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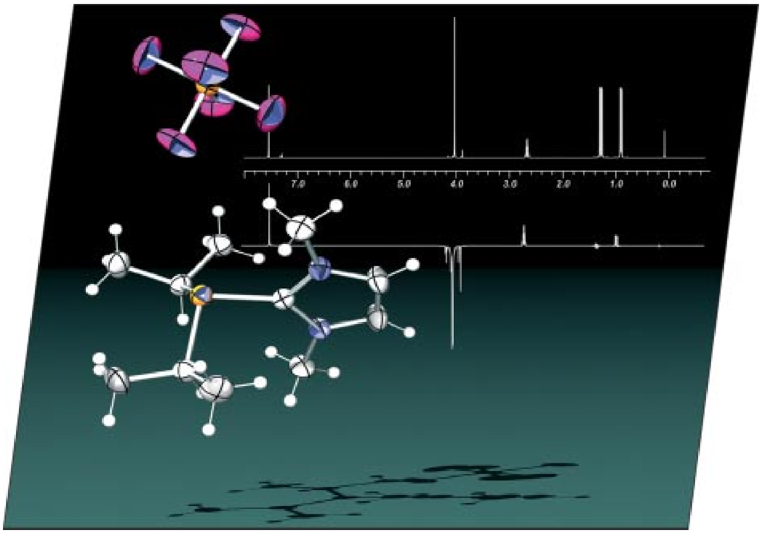
The EUChemSoc Societies have taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry.* Three further EUChemSoc Societies (Austria, Czech Republic and Sweden) are Associates of the two journals.

COVER PICTURE

The cover picture shows one of donor-stabilized phosphenium compounds which have been obtained by direct addition of chlorophosphanes to the 1,3-dimethylimidazolium-2-carboxylate without any further purification step. Their stronger π-acceptor character similar to phosphites and their ionic nature render these ligands very promising in the development of new continuous-flow catalytic processes. Details of phosphorylation mechanisms of imidazolium-2-carboxylate as well as the electronic and steric properties of these adducts are discussed in the article by J. Andrieu et al. on p. 4877 ff.



SHORT COMMUNICATION

Heterogeneous Asymmetric Catalysts

S.-H. Cho, T. Gadzikwa, M. Afshari, S. T. Nguyen,* J. T. Hupp* 4863–4867

[Bis(catechol)salen]Mn^{III} Coordination Polymers as Support-Free Heterogeneous Asymmetric Catalysts for Epoxidation

Keywords: Asymmetric catalysis / Heterogeneous catalysis / Manganese / Salen ligands / Coordination polymers

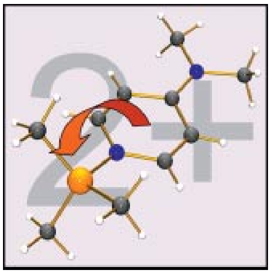
Amorphous coordination polymers, formed by the linkage of [bis(catechol)salen]Mn^{III} units, function as recyclable heterogeneous asymmetric epoxidation catalysts.

Phosphorus Cations

J. J. Weigand,* N. Burford,* A. Decken, A. Schulz 4868–4872

Preparation and Characterization of a Ligand-Stabilized Trimethylphosphane Dication

Keywords: Phosphane dication / Donor–acceptor complexes



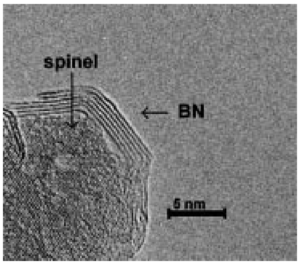
Chlorotrimethylphosphonium triflate reacts with 4-(dimethylamino)pyridine (DMAP) in the presence of trimethylsilyltriflate to give the DMAP-stabilized trimethylphosphane dication as a ditriflate salt. The new salt is also formed from DMAP-dimethylphosphenium triflate by reaction with methyltriflate. Ligand exchange of DMAP for PMe$_3$ yields the hexamethyldiphosphonium dication.

Turbostratic Boron Nitride

S. K. Klitgaard, K. Egeblad, M. Brorson, K. Herbst, C. H. Christensen* 4873–4876

Turbostratic Boron Nitride Coated on High-Surface Area Metal Oxide Templates

Keywords: Boron nitride / Turbostratic / Metal oxide templates / Catalyst support material / Nanostructure



Boron nitride coatings on high-surface area MgAl$_2$O$_4$ and Al$_2$O$_3$ have been synthesized and characterized by TEM and by X-ray powder diffraction. The metal oxide templates were coated with BN using a simple nitridation in a flow of ammonia starting from ammonium borate adsorbed onto MgAl$_2$O$_4$ or γ-Al$_2$O$_3$. This procedure resulted in the formation of a turbostratic boron nitride film with a thickness of a few individual BN layers.

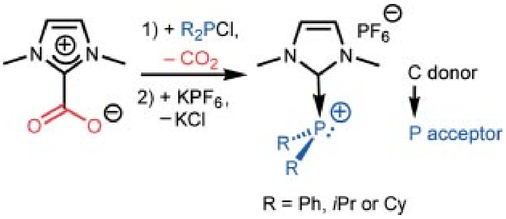
FULL PAPERS

Donor–Acceptor Systems

M. Azouri, J. Andrieu* M. Picquet, P. Richard, B. Hanquet, I. Tkatchenko 4877–4883

Straightforward Synthesis of Donor-Stabilised Phosphenium Adducts from Imidazolium-2-carboxylate and Their Electronic Properties

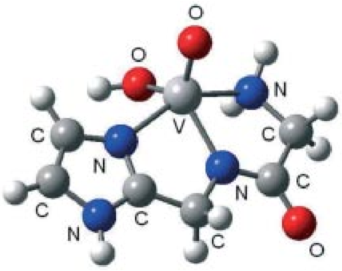
Keywords: Carboxylates / Phosphanes / Electronic properties / Synthesis / Coordination modes



A very convenient method for the generation of donor-stabilised phosphenium compounds from imidazolium-2-carboxylate and chlorophosphanes is presented; the ligands show phosphite-like π-acceptor character.

Vanadium Coordination Chemistry

Simple bis(imidazol-2-yl) derivatives form mono- and bis-chelate complexes under acidic and neutral conditions with the $V^{IV}O$ ion. The bis-chelates show *cis-trans* isomerism. With bis(imidazol-2-yl) amino acid derivatives the complexation process takes place also in the basic pH range with the deprotonation and coordination of the amide nitrogen to give $VOLH_{-1}$ and $VOLH_{-2}$.



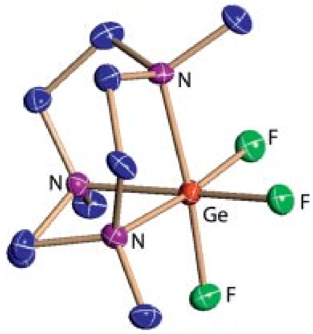
K. Várnagy, T. Csorba, D. Kiss, E. Garribba,* G. Micera,* D. Sanna **4884–4896**

$V^{IV}O$ Complexes of Bis(imidazol-2-yl) Derivatives: A Potentiometric, Spectroscopic and DFT Study

Keywords: Vanadium / Bioinorganic chemistry / pH potentiometry / EPR spectroscopy / Density functional calculations

Germanium Chemistry

Detailed structural and spectroscopic studies have been carried out on a series of GeF_4 complexes of N-donor ligands, and their properties compared with analogues containing GeX_4 (X = Cl or Br).



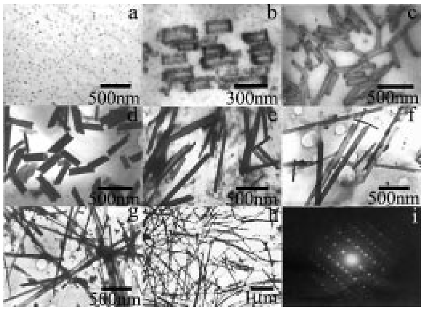
F. Cheng, M. F. Davis, A. L. Hector, W. Levason,* G. Reid, M. Webster, W. Zhang **4897–4905**

Synthesis, Spectroscopic and Structural Systematics of Complexes of Germanium(IV) Halides (GeX_4, X = F, Cl, Br or I) with Mono-, Bi- and Tri-Dentate and Macrocyclic Nitrogen Donor Ligands

Keywords: Germanium / Nitrogen ligands / Fluorido complexes

Nanotechnology

Integrative synthesis of nanoparticles, -tubes, -rods, and -wires in the same reverse micelle system is successfully achieved. The growth process is studied in detail. The stepwise assembly-growth mechanism is significant in guiding the synthesis of one-dimensional nanomaterials in micelle systems.



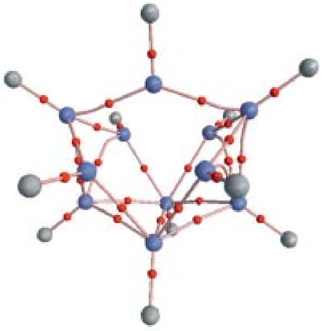
Y. Chen, Q.-S. Wu,* Y.-P. Ding **4906–4910**

Stepwise Assembly of Nanoparticles, -tubes, -rods, and -wires in Reverse Micelle Systems

Keywords: Stepwise-assembly synthesis / Nanomaterials / $CaSO_4 \cdot 2H_2O$ / Reverse micelles

"Disobedient Skeleton" of $[B_{11}H_{11}]^{2-}$

The molecular graph of the $[B_{11}H_{11}]^{2-}$ dianion obtained as a result of AIM analysis of the electron-density distribution demonstrates the absence of some edge-localized B–B bond paths, leading to the formation of two effectively six-membered "open faces" in the cluster.



E. G. Kononova, L. A. Leites,* S. S. Bukalov, I. V. Pisareva, I. T. Chizhevsky, J. D. Kennedy, J. Bould **4911–4918**

Vibrational Spectrum and Electronic Structure of the $[B_{11}H_{11}]^{2-}$ Dianion

Keywords: Boron / Cage compounds / Vibrational spectra / Electronic structure / Fluxionality

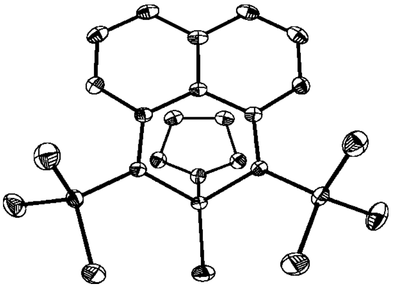
CONTENTS

Ligand-Supported Al Compounds

Z. Yang, X. Ma, H. W. Roesky,* Y. Yang, V. M. Jiménez-Pérez, J. Magull, A. Ringe, P. G. Jones .... **4919−4922**

Syntheses, Characterizations, and X-ray Single-Crystal Structures of 1,8-Bis(trimethylsilylamino)naphthalene Aluminum Hydride and the Methyl Derivative

Keywords: Aluminum / Arene ligands / Structure elucidation



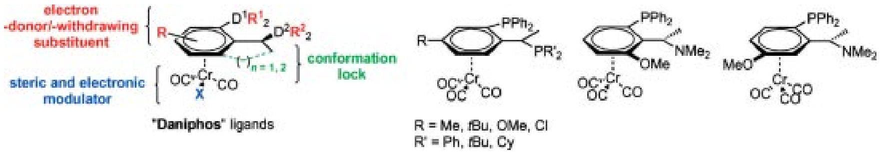
The reaction of 1,8-bis(trimethylsilylamino)naphthalene with $H_3Al{\cdot}NMe_3$ results in the formation of $[1,8\text{-}(Me_3SiN)_2C_{10}H_6]AlH(NMe_3)$ (**3**). The compound $[1,8\text{-}(Me_3SiN)_2C_{10}H_6](Li)_2(thf)_3$ reacts with $MeAlCl_2$ to yield $[1,8\text{-}(Me_3SiN)_2C_{10}H_6]Al(Me)thf$ (**4**). Compounds **3** and **4** are the first mononuclear aluminum compounds to contain the 1,8-diaminonaphthalene ligand.

[(η^6-arene)Cr(CO)$_3$]-Based Ligands

E. Alberico,* W. Braun, B. Calmuschi-Cula, U. Englert, A. Salzer,* D. Totev .... **4923−4945**

Expanding the Range of "Daniphos"-Type P∩P- and P∩N-Ligands: Synthesis and Structural Characterisation of New [(η^6-arene)Cr(CO)$_3$] Complexes

Keywords: N,P ligands / Phosphane ligands / Asymmetric catalysis / Arene complexes / Chromium



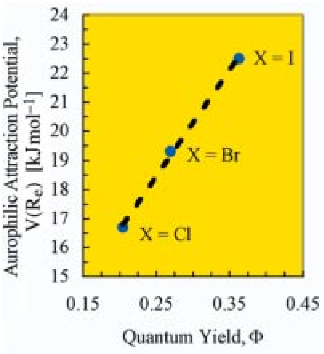
New P∩P- and P∩N-ligands have been synthesised whose core structure is an [(η^6-arene)Cr(CO)$_3$] unit. These new ligands, which expand the range of "Daniphos" ligands, are endowed with central and planar chirality and have been prepared by a stereoselective synthetic strategy from optically pure benzylamines bearing a second substituent on the arene other than the benzyldimethylamino group.

Gold Photochemistry

J. B. Foley,* S. E. Gay, M. J. Vela, B. M. Foxman, A. E. Bruce, M. R. M. Bruce* .... **4946−4951**

Structure and Photochemical Isomerization of the Dinuclear Gold(I) Halide Bis(diphenylphosphanyl)ethylene Complexes: Correlation Between Quantum Yield and Aurophilicity

Keywords: Aurophilicity / Metal−metal interactions / Gold / Photochemistry / Olefin isomerization / Quantum yield



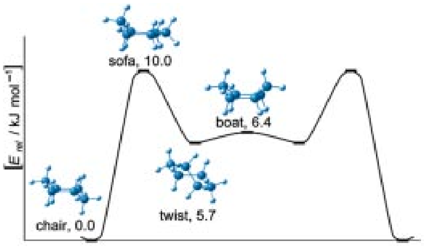
The quantum yields for the photochemical isomerization of *cis*-$(Ph_2PCH{=}CHPPh_2)(AuX)_2$, $\Phi_{(cis\rightarrow trans)}$, were measured (for X = Cl, Br, and I, respectively) and found to correlate with the aurophilic attraction potential $V(R_e)$. The crystal structures for *cis*-$(Ph_2PCH{=}CHPPh_2)(AuI)_2$ and *trans*-$(Ph_2PCH{=}CHPPh_2)(AuI)_2$ are also reported.

Conformations of Cyclohexagermanes

M. Hölbling, M. Flock, J. Baumgartner, K. Hassler* .... **4952−4957**

Ge_6Me_{12} and Ge_6H_{12} Cyclohexagermanes: Conformer Equilibria Studied by Raman Spectroscopy and Quantum Chemical Calculations

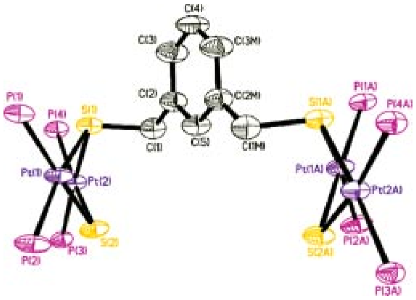
Keywords: Cyclohexagermanes / Conformational analysis / Raman spectroscopy / X-ray structure / Ab initio calculations



The conformational equilibria of cyclohexagermanes have been investigated with ab initio calculations. Two stable conformers were located on the potential energy surface for Ge_6H_{12}, whereas three were located for Ge_6Me_{12}. With the aid of Raman spectroscopy, two conformers were detected for Ge_6Me_{12}, a chair and an averaged twist/boat conformer, with an enthalpy difference of 2.4 kJ mol^{-1} between them.

Platinum Sulfide Aggregates

Dibromo-organic compounds with an extended skeleton can function as an overhead bridge across the sulfide centers in $[Pt_2(\mu\text{-}S)_2(PPh_3)_4]$. If it is stereochemically too restrictive to serve as an intramolecular bridge within the Pt_2 core, it could be switched to the intermolecular mode and interlink two Pt_2 cores, giving an open Pt_4 aggregate of $Pt_2\cdots(spacer)\cdots Pt_2$, $[(PPh_3)_4Pt_2(\mu\text{-}S)(\mu\text{-}SRS)(\mu\text{-}S)Pt_2(PPh_3)_4](PF_6)_2$.



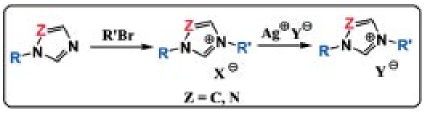
S. H. Chong, W. Henderson, T. S. A. Hor* 4958–4964

Open Platinum Aggregate Frameworks with Overhead Dithiolate Bridges

Keywords: Platinum / Sulfide / Aggregate / Alkylation / Dithiolate

Energetic Ionic Liquids

Comparison is made of heats of formation and densities of dicyanamide and dinitramide salts.



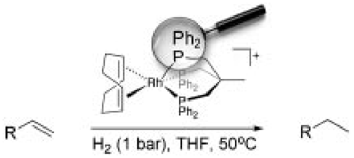
Y. Gao, H. Gao, C. Piekarski, J. M. Shreeve* 4965–4972

Azolium Salts Functionalized with Cyanomethyl, Vinyl, or Propargyl Substituents and Dicyanamide, Dinitramide, Perchlorate and Nitrate Anions

Keywords: Energetic salts / Density / Heat of formation / Thermal stability

Rhodium Phosphane Complexes

The influence of phosphane "arm-on, arm-off" association/dissociation in rhodium catalysed alkene hydrogenation using $[Rh(COD)(\kappa^3\text{-triphos})]PF_6$ has been investigated, including comparison of catalytic activity of this complex to the related diphosphane complex, $[Rh(COD)(\kappa^2\text{-dppp})]PF_6$, with added triphenylphosphane.



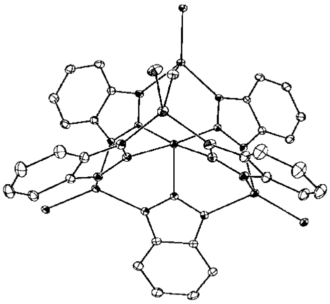
A. B. Chaplin, P. J. Dyson* ... 4973–4979

On the Influence of "Arm-on, Arm-off" Processes on Alkene Hydrogenation Catalysed by a Rhodium Triphos Complex

Keywords: Rhodium / Homogeneous catalysis / Hydrogenation / Tripodal ligands / Phosphane ligands

Benzotriazole Surface Coordination

The surface coordination chemistry of benzotriazole on a Cu electrode was investigated by electrochemical synthesis combined with in situ electrochemical surface-enhanced Raman spectroscopy in nonaqueous solution. Two different surface complexes were prepared in the solution with or without triphenylphosphane. The surface coordination mechanism was proposed.



Y.-X. Yuan, P.-J. Wei, W. Qin, Y. Zhang, J.-L. Yao,* R.-A. Gu 4980–4987

Combined Studies on the Surface Coordination Chemistry of Benzotriazole at the Copper Electrode by Direct Electrochemical Synthesis and Surface-Enhanced Raman Spectroscopy

Keywords: Benzotriazoles / Copper / Surface coordination / Electrochemistry / Raman spectroscopy

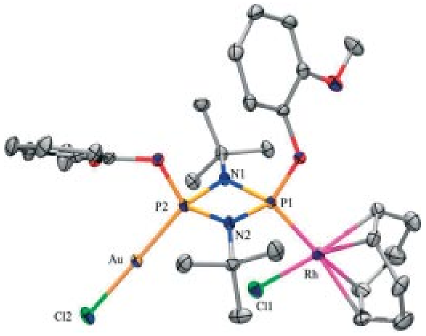
CONTENTS

Heterometallic Complexes

P. Chandrasekaran, J. T. Mague,
R. Venkateswaran,
M. S. Balakrishna* 4988–4997

Cyclodiphosphazane *cis*-{(*o*-MeOC$_6$H$_4$O)-P(μ-N*t*Bu)}$_2$ as a Bridging Bidentate Ligand: Synthesis, Structures of Heterometallic Complexes, and Halogen Exchange Between Rh–Cl and Cu–X (X = Br, I)

Keywords: Heterometallic complexes / Cyclodiphosphazanes / P,N ligands / Halogen exchange / Rhodium



The heterometallic complexes of cyclodiphosphazanes *cis*-{(*o*-MeOC$_6$H$_4$O)P(μ-N*t*Bu)}$_2$ containing Rh^{I}/Au^{I}, Rh^{I}/2Au^{I}, 2Rh^{I}/2Cu^{I}, and Rh^{I}/Pd^{II} metal centers have been synthesized. The selective mono- and bidentate coordination modes of cyclodiphosphazane with respect to diverse metal precursors gives a facile synthetic approach for the preparation of heterometallic complexes. Halogen exchange reactions were observed between Rh–Cl and CuX (X = Br, I) during the preparation of Rh^{I}/Cu^{I} heteronuclear complexes.