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Contents

Regular papers

Victor Barba, Refugio Hernández, Herbert Höpfl, Rosa Santillan, Norberto Farfán

J. Organomet. Chem. 694 (2009) 2127

3-Aminophenylboronic acid as building block for the construction of calix- and cage-shaped boron complexes 3-Aminophenylboronic acid reacts with salicylaldehyde derivatives and aliphatic alcohols leading to the formation of macrocyclic boron compounds having calixshaped conformation. Self-assembly of two calix-like compounds occurs to give a cage linked through covalent bonds.

C.W. Liu, Bijay Sarkar, Ben-Jie Liaw, Ya-Wen Lin, Tarlok S. Lobana, Ju-Chun Wang

J. Organomet. Chem. 694 (2009) 2134

The influence of alkane spacer of bis(diphenylphosphino)alkanes on the nuclearity of silver(I): Syntheses and structures of P,P'-bridged clusters and coordination polymers involving dithiophosphates

Reactions of Ag(I) with dtp and bis(diphenylphosphino)alkane "dppm", afford discrete tetra-, tri- and di-nuclear clusters while similar reactions involving dppe and dppb, diphosphines with longer spacer, favor formation of coordination polymers *viz.* 1D chains and 2D honeycomb networks. Some of them also show argentophilicity with short Ag...Ag contacts.

Tushar S. Basu Baul, Archana Mizar, Anup Paul, Giuseppe Ruisi, Rudolph Willem, Monique Biesemans, Anthony Linden

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Crystal and solution structures of di-nbutyltin(IV) complexes of 5-[(E)-2-(4methoxyphenyl)-1-diazenyl]quinolin-8-ol and benzoic acid derivatives: En route to elegant self-assembly via modulation of the tin coordination geometry Di-*n*-butyltin(IV) complexes $[{}^{n}Bu_{2}Sn(L)(L^{X})]_{2}$ (L = 5-[(*E*)-2-(4-methoxyphenyl)-1-diazenyl]quinolin-8-ol and L^{x} = substituted benzoic acids) is described. The crystal structures of the complexes reveal two different types motifs viz., $Sn_{2}O_{2}$ and $Sn_{2}C_{2}O_{4}$ as a result of a strong modulation of the tin coordination geometry as a function of the substituent pattern on the various benzoates.









Aidan R. McDonald, Nicole Franssen, Gerard P.M. van Klink, Gerard van Koten

J. Organomet. Chem. 694 (2009) 2153

'Click' silica immobilisation of metalloporphyrin complexes and their application in epoxidation catalysis Copper catalysed 'Click' tethering of monoand tetra- ethynyl functionalised porphyrin complexes to a silica support yields immobilised manganese complexes. The organometallic functionalised silica materials are applied in epoxidation catalysis, with multiple recycles of the immobilised catalysts resulting in eventual decomposition of the complex, which is investigated herein.



Roshinee Costa, Natalie Barone, Christopher Gorczycka, Ernest F. Powers, William Cupelo, Joseph Lopez, Richard S. Herrick, Christopher J. Ziegler

J. Organomet. Chem. 694 (2009) 2163

Dioxime and pyridine-2-aldoxime complexes of $\text{Re}(\text{CO})_3^+$

Dioxime complexes of the formula $ReL(CO)_3X$ (L = dioxime (1,2), dimethylglyoxime (3,4), diphenylglyoxime (5,6), 1,2-cyclohexanedione dioxime (7,8); X = Cl, Br) can be readily generated by reaction of the neutral ligand with $Re(CO)_5X$ (X = Cl, Br) or $[Re(CO)_3(H_2O)_3]Br$. A similar set of pyridine-2-aldoximes of the formula $ReL(CO)_3X$ (L = pyridine-2-aldoxime (9,10), 2-pyridylamidoxime (11,12); X = Cl, Br) can also be synthesized.



Natsuhisa Oka, Masahiko Nakamura, Naomi Soeda, Takeshi Wada

J. Organomet. Chem. 694 (2009) 2171

Stereocontrolled synthesis of tertiary silanes via optically pure 1,3,2-oxazasilolidine derivatives

Optically pure 1,3,2-oxazasilolidine derivatives were synthesized from chiral 1,2amino alcohols. The oxazasilolidine derivatives afforded tertiary silanes with excellent optical purity through successive reactions with Grignard reagents and DI-BAL. Stereochemical course of the reactions was determined based on an X-ray crystallographic analysis.



M. Emin Günay, Namık Özdemir, Mahmut Ulusoy, Melih Uçak, Muharrem Dinçer, Bekir Çetinkaya

J. Organomet. Chem. 694 (2009) 2179

The influence of moisture on deprotonation mode of imidazolinium chlorides with palladacycle acetate dimer

Deprotonation of 1,3-diorganyl imidazolinium salts (1) with N,C-type palladacyclic acetate dimer 2 afforded novel NHC coordinated complexes 3 along with ring opening hydrolysis products 4, which may coordinate to palladium center via NH group to give 5a.



Laura Valencia, Paulo Pérez-Lourido, Rufina Bastida, Alejandro Macías

J. Organomet. Chem. 694 (2009) 2185

Mn(II) azamacrocyclic bromide complexes with different nuclearities

The coordination behaviour of a series of pyridyl azamacrocyclic ligands, some of them containing cyanomethyl and cyanoethyl pendant-arms, towards Mn(II) ion was studied. All the complexes were characterized by microanalysis, LSI mass spectrometry, IR, UV–Vis spectroscopy and magnetic measurements. Crystal structures of

Santiago Gómez-Ruiz, Beatriz Gallego, Milena R. Kaluđerović, Harish Kommera, Evamarie Hey-Hawkins, Reinhard Paschke, Goran N. Kaluđerović

J. Organomet. Chem. 694 (2009) 2191

Novel gallium(III) complexes containing phthaloyl derivatives of neutral aminoacids with apoptotic activity in cancer cells [MnL¹][MnBr₄] (1), [MnL³][MnBr₄] · 2CH₃CN (3), $[Mn_2L^5Br_4] \cdot 2CH_3CN$ (5) and $[Mn_2L^6Br_4]$ (6) complexes have been determined. The X-ray studies show the presence of an ionic mixed octahedral-tetrahedral complex for 1 and 3, with the manganese ion of the cation complex, endomacrocyclicly coordinated by the six nitrogen donor atoms from the macrocyclic backbone in a distorted octahedral geometry. Instead, the complexes 5 and 6 are dinuclear, and both manganese ions are coordinated by one pyridinic and two amine nitrogen atoms from the macrocyclic backbone and two bromide ions, being the geometry around the metal better described as distorted square pyramidal. In all cases, the nitrile pendant-arms do not show coordination to the metal ion.

The dinuclear complexes $[Me_2Ga(\mu-O_2CCH_2N(CO)_2C_6H_4)]_2$ (1) and *RS*- $[Me_2Ga(\mu-O_2CCHMeN(CO)_2C_6H_4)]_2$ (2) were tested against human tumour cell lines 8505C anaplastic thyroid cancer, A253 head and neck tumour, A549 lung carcinoma, A2780 ovarian cancer, DLD-1 colon carcinoma showing cytotoxicity in cancer cells and apoptotic action in cell death.





Haq Nawaz, Zareen Akhter, Sumaira Yameen, Huamaira M. Siddiqi, Bushra Mirza, Arshia Rifat

J. Organomet. Chem. 694 (2009) 2198

Synthesis and biological evaluations of some Schiff-base esters of ferrocenyl aniline and simple aniline

The synthesis and biological studies of some long chain esters containing Schiff bases and their ferrocenyl analogues were carried out.



Sven Krieck, Helmar Görls, Matthias Westerhausen

J. Organomet. Chem. 694 (2009) 2204

Reactivity studies of phenylcalcium iodide towards THF yielding phenyl-free cage compounds – Crystal structures of [${(thf)Ca(O-CH=CH_2)_2}_4 \cdot CaO \cdot Cal_2$] and [$(CaO)_4 \cdot 4 (thf)_3Cal_2$]

The post-Grignard reagent phenylcalcium iodide can best be prepared in THF. However, far-reaching degradation reactions include α -deprotonation of THF, formation of the vinylalcoholate [{(thf)Ca(O-CH=CH_2)_2}_4 \cdot CaO \cdot Cal_2] and finally calcium oxide iodide [(CaO)_4 \cdot 4 (thf)_3Cal_2] (see picture: Ca brown, I blue, O red; H and C omitted and only the O atoms of the THF ligands are shown).



Zhanfeng Li, Bin Liu, Haisheng Xu, Ganglin Xue, Huaiming Hu, Feng Fu, Jiwu Wang

J. Organomet. Chem. 694 (2009) 2210

Preparation, crystal structures, EPR and reflectance spectra of two new chargetransfer salts, [CpFeCpCH₂N(CH₃)₃]₄- $[XMo_{12}O_{40}] \cdot nCH_3CN$ (n = 0 for X = P orn = 1 for X = Ge)

The two novel charge-transfer salts, $[CpFeCpCH_2N(CH_3)_3]_4[XMo_{12}O_{40}] \cdot nCH_3CN$ (n = 0 for X = P or n = 1 for X = Ge)were synthesized in high yields and fully characterized.



Joris Berding, Huub Kooijman, Anthony L. Spek, Elisabeth Bouwman

I. Organomet. Chem. 694 (2009) 2217

Another silver complex 1.3of dibenzylimidazol-2-ylidene: Solution and solid-state structures

The solid-state structure of $\{(Bn_2Im)AgBr\}_2$ was determined and appeared to be significantly different from a structure reported before. A new classification for all known monodentate silver-carbene complexes is introduced.



Vincent O. Nyamori, Edward N. Nxumalo, Neil J. Coville

J. Organomet. Chem. 694 (2009) 2222

effect The of arylferrocene ring substituents on the synthesis of multiwalled carbon nanotubes

The synthesis of shaped carbon nanomaterials such as carbon nanotubes (CNT), amorphous carbon, carbon fibres and carbon spheres was achieved using parasubstituted arylferrocenes, FcPhX (X = H, OH, Br, COCH₃) or a mixture of ferrocene (FcH) and substituted benzenes (PhX; $X = H, OH, Br, COCH_3$) and the presence of Br and O significantly reduced CNT growth.



Clovis Peppe, Fabiano Molinos de Andrade, Jaqueline Pinto Vargas, Melina de Azevedo Mello, **Railander Alves Barcellos**, **Robert A. Burrow**, Rubia Mara Sigueira da Silva

J. Organomet. Chem. 694 (2009) 2228

Dihalogen-halogenomethyl complexes of indium(III) X_2InCH_2X (X = Br,I): Simultaneous coordination of soft and hard ligands

The reaction of halogenomethyl-dihalogen-indium(III) compounds X₂InCH₂X (X = Br, I) with dialkylsulfides, R2S opened the facile access to dialkylsulfonium methylide complexes of InX₃ of general structure $X_3(L)InCH_2SR_2$ (L = (CH₃)₂SO, $(C_6H_5)_3PO).$



L= Me₂SO, Ph₃PO



Jesús J. Fernández, Alberto Fernández, Margarita López-Torres, Digna Vázquez-García, Antonio Rodríguez, Alexis Varela, José M. Vila

J. Organomet. Chem. 694 (2009) 2234

Cyclometallated complexes derived from pyrimidin- and pyridazinehydrazones: Structural evidence of intermolecular "chelate metal ring" π - π interactions

Pyrimidin- and pyridazinehydrazone palladacycles show π - π interactions, in the solid state, between the metallacycle ring and the heterocyclic pyridazine or pyrimidine ring, with a slipped stacking arrangement.

Eric Bonnefille, Stéphane Mazières, Nathalie Saffon, Claude Couret

J. Organomet. Chem. 694 (2009) 2246

Reactivity of a germa-alkyne: Evidence for a germanone intermediate in the hydrolysis and alcoholysis processes The formation of a new transient germaalkyne Ar-Ge \equiv C-SiMe₃ [Ar = 2,4-di-*tert*butyl-6-(diisopropylaminomethyl)phenyl] is achieved by photolysis of the corresponding trimethylsilyldiazomethylgermylene ArGeC(N₂)SiMe₃. Hydrolysis and alcoholysis reactions of the germa-alkyne are studied and a general mechanism is proposed, involving the transient formation of a germanone.

Ar-Ge \equiv C-SiMe₃



J. Kataria, P. Mayer, S.K. Vasisht, P. Venugopalan

J. Organomet. Chem. 694 (2009) 2252

Silyl stabilized azanes: Reactions of monoand dilithium bis(trimethylsilyl)hydrazide with dichloro- and tetrachlorostannane Reaction of monolithiumbis(trimethylsilyl)hydrazide with dichlorostannane gives a substitution product, 1,4-bis(trimethylsilyl)-1,2,4,5-tetraza-3,6-distannacyclohexane. Whereas, the reaction of dilithium bis(trimethylsilyl)hydrazide with SnCl₂ gives a pale yellow product, [(Me₃Si)N–Sn]₄, the first inorganic cuboid entirely build up of tin and nitrogen atoms synthesized from hydrazide moiety.



Meihua Xie, Jialiang Wang, Wei Zhang, Shaowu Wang

J. Organomet. Chem. 694 (2009) 2258

Regio- and stereospecific synthesis of vinyl halides via carbozincation of acetylenic sulfones followed by halogenation Polysubstituted vinyl halides can be constructed regio- and stereospecifically by treatment of acetylenic sulfones with organozinc reagents in tetrahydrofuran followed by halogenation.



Xiu-Li Wang, Yong-Qiang Chen, Guo-Cheng Liu, Hong-Yan Lin, Wen-Yan Zheng, Jin-Xia Zhang

J. Organomet. Chem. 694 (2009) 2263

Assembly of novel phenanthroline-based cobalt(II) coordination polymers by selecting dicarboxylate ligands with different spacer length: From 1-D chain to 3-D interpenetrated framework Three novel Co^{II} metal–organic complexes have been hydrothermally prepared by the employment of three dicarboxylate ligands with different spacer length. Complexes 1– 3 exhibit three different structures: infinite 1-D chains in 1; 3-D PtS topology in 2 and 5-fold interpenetrated diamondoid topology in 3. The thermal stabilities of complexes 1–3 and fluorescent properties of complexes 2 and 3 have been investigated.



Masaki Kakeya, Makoto Tanabe, Yoshiyuki Nakamura, Kohtaro Osakada

J. Organomet. Chem. 694 (2009) 2270

Dialkyl- and diaryl-platinum(II) complexes with secondary phosphines: Preparation, structure and thermal reaction giving the metallopolymer $[PtR_2(cod)] (R = Me, Ph, C_6H_4-p-CF_3, C_6F_5), react with PHR'_2 (R' =$ *i*-Bu,*t*-Bu, Ph), to afford*cis* $-[PtR_2(PHR'_2)_2] in 81–98% yields. Thermal reaction of$ *cis* $-[PtR_2(PHR'_2)_2] (R = Ph, R' =$ *t* $-Bu, Ph) produces multinuclear complexes [Pt(PR'_2)_2]_n.$



Mitchell A. Pet, Matthew F. Cain, Russell P. Hughes, David S. Glueck, James A. Golen, Arnold L. Rheingold

J. Organomet. Chem. 694 (2009) 2279

Synthesis and structure of ferrocenylmethylphosphines, their borane adducts, and some related derivatives

Formation of borane adducts of the ferrocenylmethylphosphines $FcCH_2PH_2$, $(FcCH_2)_2$ -PH, and $(FcCH_2)_3P$ resulted in shorter P–C bonds and larger angles at P, consistent with rehybridization at P on quaternization.



Note

Ping Liu, Li Zhou, Xiaogang Li, Ren He

J. Organomet. Chem. 694 (2009) 2290

Bis(imino)pyridine palladium(II) complexes: Synthesis, structure and catalytic activity Bis(imino)pyridine palladium(II) complexes **3–6** were synthesized by two different methods. The complex **4** was used to catalyze the synthesis of fluorinated liquid crystalline compounds via Suzuki crosscoupling reactions.





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