

## Contents

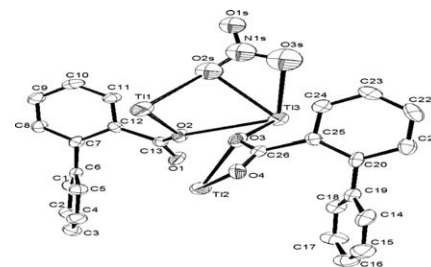
### Communication

**Azadeh Askarinejad, Ali Morsali**

*J. Organomet. Chem. 691 (2006) 3563*

Tl<sup>I</sup>2D coordination polymer involving close Tl<sup>I</sup>···π (aromatic) contacts, [Tl<sub>3</sub>(μ-BPC)<sub>2</sub>(μ-NO<sub>3</sub>)<sub>n</sub>]

A two-dimensional polymer, [Tl<sub>3</sub>(μ-BPC)<sub>2</sub>(μ-NO<sub>3</sub>)<sub>n</sub>] [BPC = biphenyl-2-carboxylate], has been synthesized and characterized. Its single-crystal X-ray structure shows three types of Tl<sup>I</sup>-ions with coordination numbers of 5 (Tl1 and Tl2), and 4 (Tl3). Two of the thallium atoms, Tl1 and Tl3, contain close Tl<sup>I</sup>···π (aromatic) contacts, thus attaining a total hapticity of 11 and 10 with environments Tl1O<sub>5</sub>C<sub>6</sub> and Tl3O<sub>4</sub>C<sub>6</sub>, respectively.



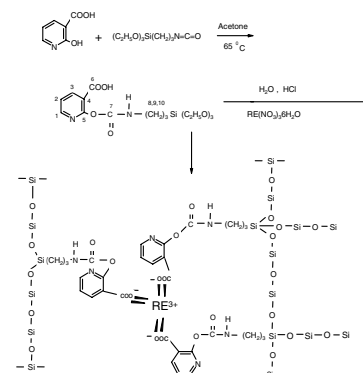
### Regular papers

**Qian-Ming Wang, Bing Yan**

*J. Organomet. Chem. 691 (2006) 3567*

Designing a family of luminescent hybrid materials by 3-(triethoxysilyl)-propyl isocyanate grafted 2-hydroxynicotinic acid bridge molecules

A new modification path was used to graft 2-hydroxynicotinic acid by 3-(triethoxysilyl)-propyl isocyanate to afford a bridge molecule through the hydrogen transfer addition reaction between them, subsequently a novel family of luminescent molecular based hybrid materials with chemical bond were constructed.

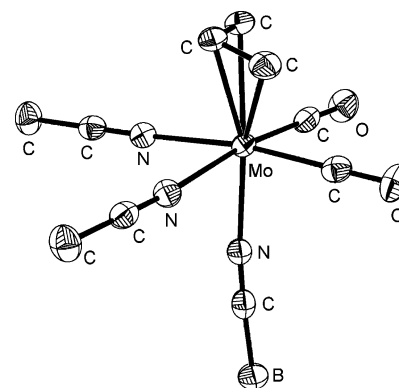


**Fu-Chen Liu, Jung-Hua Chen, Jo-Ju She, Gene-Hsian Lee, Shie-Ming Peng**

*J. Organomet. Chem. 691 (2006) 3574*

Syntheses and crystal structures of group 6 metal complexes containing allyl and cyanotrihydroborate groups

Compounds M(η<sup>3</sup>-C<sub>3</sub>H<sub>5</sub>)(CO)<sub>2</sub>(NCCH<sub>3</sub>)<sub>2</sub>(NCBH<sub>3</sub>), and [M(η<sup>3</sup>-C<sub>3</sub>H<sub>5</sub>)(CO)<sub>2</sub>(NCBH<sub>3</sub>)<sub>3</sub>]<sup>2-</sup> (M = Mo, W) were prepared and characterized. The M-N interaction was found and the spectroscopic data suggested most of the negative charge of the complexes is localized on the BH<sub>3</sub>.

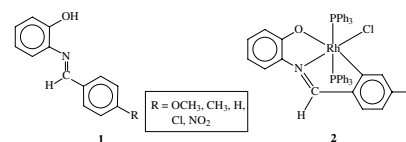


**Semanti Basu, Swati Dutta,  
Michael G.B. Drew, Samaresh Bhattacharya**

*J. Organomet. Chem.* 691 (2006) 3581

Rhodium assisted C–H activation of *N*-(2'-hydroxyphenyl)benzaldimines. Synthesis, structure and electrochemical properties of a group of organorhodium complexes

Reaction of a group of *N*-(2'-hydroxyphenyl)benzaldimines (**1**) with  $[\text{Rh}(\text{PPh}_3)_3\text{Cl}]$  in refluxing toluene in the presence of triethylamine afforded a family of organorhodium complexes (**2**) in which the benzaldimine ligands are coordinated to the metal center, via C–H activation, as dianionic tridentate C,N,O-donors.

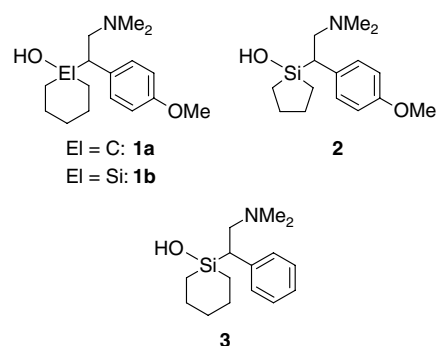


**Jürgen O. Daif, Christian Burschka,  
John S. Mills, John G. Montana,  
Graham A. Showell, Julie B.H. Warneck,  
Reinhold Tacke**

*J. Organomet. Chem.* 691 (2006) 3589

Synthesis, crystal structure analysis, and pharmacological characterization of desmethoxy-sila-venlafaxine, a derivative of the serotonin/noradrenaline reuptake inhibitor sila-venlafaxine

The syntheses and crystal structure analyses of *rac*-desmethoxy-sila-venlafaxine (*rac*-**3**) and its hydrochloride *rac*-**3** · HCl are reported. Compound *rac*-**3** is a derivative of *rac*-sila-venlafaxine (*rac*-**1b**), a sila-analogue of the serotonin/noradrenaline reuptake inhibitor *rac*-venlafaxine (*rac*-**1a**). The pharmacological properties of *rac*-**1a**, *rac*-**1b**, *rac*-**2**, and *rac*-**3** are compared.

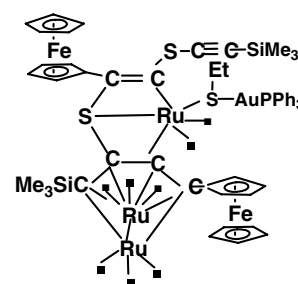


**Esther Delgado, Elisa Hernández,  
Miguel A. Maestro, Angel Nievas, Maria Villa**

*J. Organomet. Chem.* 691 (2006) 3596

Gold–ruthenium compounds containing bridging phosphide or thiolate groups: Crystal structures of the intermediate species  $[\text{Ru}_3(\text{CO})_8\text{L}(\mu_3\text{-}\eta^2, \eta^4, \eta^3\text{-}\{\text{Me}_3\text{SiCC}(\text{C}_2\text{Fc})\text{SC}(\text{Fc})\text{CSC}\equiv\text{CSiMe}_3\})]$  (L = NMe<sub>3</sub> or PPh<sub>2</sub>H)

AuPR<sub>3</sub> (R = Ph, <sup>i</sup>Pr) fragments have been connected to the ruthenium compound  $[\text{Ru}_3(\text{CO})_9(\mu_3\text{-}\eta^2, \eta^4, \eta^3\text{-}\{\text{Me}_3\text{SiCC}(\text{C}_2\text{Fc})\text{SC}(\text{Fc})\text{CSC}\equiv\text{CSiMe}_3\})]$ , towards phosphide or thiolate bridging groups, affording to new gold–ruthenium complexes.

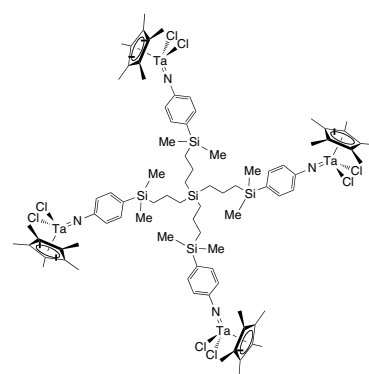


**José M. Benito, Ernesto de Jesús,  
F. Javier de la Mata, Juan C. Flores,  
Rafael Gómez, Pilar Gómez-Sal**

*J. Organomet. Chem.* 691 (2006) 3602

Carbosilane dendrimers containing peripheral cyclopentadienyl niobium- and tantalum-imido complexes

A series of mono(cyclopentadienyl)tantalum and niobocene compounds containing arylimido ligands of simple- or dendritic-carbosilane nature have been synthesized. The (imido)tantalum complexes were prepared using metallation reactions of anilines, and by a post synthetic modification of half-sandwich metal imido dendrimers in the case of the niobium derivatives.

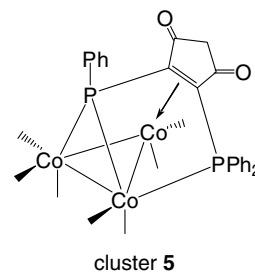


**William H. Watson, Satish G. Bodige,  
Krzysztof Ejsmont, Jie Liu,  
Michael G. Richmond**

*J. Organomet. Chem.* 691 (2006) 3609

Ligand substitution in  $\text{HC(O)CCO}_3(\text{CO})_9$  with 4,5-bis(diphenylphosphino)-4-cyclopenten-1,3-dione (bpcd): Diphosphine ligand fluxionality, decarbonylation of the formyl moiety and competitive P–Ph bond cleavage reactivity

The formyl-substituted cluster  $\text{HC(O)CCO}_3(\text{CO})_9$  reacts with the diphosphine ligand 4,5-bis(diphenylphosphino)-4-cyclopenten-1,3-dione (bpcd) to give  $\text{HC(O)CCO}_3(\text{CO})_7(\text{bpcd})$  (**2**). Thermolysis of  $\text{HC(O)CCO}_3(\text{CO})_7(\text{bpcd})$  leads to decarbonylation of the formyl moiety and formation of the methylidyne-capped cluster  $\text{HCCO}_3(\text{CO})_7(\text{bpcd})$  (**4**) and concurrent production of the phosphido-bridged cluster  $\text{Co}_3(\text{CO})_7[\mu_2, \eta^2, \eta^1\text{-P(Ph)C}=\text{C(PPh}_2\text{)C(O)C-H}_2\text{C(O)}]$  (**5**). The three bpcd-derived clusters **2**, **4**, and **5** have been fully characterized in solution and their molecular structures established by X-ray crystallography.

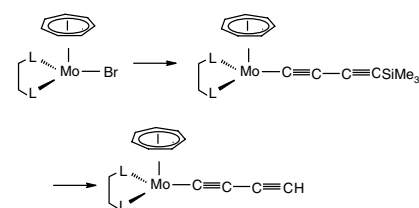


**Hannah N. Lancashire, Rezaul Ahmed,  
Tracy L. Hague (née Lumb),  
Madeleine Helliwell, Gareth A. Hopgood,  
Leanne Sharp, Mark W. Whiteley**

*J. Organomet. Chem.* 691 (2006) 3617

Synthesis and structure of the diyne complexes  $[\text{Mo}(\text{C}\equiv\text{CC}\equiv\text{CR})\text{L}_2(\eta\text{-C}_7\text{H}_7)]$ ,  $\text{L}_2$  = chelate N- or P-donor ligand,  $\text{R}$  =  $\text{SiMe}_3$  or  $\text{H}$ : X-ray crystal structures of  $[\text{Mo}(\text{C}\equiv\text{CC}\equiv\text{CSiMe}_3)(2,2'\text{-bipyridine})(\eta\text{-C}_7\text{H}_7)]$  and  $[\text{Mo}(\text{C}\equiv\text{CC}\equiv\text{CH})(\text{Ph}_2\text{PCH}_2\text{CH}_2\text{PPh}_2)(\eta\text{-C}_7\text{H}_7)]$

The synthesis and characterisation of new butadiynyl complexes of the electron-rich cycloheptatrienyl molybdenum auxiliaries  $\text{MoL}_2(\eta\text{-C}_7\text{H}_7)$ ,  $\text{L}_2$  = chelate N- or P-donor ligand, is reported.

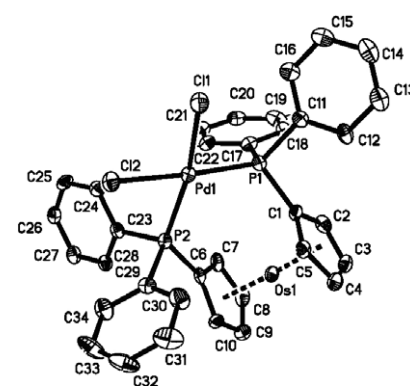


**Sarah L. Martinak, Lauren A. Sites,  
Sarah J. Kolb, Katherine M. Bocage,  
William R. McNamara, Arnold L. Rheingold,  
James A. Golen, Chip Nataro**

*J. Organomet. Chem.* 691 (2006) 3627

Derivatives of 1,1'-bis(diphenylphosphino)-ferrocene (dppf): Electrochemistry, complexation and the X-ray structures of 1,1'-bis(diphenylphosphino)osmocene (dppo) and  $[\text{PdCl}_2(\text{dppo})]$

The oxidative electrochemistry of 1,1'-bis(diphenylphosphino)osmocene (dppo) and 1,1'-bis(diphenylarsino)ferrocene (dpaf) was studied in dichloromethane with tetrabutylammonium hexafluorophosphate as the supporting electrolyte. The  $[\text{MCl}_2(\text{P}^i\text{P})]$  ( $\text{M} = \text{Pd}$  or  $\text{Pt}$ ;  $\text{P}^i\text{P} = \text{dppo}$  or 1,1'-bis(diphenylphosphino)indenyl)iron) complexes were prepared, studied electrochemically and the X-ray structures of dppo and  $[\text{PdCl}_2(\text{dppo})]$  were determined.

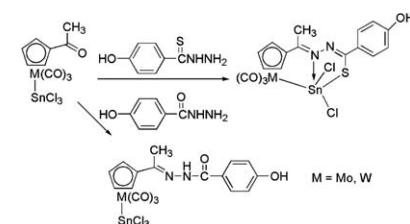


**Shan-Shan Chen, Yan-Ye Dou, Miao Du,  
Liang-Fu Tang**

*J. Organomet. Chem.* 691 (2006) 3633

New pentacoordinate bicyclic diazastannulfide formed between the functionalized cyclopentadienyl ring and tin

Reaction of  $\text{CH}_3\text{COC}_5\text{H}_4\text{M}(\text{CO})_3\text{SnCl}_3$  ( $\text{M} = \text{Mo}$  or  $\text{W}$ ) with arylthiocarboxyhydrazide yields pentacoordinate bridging dinuclear tin derivatives, while with hydroxyphenylcarboxyhydrazide gives tetracoordinate non-cyclic tin compounds.

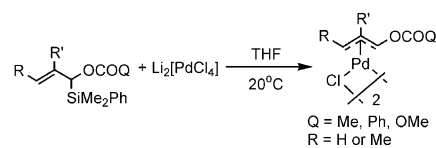


**Johan Kjellgren, Mikael Kritikos,  
Kálmán J. Szabó**

*J. Organomet. Chem.* 691 (2006) 3640

Synthesis and structural features of  $\alpha$ -acyloxy- $(\eta^3\text{-allyl})$ palladium complexes

$\alpha$ -Acetoxy  $(\eta^3\text{-allyl})$ palladium complexes were prepared from acyloxy functionalized allylsilanes under mild conditions and in good isolated yields. The X-ray analysis of the complexes shows a strongly distorted allyl-palladium bonding, which is also modified by the ligand effects.

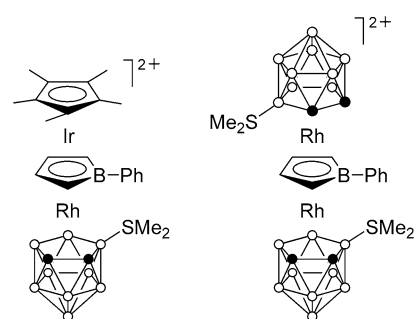


**Dmitry A. Loginov, Dmitry V. Muratov,  
Zoya A. Starikova, Pavel V. Petrovskii,  
Alexander R. Kudinov**

*J. Organomet. Chem.* 691 (2006) 3646

The first metallacarborane triple-decker complexes with a bridging borole ligand

The first metallacarborane triple-decker complexes with a bridging borole ligand were prepared by stacking reactions of (borole)rhodacarborane  $(\text{Carb}')\text{Rh}(\eta^5\text{-C}_4\text{H}_4\text{BPh})$  ( $\text{Carb}' = 9\text{-SMe}_2\text{-7,8-C}_2\text{B}_9\text{H}_{10}$ ) with  $[\text{Cp}^*\text{Ir}]^{2+}$  or  $[(\text{Carb}')\text{Rh}]^{2+}$  fragments.

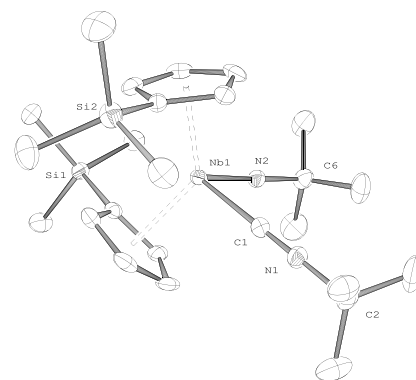


**Andrés Garcés, Yolanda Pérez,  
Santiago Gómez-Ruiz, Mariano Fajardo,  
Antonio Antiñolo, Antonio Otero,  
Carmen López-Mardomingo, Pilar Gómez-Sal,  
Sanjiv Prashar**

*J. Organomet. Chem.* 691 (2006) 3652

Synthesis of niobocene imido cations: X-ray crystal structure of  $[\text{Nb}(=\text{NBu}')(\eta^5\text{-C}_5\text{H}_4\text{SiMe}_3)_2(\text{CNBu}')][\text{BPh}_4]$

The synthesis and structural characterization of niobocene imido cation species are described. The preparation of a  $d^1\text{-}d^1$  niobocene imido dimer is also reported.

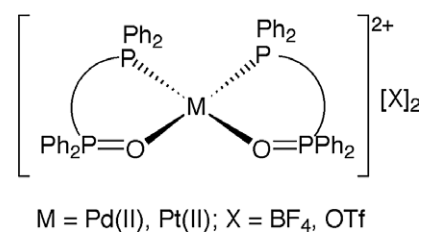


**Paolo Sgarbossa, Erika Pizzo,  
Alessandro Scarso, Silvia Mazzega Sbovata,  
Rino A. Michelin, Mirto Mozzon,  
Giorgio Strukul, Franco Benetollo**

*J. Organomet. Chem.* 691 (2006) 3659

Bis-phosphine monoxide platinum(II) and palladium(II) cationic complexes as Lewis acid catalysts in Diels-Alder and sulfoxidation reactions

A series of bis-phosphine monoxide Pd(II) and Pt(II) dicationic complexes were prepared and tested as catalysts in some Diels-Alder and oxidation reactions with different substrates. In the C-C coupling, the Pt(II) species showed interesting high *endo/exo* diastereoselectivity depending on the counteranion.

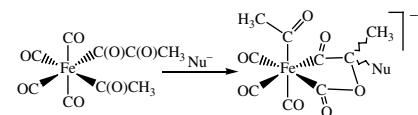


Jean-Yves Salaün, René Rumin,  
Hervé des Abbayes, Smail Triki

*J. Organomet. Chem.* 691 (2006) 3667

Thermal properties and reactions towards nucleophiles of an iron complex displaying an acetyl and a pyruvoyl ligands

The mechanism of formation of metallalactone rings by addition of anionic nucleophile reagents on the  $\beta$ -carbonyl of a pyruvoyl ligand followed by the attack of the oxygen of this carbonyl on a terminal carbonyl ligand is studied.

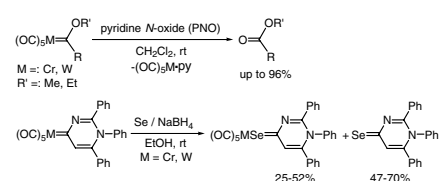


Zhaoyan Zheng, Jinzhu Chen, Zhengkun Yu,  
Xiuwen Han

*J. Organomet. Chem.* 691 (2006) 3679

Oxidative demetalation of Fischer alkoxy carbene complexes with stoichiometric pyridine *N*-oxide and  $\text{NaBH}_4$ -promoted demetalation of Fischer iminocarbene complexes with elemental sulfur or selenium regioselectively formed thione or selone derivatives.

Oxidative demetalation of Fischer alkoxy carbene complexes with stoichiometric pyridine *N*-oxide were efficiently realized to generate ester products or stepwisely demetalated products under controlled mild conditions. In the presence of  $\text{NaBH}_4$ , reactions of Fischer iminocarbene complexes with elemental sulfur or selenium regioselectively formed thione or selone derivatives.

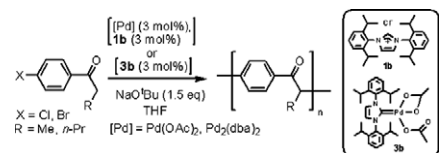


Kouki Matsubara, Hiromi Okazaki,  
Misako Senju

*J. Organomet. Chem.* 691 (2006) 3693

Polycondensation of haloarylketones catalyzed by palladium compounds bearing *N*-heterocyclic carbene (NHC) ligands

We successfully demonstrated a polycondensation procedure of haloarylketones using palladium catalysts with a bulky *N*-heterocyclic carbene (NHC) ligand. The activity of the catalysts, the best reaction conditions, and detailed structures of the polymers were studied.

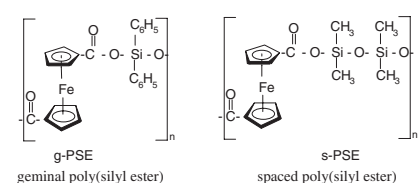


Maria Cazacu, Grigore Munteanu,  
Carmen Racles, Angelica Vlad, Mihai Marcu

*J. Organomet. Chem.* 691 (2006) 3700

New ferrocene-containing structures: Poly(silyl ester)s

A geminal poly(silyl ester) (g-PSE) and one having a disiloxane spacer between the silyl ester groups (s-PSE) have been synthesized, these constituting a new type of ferrocene-containing polymers that are both redox active and hydrolytically degradable.



**Marcin Górski, Andrzej Kochel,  
Teresa Szymańska-Buzar**

*J. Organomet. Chem.* 691 (2006) 3708

Photochemical reaction of  $W(CO)_6$  with  $GeCl_4$  as a source of germyl and germylene compounds acting as initiators for ring-opening metathesis polymerization of norbornene

Photolysis of  $W(CO)_6$  in a solution of *n*-heptane containing  $GeCl_4$  leads to the formation of two compounds:  $[(CO)_4W(\mu-Cl)_3W(GeCl_3)(CO)_3]$  (**1**) and  $[(\mu-GeCl_2)\{W(CO)_5\}_2]$  (**2**). The molecular structures of these compounds were established by single-crystal X-ray diffraction studies. Compounds **1** and **2** were tested as precatalyst for the ring-opening metathesis polymerization of norbornene.

