

## Contents

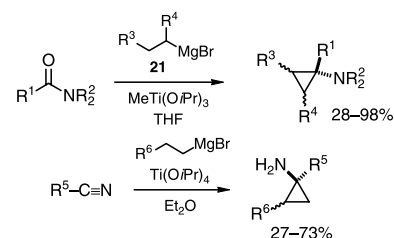
### Review

**Armin de Meijere, Sergei I. Kozhushkov,  
Andrei I. Savchenko**

*J. Organomet. Chem.* 689 (2004) 2033

Titanium-mediated & syntheses of cyclopropylamines

The transformations of *N,N*-dialkylcarboxamides and nitriles to cyclopropylamines with organometallics in situ generated from organomagnesium as well as organozinc reagents in the presence of stoichiometric or substoichiometric quantities of a titanium alkoxide derivative are described. In many cases, these procedures provide synthetically and/or pharmacologically important cyclopropylamines in good to very good yields (from 20 to 98% from *N,N*-dialkylcarboxamides and from 27 to 73% from nitriles) and with high chemo- and stereoselectivity. These circumstances in conjunction with the simplicity of the experimental handling and inexpensiveness of the reagents favor these reactions for an ever increasing range of applications in organic synthesis.



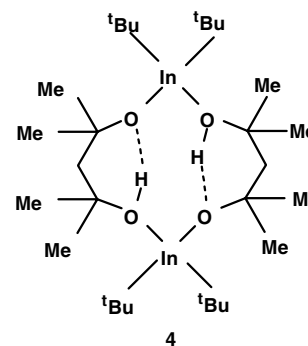
### Regular papers

**Wanda Ziemkowska,  
Romana Anulewicz-Ostrowska**

*J. Organomet. Chem.* 689 (2004) 2056

Sterically crowded diolates of group 13 metals

The structure of complexes formed by the reactions of sterically crowded diols with group 13 metal trialkyls depends on the kind of metal, as well as steric bulk of the substituents at the metal atoms.  $tBu_3In$  reacts with 2,4-dimethylpentane-2,4-diol to give the dimeric complex (4) stabilised by two intramolecular  $O-H\cdots O$  bonds, whereas  $tBu_3Ga$  with this diol forms unstable  $\{tBu_2Ga[OC(CH_3)_2CH_2C(CH_3)_2OH]\}_2$  (1) product with  $Ga_2O_2$  core and two unreacted OH groups.

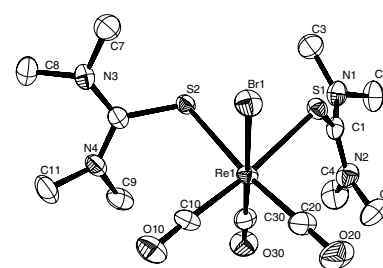


**Henrik Braband, Ulrich Abram**

*J. Organomet. Chem.* 689 (2004) 2066

Tricarbonyl complexes of rhenium(I) and technetium(I) with thiourea derivatives

*fac*- $[M(CO)_3X_3]^{2-}$  complexes ( $M = Re$ ,  $X = Br$ ;  $M = Tc$ ,  $X = Cl$ ) react with thiourea derivatives under formation of stable rhenium(I) and technetium(I) complexes.

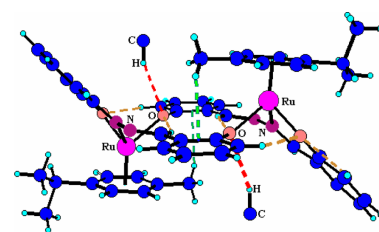


**Sanjay K. Singh, Manish Chandra,  
Daya S. Pandey**

*J. Organomet. Chem.* 689 (2004) 2073

Ru(II) complexes imparting N<sub>2</sub>O<sub>2</sub> donor bis chelating ligand *N,N'*-bis(salicylidine)-hydrazine in unusual coordination mode

Synthesis and structural characterization Ru(II) arene complexes containing N O donor bis-chelating ligand in a rare coordination mode and involvement of methyl and isopropyl groups in hydrogen bonding.

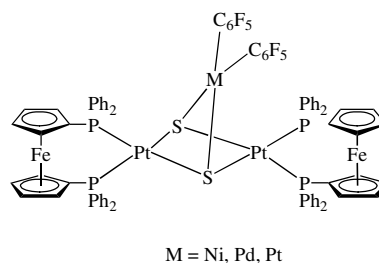


**José Ruiz, Venancio Rodríguez,  
Antonia Pérez, Gregorio López,  
Delia Bautista**

*J. Organomet. Chem.* 689 (2004) 2080

Synthesis and characterization of new sulfide aggregates of the type  $[\{\text{Pt}_2(\mu_3\text{-S})_2(\text{P-P})_2\}\text{M}(\text{C}_6\text{F}_5)_2]$  (M = Ni, Pd, Pt; P-P = 2PPh<sub>3</sub>, 2PMe<sub>2</sub>Ph, dppf)

New sulfide aggregates of the type  $[\{\text{Pt}_2(\mu_3\text{-S})_2(\text{P-P})_2\}\text{M}(\text{C}_6\text{F}_5)_2]$  (M = Ni, Pd, Pt) have been prepared. X-ray crystal analysis revealed that  $[\{\text{Pt}_2(\mu_3\text{-S})_2(\text{dppf})_2\}\text{Pd}(\text{C}_6\text{F}_5)_2]$ ,  $[\{\text{Pt}_2(\mu_3\text{-S})_2(\text{PPh}_3)_2\}\text{Ni}(\text{C}_6\text{F}_5)_2]$ ,  $[\{\text{Pt}_2(\mu_3\text{-S})_2(\text{PPh}_3)_2\}\text{Pd}(\text{C}_6\text{F}_5)_2]$  and  $[\{\text{Pt}_2(\mu_3\text{-S})_2(\text{PMe}_2\text{-Ph})_2\}\text{Pt}(\text{C}_6\text{F}_5)_2]$  have triangular M<sub>3</sub>S<sub>2</sub> core structures capped on both sides by μ<sub>3</sub>-sulfido ligands. The structural features of these polymetallic complexes are described.

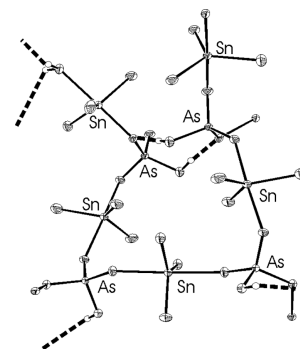


**Aminata Diassé-Sarr, Aliou H. Barry,  
Tahar Jouini, Libasse Diop, Bernard Mahieu,  
Mary F. Mahon, Kieran C. Molloy**

*J. Organomet. Chem.* 689 (2004) 2087

Synthesis, spectroscopic studies and crystal structure of  $(\text{Et}_4\text{N})(\text{SnMe}_3)_7(\text{HAsO}_4)_4 \cdot 2\text{H}_2\text{O}$

$(\text{Et}_4\text{N})(\text{SnMe}_3)_7(\text{HAsO}_4)_4 \cdot 2\text{H}_2\text{O}$  consists of layers containing both corner sharing AsO<sub>4</sub>H tetrahedra and *trans*-O<sub>2</sub>SnC<sub>3</sub> entities.

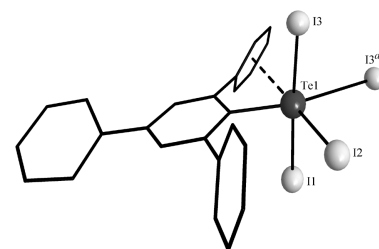


**Gabriela N. Ledesma, Ernesto Schulz Lang,  
Ulrich Abram**

*J. Organomet. Chem.* 689 (2004) 2092

2,4,6-Triphenylphenyltellurium(IV) triiodide – supramolecular self-assembling in organo-tellurium triiodides

The bisphenoidal coordination sphere of the central tellurium atom in (2,4,6-Ph<sub>3</sub>C<sub>6</sub>H<sub>2</sub>)-TeI<sub>3</sub> is extended by the presence of intermolecular Te···I and I···I secondary bonds. Chains along the crystallographic *a* axis are formed and weak intramolecular interactions with one of the phenyl rings of the (2,4,6-Ph<sub>3</sub>C<sub>6</sub>H<sub>5</sub>) unit completes the pseudo-octahedral coordination geometry around each tellurium atom.

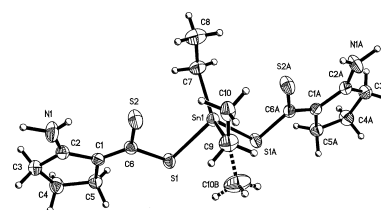


**Joaquín Barroso-Flores,  
Raymundo Cea-Olivares, Rubén A. Toscano,  
J.A. Cogordan**

*J. Organomet. Chem.* 689 (2004) 2096

Synthesis of the anisobidentate compound bis(2-amino-cyclopent-1-ene-carbodithioate)-diethyltin (IV). Experimental and theoretical study

The characteristic coordination pattern adopted by diorganotin (IV) complexes of ACDA is governed only by electronic, and not steric, factors. This has been concluded from our theoretical studies and supported by  $^{119}\text{Sn}$  NMR spectra. The local bond order concept is defined to describe the intramolecular interactions.

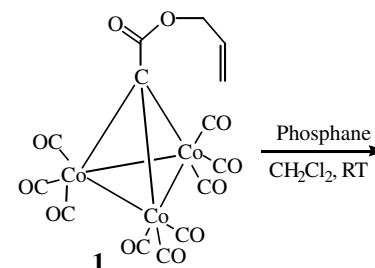


**Steven J. Black, Christopher P. Morley,  
Alun E. Owen, Mark R.J. Elsegood**

*J. Organomet. Chem.* 689 (2004) 2103

Synthesis and characterisation of phosphane-substituted  $\text{Co}_3\text{C}$  clusters having a pendant allyl side-chain

Di- and trisubstituted  $\mu_3$ -carbido-capped tricobalt carbonyl clusters have been synthesised by room temperature reaction of **1** with a range of monodentate and chelating phosphane ligands. The products have been characterised by spectroscopic and analytical techniques, and the molecular structures of five examples have been determined by X-ray crystallography.

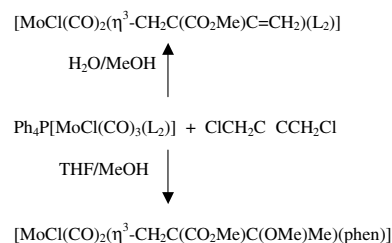


**Annabelle G.W. Hodson, Rupinder K. Thind,  
Oliver Granville-George**

*J. Organomet. Chem.* 689 (2004) 2114

Solvent-controlled formation of  $\eta^3$ -butadienyl or  $\eta^3$ -allyl group 6 transition metal complexes in water or alcohols

Synthesis of acyl chloride, amide, ester or thioester-substituted  $\eta^3$ -butadienyl metal complexes in aqueous solution resulted in improved yields over chlorinated solvents and assisted recycling of reactants. Presence of ethers or bases in these reactions in alcohols resulted in controlled formation of either  $\eta^3$ -butadienyl or  $\eta^3$ -allyl complexes for methanol only.

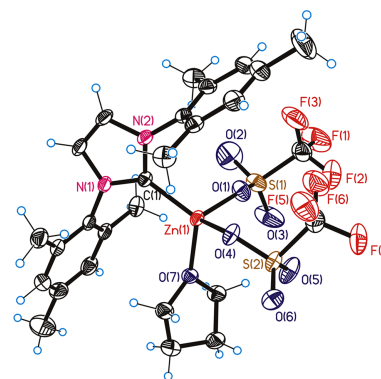


**Dongren Wang, Klaus Wurst,  
Michael R. Buchmeiser**

*J. Organomet. Chem.* 689 (2004) 2123

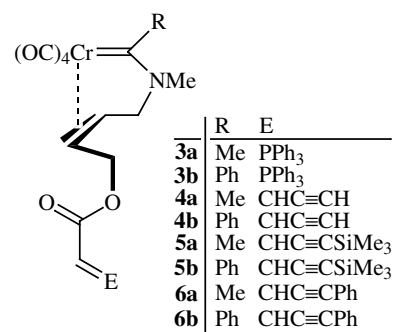
N-heterocyclic carbene complexes of Zn(II): synthesis, X-ray structures and reactivity

Six novel zinc (II) mono(N-heterocyclic carbene) complexes have been prepared, structurally characterized and were investigated for their activity in the copolymerization of carbon dioxide with cyclohexene oxide as well as in the ring-opening polymerization of cyclohexene oxide and  $\epsilon$ -caprolactone.



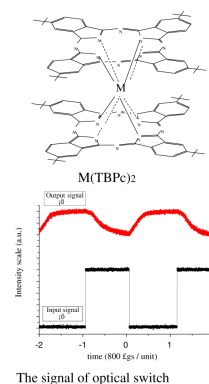
**Rainer Schobert, Thomas Schmalz***J. Organomet. Chem.* 689 (2004) 2131

Introduction of a phosphorus ylide moiety into  $[\eta^2-(\omega\text{-hydroxy)alkenyl}]chromium(0)$  carbene complexes with  $Ph_3PCCO$  and consecutive Wittig alkenations with 2-alkynals,  $R^2-C\equiv C-CHO$  ( $R^2 = H, SiMe_3, Ph$ ), furnishing the corresponding 4*Z*,9*E*-dien-11-yne  $(OC)_4Cr=C((4,5-\eta^2)\text{-}NMeCH_2CH=CHCH_2O(O)C-CH=PPh_3)R^1$  (3). These undergo Wittig alkenation reactions with 2-alkynals,  $R^2-C\equiv C-CHO$  ( $R^2 = H, SiMe_3, Ph$ ), furnishing the corresponding 4*Z*,9*E*-dien-11-yne  $(OC)_4Cr=C((4,5-\eta^2)\text{-}NMeCH_2CH=CHCH_2O_2C-CH=C(R^2)-R^1)$  (4-6). All complexes were characterized in solution by one- and two-dimensional NMR spectroscopy ( $^1H$ ,  $^{13}C$ ,  $^{29}Si$ ,  $^{31}P$ ,  $^1H/^1H$  COSY,  $^{13}C/^1H$  HETCOR,  $^{31}P/^31P$  EXSY).

**Mark O. Liu, Chia-Hon Tai, Andrew Teh Hu, Tai-Huei Wei***J. Organomet. Chem.* 689 (2004) 2138

Reverse saturable absorption of lanthanide bisphthalocyanines and their application for optical switches

Reverse saturable absorption (RSA) of tetrakis (2,9,16,23-*tert*-butyllanthanide bisphthalocyanines)(M(TBPC)<sub>2</sub>, M = Lu, Dy, Tb) have been investigated with Z-scan technique. Based on their RSA, moreover, they have also been applied for optical switches.



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