

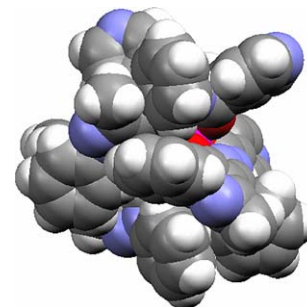
## Contents

### Regular papers

**Zheng-Yin Yang, Bao-Dui Wang, Yan-Hua Li**  
*J. Organomet. Chem. 691 (2006) 4159*

Study on DNA-binding properties and cytotoxicity in  $L_{1210}$  of La(III) complex with PMBP-isonicotinoyl hydrazone

La(III) complex with 1-phenyl-3-methyl-5-hydroxy-4-pyrazolyl phenyl ketone (PMBP)-isonicotinoyl hydrazone ( $H_2L$ ) is a tricapped triprism configuration with the nine-coordinate atoms, the La-complex molecule looks like a helix structure according to its spacefill picture.

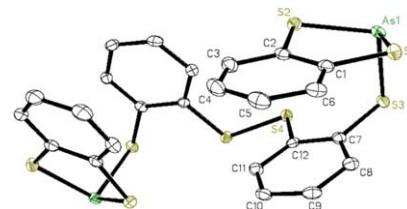


**Taimur A. Shaikh, Sean Parkin, David A. Atwood**

*J. Organomet. Chem. 691 (2006) 4167*

Synthesis and characterization of a rare arsenic trithiolate with an organic disulfide linkage and 2-chloro-benzo-1,3,2-dithiastibole

The synthesis and structural characterization of bis(2-(1,3,2-benzodithiarsol-2ylsulfanyl)-benzenesulfide) (1) and 2-chloro-benzo-1,3,2-dithiastibole (2) are reported. Both compounds contain a five-membered ring with two sulfurs bound to the central group 15 atom.

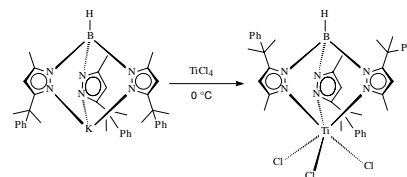


**Paolo Biagini, Fausto Calderazzo, Fabio Marchetti, Anna Maria Romano, Silvia Spera**

*J. Organomet. Chem. 691 (2006) 4172*

Synthesis and structural characterization of sterically crowded hydridotris(pyrazolyl)borato complexes: Unusual double 1,2-borotropic shift at a titanium centre

The reactions of  $M[Tp^{Me_2Bz,Me}]$  ( $M = K, Ti$ ) with  $TiCl_4$  under mild conditions afford, after an unusual double isomerization of the ligand, the related Ti(IV) trichloro complex  $[Tp^{Me_2Bz,Me^{**}}]TiCl_3$ ; all new compounds have been spectroscopically characterized and the structure of the titanium complex has been resolved by X-ray diffraction methods. A possible mechanism of formation of  $[Tp^{Me_2Bz,Me^{**}}]TiCl_3$  is proposed.

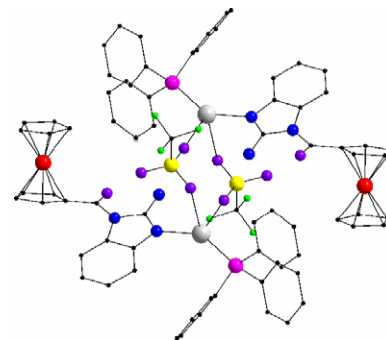


**Maria José Calhorda, Paulo J. Costa,  
Paulo N. Martinho, M. Concepción Gimeno,  
Antonio Laguna, Susana Quintal,  
M. Dolores Villacampa**

*J. Organomet. Chem.* 691 (2006) 4181

Synthesis and ligand properties towards gold and silver of the ferrocenylamidobenzimidazole ligand

Two new ferrocenylamidobenzimidazole ligands have been synthesized by reaction of  $\text{FcCOCl}$  ( $\text{Fc} = (\text{C}_5\text{H}_5)\text{Fe}(\text{C}_5\text{H}_4)$ ) with amino-benzimidazole in a 1:1 and 2:1 ratio. The reactivity towards gold and silver complexes has been studied.

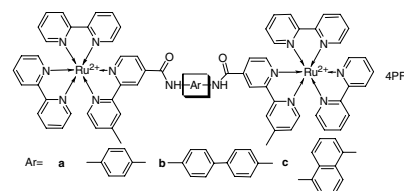


**Minna Li, Jianhui Liu, Changzhi Zhao,  
Licheng Sun**

*J. Organomet. Chem.* 691 (2006) 4189

Aryl-diamide bridged binuclear ruthenium (II) tris(bipyridine) complexes: Synthesis, photo-physical, electrochemical and electrochemiluminescence properties

The central aromatic hydrocarbon and ruthenium tris(bipyridine) have been covalently connected to form novel symmetrical hydrocarbon centered binuclear Ru (II) complexes. Of the three complexes studied, the naphthalene ring centered complex **3c** exhibited the best electro-chemiluminescence properties, 6 times stronger than that of the reference compound  $\text{Ru}(\text{bpy})_3^{2+}$ .

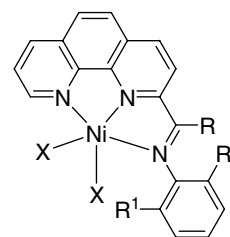


**Wen-Hua Sun, Shu Zhang, Suyun Jie,  
Wen Zhang, Yan Li, Hongwei Ma,  
Jiutong Chen, Katrin Wedeking,  
Roland Fröhlich**

*J. Organomet. Chem.* 691 (2006) 4196

Synthesis, characterization and ethylene oligomerization studies of nickel complexes bearing 2-imino-1,10-phenanthrolines

A series of nickel (II) complexes ligated by 2-imino-1,10-phenanthrolines were synthesized and characterized by elemental and spectroscopic analysis as well as the single-crystal X-ray crystallography. X-ray crystallographic analysis reveals nickel complexes as the five-coordinated distorted trigonal-bipyramidal geometry. Upon activation with  $\text{Et}_2\text{AlCl}$ , these complexes exhibited considerably high activity for ethylene oligomerization.

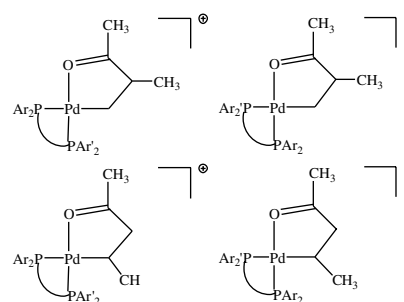


**Antonella Leone, Giambattista Consiglio**

*J. Organomet. Chem.* 691 (2006) 4204

Olefin insertion in Pd-acyl complexes modified with 1,4- $C_s$ -symmetrical diphosphine ligands

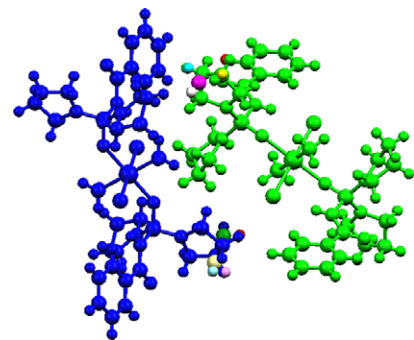
The insertion of ethene and propene was investigated in palladium(II) acyl complexes of the type  $[\text{PdC}(\text{O})\text{CH}_3(\text{P}^{\wedge}\text{P}^*)(\text{CH}_3\text{CN})](\text{OTf})$  modified with the  $C_s$ -symmetric diphosphines.



**Khodayar Gholivand, Zahra Shariatinia***J. Organomet. Chem.* 691 (2006) 4215

Two conformers in the solid state for a novel organotin(IV) complex of a phosphoramidate: Syntheses, spectroscopic study and crystal structures of several new organotin(IV) complexes of *N*-benzoylphosphoric triamides

Novel organotin(IV) complexes were synthesized and characterized by NMR and IR spectroscopy, elemental analysis and X-ray crystallography. Compound **1** exists as two conformers in the crystalline state. In these four structures there are intramolecular  $-\text{Sn}-\text{Cl}\cdots\text{H}-\text{N}-$  hydrogen bonds, in addition to weak  $\text{C}-\text{H}\cdots\text{O}$  and  $\text{C}-\text{H}\cdots\text{Cl}$  hydrogen bonds.

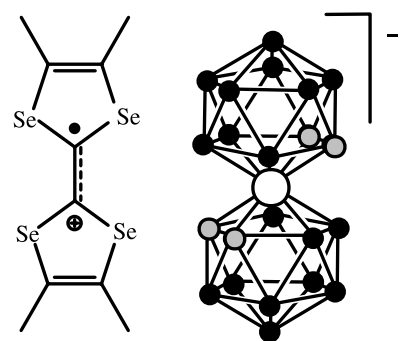


**Olga N. Kazheva, Anatolii N. Chekhlov, Grigori G. Alexandrov, Lev I. Buravov, Andrey V. Kravchenko, Vladimir A. Starodub, Igor B. Sivaev, Vladimir I. Bregadze, Oleg A. Dyachenko**

*J. Organomet. Chem.* 691 (2006) 4225

Synthesis, structure and electrical conductivity of fulvalenium salts of cobalt bis(dicarbollide) anion

Radical cation salts  $(\text{TMTSF})_2[3,3'\text{-Co}(1,2\text{-C}_2\text{B}_9\text{H}_{11})_2]$  (**1**),  $(\text{TTF})[3,3'\text{-Co}(1,2\text{-C}_2\text{B}_9\text{H}_{11})_2]$  (**2**) and  $(\text{ET})[3,3'\text{-Co}(1,2\text{-C}_2\text{B}_9\text{H}_{11})_2]$  (**3**) were synthesized and their crystal structures and electrical conductivities were determined. Compound **1** has layered structure with conducting stacks of the TMTSF cations, whereas compounds **2** and **3** contain separated pairs of fulvalenium cations.

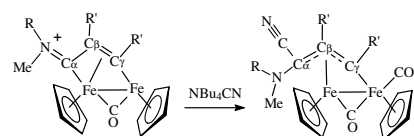


**Vincenzo G. Albano, Luigi Busetto, Fabio Marchetti, Magda Monari, Stefano Zacchini, Valerio Zanotti**

*J. Organomet. Chem.* 691 (2006) 4234

C–C bond formation by cyanide addition to dinuclear vinyliminium complexes

Cyanide anion gives regio- and stereo-specific addition at the  $\text{C}_\alpha$  of the  $\mu$ -vinyliminium ligand, in dinuclear complexes, affording novel bridging cyano-functionalized allylidene complexes. The reaction is influenced by the nature of the R substituent: when  $\text{R} = \text{Xyl}$ , the addition to  $\text{C}_\alpha$  is inhibited, or it occurs at the  $\text{C}_\beta$  position.

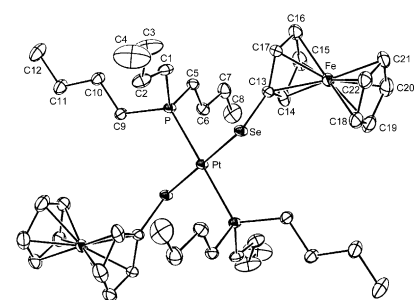


**Christopher P. Morley, Christopher A. Webster, Massimo Di Vaira**

*J. Organomet. Chem.* 691 (2006) 4244

Oxidative addition of  $(\text{PhSe})_2$  and  $(\text{FcSe})_2$  to zerovalent palladium and platinum trialkylphosphine complexes (Fc = ferrocenyl,  $[\text{Fe}(\eta^5\text{-C}_5\text{H}_5)(\eta^5\text{-C}_5\text{H}_4)]$ )

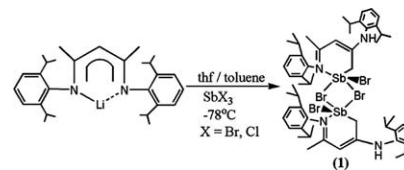
Room temperature reaction of  $[\text{Pd}_2(\text{dba})_3]/\text{PR}_3$  or  $[\text{Pt}(\text{C}_2\text{H}_4)(\text{PR}_3)_2]$  (dba = dibenzylideneacetone;  $\text{R} = \text{Et}, \text{Bu}$ ) with the diselenides  $(\text{R}'\text{Se})_2$  ( $\text{R}' = \text{Ph}, \text{Fc}$ ) yielded the oxidative addition products  $\text{trans}-[\text{M}(\text{SeR}')_2(\text{PR}_3)_2]$  ( $\text{M} = \text{Pd}, \text{Pt}$ ). The structures of  $\text{trans}-[\text{Pt}(\text{SePh})_2(\text{PR}_3)_2]$  ( $\text{R} = \text{Et}, \text{Bu}$ ) and  $\text{trans}-[\text{Pt}(\text{SeFc})_2(\text{PBu}_3)_2]$  have been determined by X-ray crystallography.



**Leslie A. Lesikar, Anne F. Richards***J. Organomet. Chem.* 691 (2006) 4250

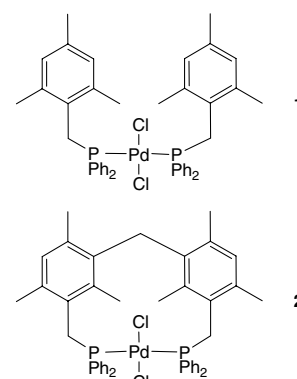
Synthesis and characterization of  $\beta$ -diketiminato complexes of antimony (III) halides

The synthesis and characterization of three novel  $\beta$ -diketiminato (nacnac) complexes of antimony are reported. The products isolated are dependant on reaction stoichiometry, the halide precursor and the substituent on the nacnac ligand, (nacnac =  $\{[N(R)C(Me)}_2-CH]^-$ , R = 2,4,6 trimethyl benzene (Mes) or  $C_6H_3^iPr_{2,6}$  (Dipp)).

**Ludovic Chahen, Bruno Therrien, Georg Süß-Fink***J. Organomet. Chem.* 691 (2006) 4257

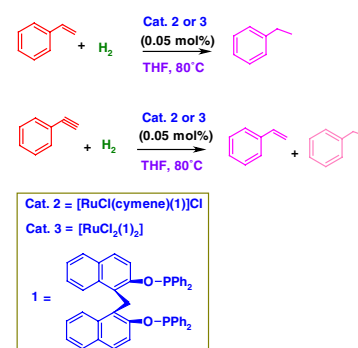
Square-planar dichloro palladium complexes with *trans*-configured phosphine ligands avoiding *ortho*-metallation: Ligand design, complex synthesis, molecular structure and catalytic potential for Suzuki cross-coupling reactions

The square-planar palladium complexes *trans*- $[PdCl_2(PPh_2-CH_2-2,4,6-C_6H_2Me_3)_2]$  (**1**) and *trans*- $[PdCl_2(\eta^2-PPh_2-CH_2-2,4,6-C_6HMe_3-CH_2-2,4,6-C_6HMe_3-CH_2-PPh_2)]$  (**2**) have been synthesized from  $[PdCl_2(cod)]$  (cod = 1,5-cyclooctadiene) and the corresponding new phosphine or diphosphine ligands. Both complexes are found to catalyze Suzuki cross-coupling reactions of deactivated and even bulky aromatic substrates.

**Benudhar Punji, Joel T. Mague, Maravanji S. Balakrishna***J. Organomet. Chem.* 691 (2006) 4265

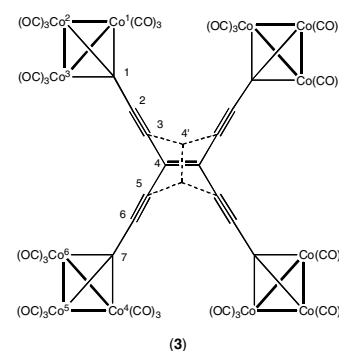
Ruthenium(II), copper(I) and silver(I) complexes of large bite bisphosphinite, bis(2-diphenylphosphinoxynaphthalen-1-yl)methane: Application of Ru(II) complexes towards the hydrogenation of styrene and phenylacetylene

The synthesis of new 10-membered chelate complexes of ruthenium(II), copper(I) and silver(I) with large bite bisphosphinite  $Ph_2P\{-OC_{10}H_6(\mu-CH_2)(C_{10}H_6O-)\}PPh_2$  (**1**) is described. The ruthenium(II) complexes promote the hydrogenation reactions of styrene and phenylacetylene with excellent turnover numbers.

**Michael I. Bruce, Natasha N. Zaitseva, Paul J. Low, Brian W. Skelton, Allan H. White***J. Organomet. Chem.* 691 (2006) 4273

Polymetallation of alkenes: Formation of some complexes containing branched chain carbon-rich ligands

Reactions of  $\{(PPh_3)AuC\equiv C\}_2C=C\{C\equiv CAu(PPh_3)\}_2$  with  $Co_3(\mu-CBr)(\mu-dppm)_n(CO)_{9-2n}$  ( $n = 0, 1$ ) result in complete or partial elimination of  $AuBr(PPh_3)$  to give the complexes  $\{(OC)_9Co_3-\mu_3-CC\equiv C\}_2C=C\{C\equiv C-\mu_3-CCO_3(CO)_9\}_2$  (**3**), *trans*- $\{(OC)_7(\mu-dppm)Co_3-\mu_3-CC\equiv C\}(HC\equiv C)C=C\{C\equiv CAu(PPh_3)\}\{C\equiv C-\mu_3-CCO_3(\mu-dppm)(CO)_7\}$  (**4**),  $\{(OC)_7(\mu-dppm)Co_3-\mu_3-CC\equiv C\}_2C=C(C\equiv CH)\{C\equiv C-\mu_3-CCO_3(\mu-dppm)(CO)_7\}$  (**5**) and  $\{(OC)_7(\mu-dppm)Co_3-\mu_3-CC\equiv C\}_2C=C\{C\equiv CAu(PPh_3)\}\{C\equiv C-\mu_3-CCO_3(\mu-dppm)(CO)_7\}$  (**6**).

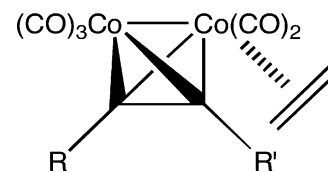


**Theodorus J.M. de Bruin, Carine Michel, Karoly Vekey, Andrew E. Greene, Yves Gimbert, Anne Milet**

*J. Organomet. Chem.* 691 (2006) 4281

First C–C bond formation in the Pauson–Khand reaction: Influence of carbon–carbon triple bond polarization on regiochemistry. A density functional theory study

It has been shown with acetylenes that differ in polarization of the carbon–carbon triple bond and size of the substituents that the electron density plays an important role in determining the regiochemical outcome of the PK reaction: the acetylenic carbon that carries the larger electron density will, in general, be that involved in forming the crucial C–C bond, even when geometrical factors are less favorable

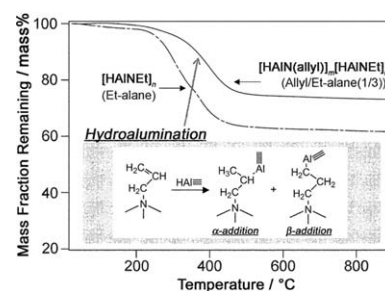


**Yusuke Mori, Yasuhiro Kumakura, Yoshiyuki Sugahara**

*J. Organomet. Chem.* 691 (2006) 4289

Preparation and pyrolysis of poly(allyl iminoalane-co-ethyl iminoalane)s [HAIN(allyl)<sub>m</sub>][HAINEt]<sub>n</sub>

Poly(allyl iminoalane-co-ethyl iminoalane)s have been prepared from LiAlH<sub>4</sub>, allyl-NH<sub>2</sub> · HCl and EtNH<sub>2</sub> · HCl with various allyl/Et ratios. It is demonstrated that the loss of aluminum during the pyrolysis of poly(allyl iminoalane-co-ethyl iminoalane) (allyl/Et = 1/3) is suppressed due to cross-linking reactions involving the allyl groups.

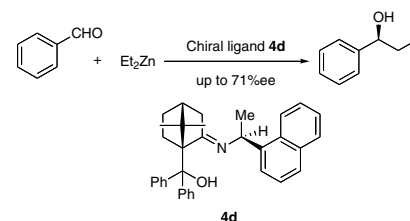


**Takashi Mino, Atsushi Suzuki, Masakazu Yamashita, Shusaku Narita, Yoshiaki Shirae, Masami Sakamoto, Tsutomu Fujita**

*J. Organomet. Chem.* 691 (2006) 4297

Enantioselective addition of diethylzinc to aldehydes in the presence of chiral hydrazone and imine ligands

Optically active hydrazone and imine were found to act as effective ligands for enantioselective addition of diethylzinc to aldehydes. This reaction provided optically active secondary alcohols with ee up to 71%.

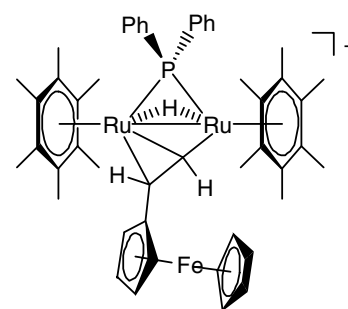


**Mathieu J.-L. Tschan, Bruno Therrien, Jiří Ludvík, Petr Štěpnička, Georg Süß-Fink**

*J. Organomet. Chem.* 691 (2006) 4304

Dinuclear hexamethylbenzene ruthenium cations containing η<sup>1</sup>:η<sup>2</sup>-2-(ferrocenyl)ethenyl ligands: Synthesis, structure, electrochemistry

The ferrocenyl-containing complexes [(η<sup>6</sup>-C<sub>6</sub>Me<sub>6</sub>)<sub>2</sub>Ru<sub>2</sub>(μ-η<sup>1</sup>:η<sup>2</sup>-CH=CHFc)<sub>2</sub>(μ-H)][BF<sub>4</sub>] and [(η<sup>6</sup>-C<sub>6</sub>Me<sub>6</sub>)<sub>2</sub>Ru<sub>2</sub>(μ-PPh<sub>2</sub>)(μ-η<sup>1</sup>:η<sup>2</sup>-CH=CHFc)(μ-H)][BF<sub>4</sub>] have been synthesised in ethanol from ethynylferrocene and the dinuclear precursors [(η<sup>6</sup>-C<sub>6</sub>Me<sub>6</sub>)<sub>2</sub>Ru<sub>2</sub>(μ-H)<sub>3</sub>][BF<sub>4</sub>] and [(η<sup>6</sup>-C<sub>6</sub>Me<sub>6</sub>)<sub>2</sub>Ru<sub>2</sub>(μ-PPh<sub>2</sub>)(μ-H)<sub>2</sub>][BF<sub>4</sub>] respectively, and isolated as the tetrafluoroborate salts. The four complexes have been studied by cyclic voltammetry.

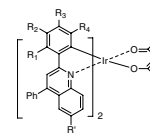


**Xiaowei Zhang, Jia Gao, Chuluo Yang,  
Linna Zhu, Zhongan Li, Kai Zhang,  
Jingui Qin, Han You, Dongge Ma**

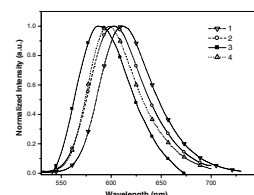
*J. Organomet. Chem.* 691 (2006) 4312

Highly efficient iridium(III) complexes with diphenylquinoline ligands for organic light-emitting diodes: Synthesis and effect of fluorinated substitutes on electrochemistry, photophysics and electroluminescence

The effect of fluorinated substituents in the diphenylquinoline ligand frame on the electrochemistry, photophysics and electroluminescent performance of iridium complexes have been studied.



- 1: R<sup>1</sup>=Br R<sub>2</sub>=R<sub>3</sub>=R<sub>4</sub>=R<sub>5</sub>=H  
 2: R<sup>1</sup>=Cl R<sub>2</sub>=F, R<sub>3</sub>=R<sub>4</sub>=R<sub>5</sub>=H  
 3: R<sup>1</sup>=Cl R<sub>2</sub>=F, R<sub>3</sub>=R<sub>4</sub>=R<sub>5</sub>=H  
 4: R<sup>1</sup>=Cl R<sub>2</sub>=CF<sub>3</sub>, R<sub>3</sub>=R<sub>4</sub>=R<sub>5</sub>=H

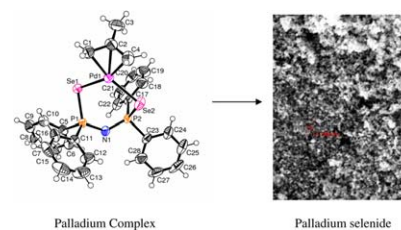


**A. Singhal, D.P. Dutta, S.K. Kulshreshtha,  
S.M. Mobin, P. Mathur**

*J. Organomet. Chem.* 691 (2006) 4320

Allylpalladium (II) complexes with dichalcogenoimidodiphosphinate ligands: Synthesis, structure, spectroscopy and their transformation into palladium chalcogenides

Monomeric allylpalladium (II) complexes with dichalcogenoimidodiphosphinate dichabridged have been prepared and structurally characterized. Their thermal behaviour has been investigated. The complexes are potential precursors for palladium chalcogenides.



## Note

**Chan Sik Cho, Sang Chul Shim**

*J. Organomet. Chem.* 691 (2006) 4329

A ruthenium-catalyzed one-pot method for  $\alpha$ -alkylation of ketones with aldehydes

Ketones undergo  $\alpha$ -alkylation with aromatic and aliphatic aldehydes in dioxane at 80 °C in the presence of a catalytic amount of RuCl<sub>2</sub>(PPh<sub>3</sub>)<sub>3</sub> together with KOH. The reaction is applicable to aryl(methyl), alkyl(methyl), and benzo-fused cyclic ketones, and in the case of alkyl(methyl) ketones the alkylation takes place exclusively at less-hindered methyl position over  $\alpha$ -methylene and -methine.

