ligands in a square planar fashion.



**Rainer Schobert, Thomas Schmalz***J. Organomet. Chem.* 689 (2004) 1771

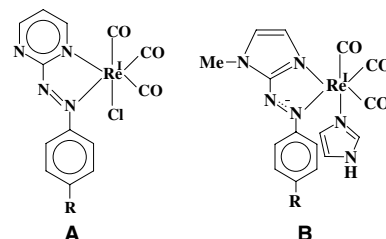
Synthesis and selective silylation of  $\omega$ -hydroxy functionalized ( $\eta^2$ -alkenyl)carbene complexes of chromium(0) and tungsten(0) Part 11. The chemistry of metallacyclic alkenylcarbene complexes

Chelated ( $\eta^2$ -alkene)carbene complexes of Cr (**3**) and W (**4**) are prepared from methoxycarbene complexes and 1-methylamino-but-(2Z)-en-4-ol by an aminolysis/photo-decarbonylation protocol. A deprotonation/silylation (hydrolysis) procedure yields derivatives monosilylated either at the O- (**5**, **6**) or the C-terminus (**9**, **10**) or bisilylated at both ends (**7**, **8**) of the metallacycle. 1D and 2D solution NMR data is provided ( $^1\text{H}$ ,  $^{13}\text{C}$ ,  $^{29}\text{Si}$ ,  $^1\text{H}/^1\text{H}$  COSY,  $^1\text{H}/^1\text{H}$  NOESY,  $^{13}\text{C}/^1\text{H}$  HETCOR).

**Bikash Kumar Panda, Suman Sengupta, Animesh Chakravorty***J. Organomet. Chem.* 689 (2004) 1780

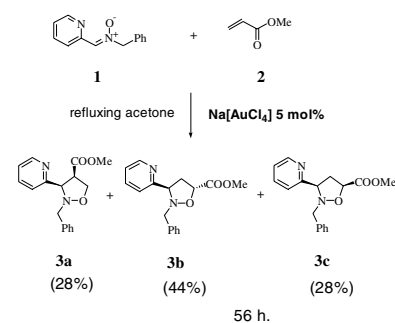
Chemistry of tricarbonylrhenium(I) chelates of azopyrimidines, azoimidazoles and anion radicals thereof

Reaction of  $\text{Re}(\text{CO})_5\text{Cl}$  and 2-(aryloxy)pyrimidine/2-(aryloxy)-1-methylimidazole, RL, has afforded  $\text{Re}(\text{CO})_3\text{Cl}(\text{RL})$  (such as **A**) which has been structurally characterized. Electroreduction in presence of D has furnished the EPR-active azo anion radical system ( $S = 1/2$ )  $\text{Re}(\text{CO})_3(\text{D})(\text{RL}^-)$  (D = MeCN,  $\text{C}_3\text{H}_4\text{N}_2$  and  $\text{PPh}_3$ ) as in **B**.

**Ana Adé, Elena Cerrada, María Contel, Mariano Laguna, Pedro Merino, Tomás Tejero***J. Organomet. Chem.* 689 (2004) 1788

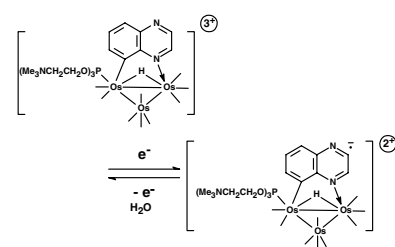
Organometallic gold(III) and gold(I) complexes as catalysts for the 1,3-dipolar cycloaddition to nitrones: synthesis of novel gold–nitron derivatives

Gold(III) and gold(I) anionic salts mediate the 1,3-dipolar cycloaddition of N-benzyl-C(2-pyridyl)nitron (2-PyBN) and methyl acrylate (gold 5–10 mol% with respect to the nitron) decreasing the reaction time and favouring the formation of the *exo* (*cis*) isomer. The catalytic activity of organometallic gold complexes has been also investigated. In some cases the activity is very similar to that obtained with inorganic salts. With the aim of identifying possible metallic intermediates in the cycloaddition reaction, novel gold(III) and gold(I) nitron derivatives have been prepared and characterized. The reaction between  $[\text{AuCl}_3(\text{tht})]$  and 2-PyBN unexpectedly affords the ionic compound  $[2\text{-PyBN-H}][\text{AuCl}_4]$  whose crystal structure has been confirmed by X-ray studies.

**Carlo Nervi, Roberto Gobetto, Luciano Milone, Alessandra Viale, Edward Rosenberg, Fabrizio Spada, Dalia Rokhsana, Jan Fiedler***J. Organomet. Chem.* 689 (2004) 1796

Solution properties, electrochemical behavior and protein interactions of water soluble triosmium carbonyl clusters

The water soluble cluster  $\text{Os}_3(\text{CO})_9(\mu\text{-}\eta^2\text{-Bz})(\mu\text{-H})(\text{L}^+)$  ( $\text{HBz}$  = quinoxaline,  $\text{L}^+ = [\text{P}(\text{OCH}_2\text{CH}_2\text{NMe}_3)_3\text{I}_3]$ , **1**) shows a reversible  $1e^-$  reduction in water. The potential for this reduction is pH dependent. A series of positively and negatively charged clusters was also surveyed with regard to their electrochemical behavior and their binding to albumin as followed by the changes in the  $T_1$  of their hydride resonances.

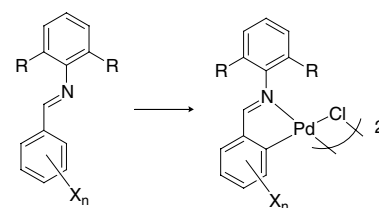


**Chuan-Lin Chen, Yi-Hung Liu,  
Shie-Ming Peng, Shih-Tzung Liu**

*J. Organomet. Chem.* 689 (2004) 1806

Substituent effect on cyclopalladation of  
arylimines

The substituent effect on cyclopalladation of  
a series of substituted benzylidene-dialkyl-  
arylamines was investigated.

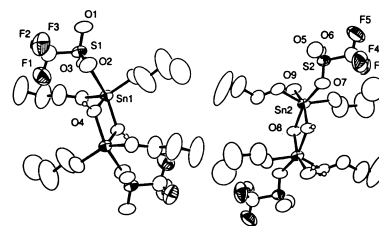


**Hyunjoo Lee, Jin Yong Bae, O-Sung Kwon,  
Sung Joon Kim, Sang Deuk Lee,  
Hoon Sik Kim**

*J. Organomet. Chem.* 689 (2004) 1816

Sulfonate-bonded tin complexes for the  
production of diphenyl carbonate

The reaction of dibutyltin oxide with alkyl or  
arylsulfonic acid afforded highly active sul-  
fonate-bonded tin complexes for the tran-  
sesterification of dimethyl carbonate and  
phenol to give diphenyl carbonate. The X-  
ray structural analysis of the triflate-bonded  
complex, obtained from dibutyltin oxide and  
triflic acid, reveals that the crystal unit cell  
contains mutually interacting two anhydrous  
and hydrated molecules,  $[\text{Bu}_2\text{Sn}(\text{OH})(\text{OTf})]_2$   
and  $[\text{Bu}_2\text{Sn}(\text{OH})(\text{OTf})(\text{H}_2\text{O})]_2$ .

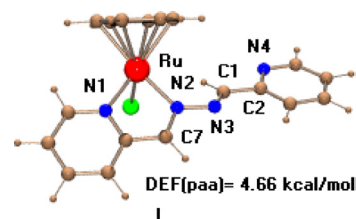


**Anupam Singh, Manish Chandra,  
Abhaya N. Sahay, Daya S. Pandey,  
Krishna K. Pandey, Shaikh M. Mobin,  
M. Carmen Puerta, Pedro Valerga**

*J. Organomet. Chem.* 689 (2004) 1821

Arene ruthenium complexes incorporating  
imine/azine hybrid-chelating N-N' donor  
ligands: synthetic, spectral, structural aspects  
and DFT studies

Mono and binuclear arene ruthenium com-  
plexes  $[(\eta^6\text{-arene})\text{RuCl}(\text{L})]^+$  and  $[(\eta^6\text{-arene})\text{RuCl}]_2(\mu\text{-L}_2)$  (arene = benzene, *p*-cymene  
or hexamethylbenzene), L = N, N' donor li-  
gands are reported. The complexes have been  
characterized by spectral and structural stud-  
ies and DFT/B3LYP calculations have been  
performed on the complexes  $[(\eta^6\text{-arene})\text{RuCl}(\text{paa})]^+$  (arene =  $\text{C}_6\text{H}_6$ , **I**;  $\text{C}_6\text{Me}_6$ , **II**;  
 $\text{C}_{10}\text{H}_{14}$ , **III**).

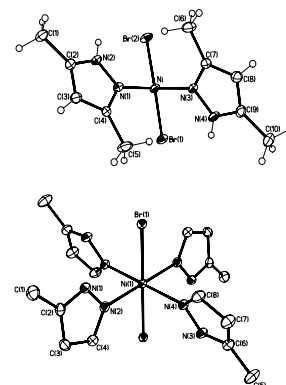


**Simphiwe M. Nelana, James Darkwa,  
Ilia A. Guzei, Selwyn F. Mapolie**

*J. Organomet. Chem.* 689 (2004) 1835

Ethylene polymerization catalyzed by  
substituted pyrazole nickel complexes

The reaction of substituted pyrazoles with  
(DME)NiBr<sub>2</sub> yielded two structurally differ-  
ent pyrazole nickel complexes, depending on  
the size of the pyrazole ligand. More bulky  
pyrazoles formed four-coordinate nickel  
complexes, whilst less bulky pyrazoles  
formed six-coordinate nickel complexes.  
Both structural types, when activated with  
methylaluminoxane (MAO), were active  
catalysts for the polymerization of ethylene.

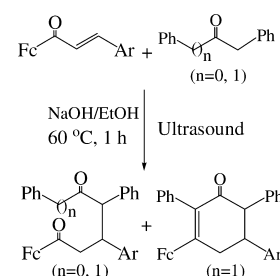


**Shun-Jun Ji, Zhi-Liang Shen, Da-Gong Gu, Shun-Yi Wang**

*J. Organomet. Chem.* 689 (2004) 1843

An efficient synthesis of ferrocenyl substituted 1,5-diketone and cyclic  $\alpha, \beta$ -unsaturated ketones under ultrasound irradiation

A series of new ferrocenyl substituted 1,5-diketone and cyclic  $\alpha, \beta$ -unsaturated ketones were synthesized in high yields catalyzed by inorganic base under ultrasound irradiation. In addition, influence on the formation of final product between the reactions of dibenzyl ketone and chalcones were investigated.

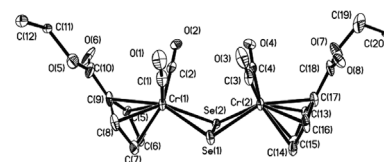


**Li-Cheng Song, Hua-Wei Cheng, Qing-Mei Hu**

*J. Organomet. Chem.* 689 (2004) 1849

Synthesis, spectroscopic characterization and reactivities of linear and butterfly chromium/selenium complexes containing substituted cyclopentadienyl ligands: crystal structures of  $[\{\eta^5\text{-MeC}_5\text{H}_4\text{Cr}(\text{CO})_2\}_2\text{Se}]$  and  $[\{\eta^5\text{-EtO}_2\text{CC}_5\text{H}_4\text{Cr}(\text{CO})_2\}_2\text{Se}_2]$

The linear  $\text{Cr}_2\text{Se}$  complexes  $[\{\eta^5\text{-RC}_5\text{H}_4\text{-Cr}(\text{CO})_2\}_2\text{Se}]$  (**3**, R = Me; **4**, R =  $\text{CO}_2\text{Et}$ ; **6**, R =  $\text{MeCH}(\text{OH})$ ; **7**, R =  $\text{PhCH}=\text{CMe}$ ; **8**, R =  $2,4\text{-}(\text{NO}_2)_2\text{C}_6\text{H}_3\text{NHN}=\text{CMe}$ ) and the butterfly  $\text{Cr}_2\text{Se}_2$  complexes  $[\{\eta^5\text{-RC}_5\text{H}_4\text{Cr}(\text{CO})_2\}_2\text{Se}_2]$  (**9**, R = Me; **10**, R =  $\text{CO}_2\text{Et}$ ; **12**, R =  $\text{MeCH}(\text{OH})$ ; **13**, R =  $\text{PhCH}=\text{CMe}$ ; **14**, R =  $2,4\text{-}(\text{NO}_2)_2\text{C}_6\text{H}_3\text{NHN}=\text{CMe}$ ) were successfully synthesized and fully characterized by elemental analysis, spectroscopy and X-ray diffraction analysis.



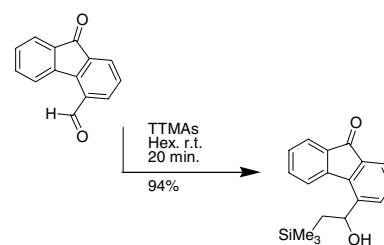
## Notes

**Vahak Abedi, Merle A. Battiste**

*J. Organomet. Chem.* 689 (2004) 1856

Tris(trimethylsilylmethyl)alane: an aldehyde selective peterson methylation reagent

Tris(trimethylsilylmethyl)alane (TTMA) is a rapid, efficient, and highly aldehyde-selective trimethylsilylmethylating reagent. A solid lithium halide complex of the reagent,  $\text{TTMA}\cdot 3\text{LiBr}$  (TTMAs), is particularly effective in this transformation to the Peterson alcohol intermediate.

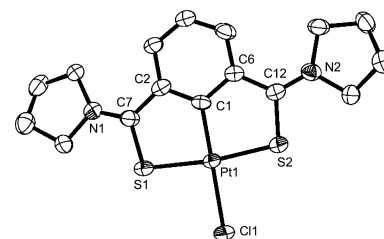


**Takaki Kanbara, Keisuke Okada, Takakazu Yamamoto, Hiromitsu Ogawa, Tetsuji Inoue**

*J. Organomet. Chem.* 689 (2004) 1860

Preparation of platinum complexes containing a thioamide-based SCS pincer ligand and their light emitting properties

Reaction of 1,3-bis(1-pyrrolidinothiocarbonyl)benzene with  $\text{PtCl}_2(\text{PhCN})_2$  afforded a platinum complex with  $\eta^3\text{-S,C,S}$  type coordination. The complex exhibits strong emission in a glassy frozen state as well as in the solid state. Light-emitting diode based on the complexes displayed red electroluminescence.



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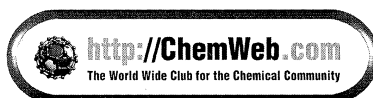
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