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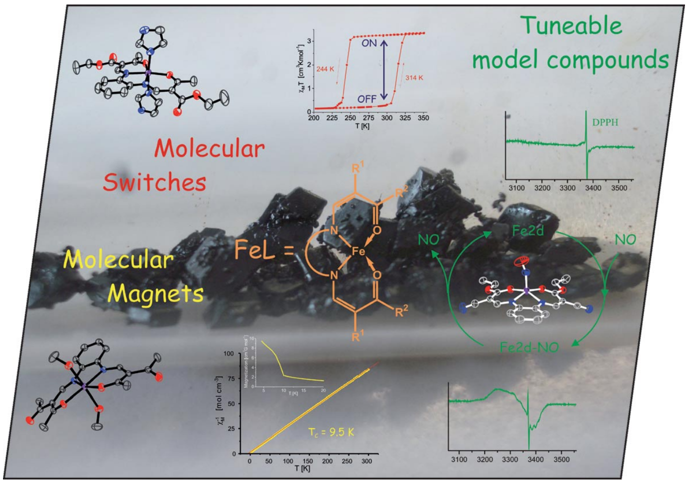
A union formed by chemical societies in Europe (ChemPubSoc Europe) has taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry*. Three further members of ChemPubSoc Europe (Austria, Czech Republic and Sweden) are Associates of the two journals.

COVER PICTURE

The cover picture shows the general formula of the iron complexes presented in the Microreview by B. Weber and E.-G. Jäger on p. 465ff with single crystals of one of the complexes in the background. The application of this system ranges over model compounds for biological systems to molecular magnets or molecular switches. The examples show the reversible binding of the biomolecule nitric oxide, a spin-crossover complex with a 70 K wide thermal hysteresis loop around room temperature and an example for spontaneous magnetic ordering below 10 K.



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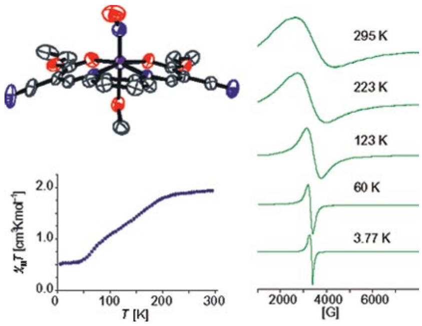
MICROREVIEW

Iron Complexes with N,O Ligands

B. Weber,* E.-G. Jäger **465–477**

Structure and Magnetic Properties of Iron(II/III) Complexes with $N_2O_2^{2-}$ Coordinating Schiff Base Like Ligands

Keywords: Iron / N,O ligands / Structure elucidation / Magnetic properties



In this review iron(II/III) complexes of Schiff base like N_2O_2 coordinating ligands investigated in the research group of the late Prof. Jäger are presented. The properties of the different complexes are discussed with regard to their relevance as model compounds for biological systems or as molecular magnets. The pictured nitrosyl-iron complex can be considered under both aspects.

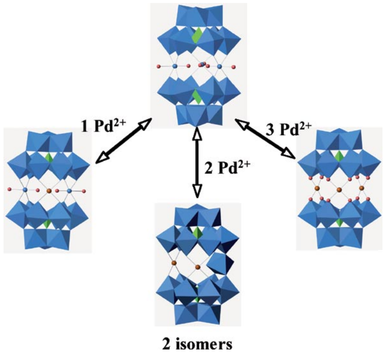
FULL PAPERS

Palladium Polyoxometalates

R. Villanneau,* S. Renaudineau, P. Herson, K. Boubekeur, R. Thouvenot, A. Proust **479–488**

Palladium(II) Phosphotungstate Derivatives: Synthesis and Characterization of the $[Pd_x\{WO(H_2O)\}_{3-x}\{A,\alpha\text{-}PW_9O_{34}\}_2]^{(6+2x)-}$ Anions

Keywords: Polyoxometalates / Palladium / Tungsten / Noble cations / Multinuclear NMR spectroscopy



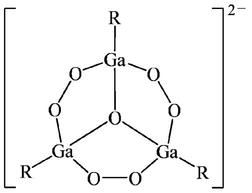
A series of Pd^{II} derivatives of the $[P_2W_{21}O_{71}(H_2O)_3]^{6-}$ heteropolytungstate with the general formula $[Pd_x\{WO(H_2O)\}_{3-x}\{A,\alpha\text{-}PW_9O_{34}\}_2]^{(6+2x)-}$ ($x = 1-3$) have been obtained by the reaction between palladium nitrate and $[P_2W_{20}O_{70}(H_2O)_2]^{10-}$, $[P_2W_{19}O_{69}(H_2O)_2]^{14-}$ and $[PW_9O_{34}]^{9-}$, respectively. The crystallographic structure of $K_{10}[Pd_2\{WO(H_2O)\}\{A,\alpha\text{-}PW_9O_{34}\}_2]\cdot 30H_2O$ has been reported.

Alkylgallium Peroxide

W. Uhl,* M. R. Halvagar, F. Rogel, W. Massa **489–492**

Persistent Alkylgallium Peroxides – Synthesis of the Cage Compound $Na_4[(Ga\text{-}R)_3(O_2)_3(O)]_2(Et_2O)(DABCO)$ [R = $CH(SiMe_3)_2$]

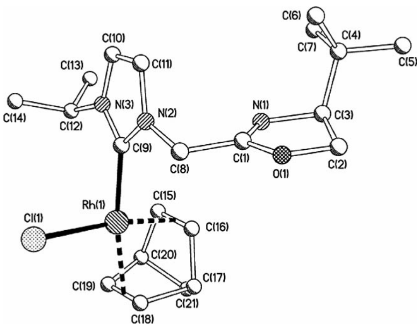
Keywords: Gallium / Peroxides / Cage compounds



The title compound has oxidizing peroxo groups in close proximity to reducing Ga–C bonds. Influenced by the sodium counterions it shows a remarkable stability even in solution at room temperature.

Hydrosilylation Catalysis

Bidentate oxazoline-NHC ligands have been tested in the Rh-catalyzed asymmetric hydrosilylation of acetophenone.



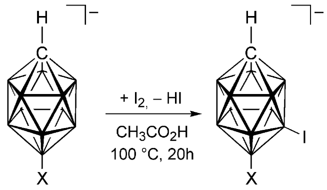
N. Schneider, M. Kruck, S. Bellemin-Laponnaz,* H. Wadepohl, L. H. Gade* 493–500

Chiral Oxazoline-NHC Ligands with and without CR_2 Bridges: A Comparative Study in Rhodium Hydrosilylation Catalysis

Keywords: Homogeneous catalysis / Hydrosilylation / Rhodium / Carbene ligands / N-Heterocyclic carbenes / Oxazolines

Carba-*closo*-dodecaborates

Iodinated carba-*closo*-dodecaborate anions are valuable starting materials for the synthesis of functionalized {*closo*-CB_{11}} clusters. Monoiodination of [*closo*-$CB_{11}H_{12}$]$^-$ occurs at the antipodal boron atom. Single, regioselective iodination at the 7 position is achieved by blocking the antipodal boron atom with the substituents: F, Cl, Br, or OH.



(X = F (**1**), Cl (**2**), Br (**3**), OH (**4**))

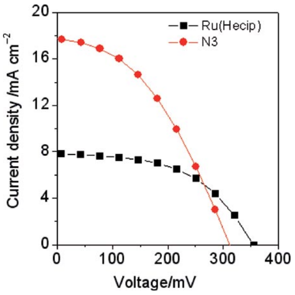
M. Finze* 501–507

Regioselective Monoiodination of Carba-*closo*-dodecaborates: M[7-I-12-X-*closo*-$CB_{11}H_{10}$] (M = Cs^+, $[Et_4N]^+$; X = F, Cl, Br, OH)

Keywords: Boron / Borates / Carba-*closo*-dodecarborates / Iodination / Density functional calculations

Difunctional Ruthenium Complex

A carbazole-containing Ru^{II} complex acts as off-on-off/on-off-on-off-type emission switches, when excited at 530 nm/470 nm, with a protonation/deprotonation reaction taking place near the physiological pH range. It also functions as an efficient sensitizer for solar cells with an open-circuit photovoltage of 356 mV, a short-circuit photocurrent of 7.8 mA cm^{-2}, and an IPCE value of 63%.



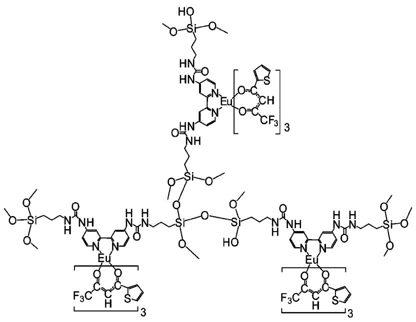
S.-H. Fan, K.-Z. Wang,* W.-C. Yang 508–518

A Carbazole-Containing Difunctional Ru^{II} Complex That Functions as a pH-Induced Emission Switch and an Efficient Sensitizer for Solar Cells

Keywords: Ruthenium / Phenanthroline / Carbazole / Protonation / Emission switch / Solar cells / Sensitizers / Mesoporous materials

Siloxane Hybrid Materials

Organic–inorganic hybrid materials with high loading of lanthanide 2,2-bipyridine moieties were obtained. The high concentration of lanthanide complexes grafted to the hybrid silica was anticipated because the silylated bipyridine was used as the only siloxane network precursor.



H. Li,* N. Lin, Y. Wang, Y. Feng, Q. Gan, H. Zhang,* Q. Dong, Y. Chen 519–523

Construction and Photoluminescence of Monophase Hybrid Materials Derived from a Urea-Based Bis-Silylated Bipyridine

Keywords: Luminescence / Lanthanides / Hybrid material / Materials science / Energy conversion / Silylated bipyridine

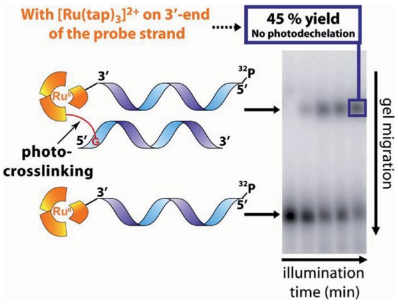
CONTENTS

DNA Photodamage

S. Deroo, S. Le Gac, S. Ghosh, M. Villien, P. Gerbaux, E. Defrancq, C. Moucheron, P. Dumy, A. Kirsch-De Mesmaeker* 524–532

Oligonucleotide Duplexes with Tethered Photoreactive Ruthenium(II) Complexes: Influence of the Ligands and Their Linker on the Photoinduced Electron Transfer and Crosslinking Processes of the Two Strands

Keywords: Conjugation / DNA damage / Oligonucleotides / Ruthenium / Electron transfer



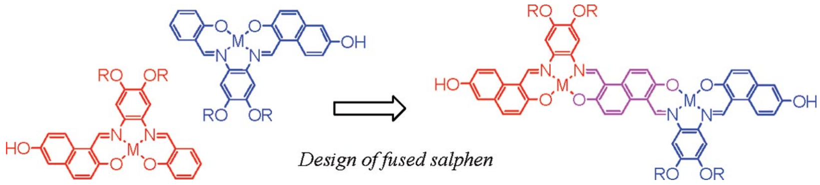
Ru^{II}-labelled oligonucleotides (ODNs) were studied for developing new DNA sequence-specific damaging agents. The best candidate is an ODN derivatized in the 3′-position by a $[Ru(tap)_3]^{2+}$ complex. In this case, as a result of a stronger interaction with the duplex, the loss of a tap ligand under illumination is inhibited and only efficient photocrosslinking occurs.

Conjugated salphen Ligands

H. Houjou,* T. Motoyama, K. Araki 533–538

Electronic Spectra of Mono- and Dinuclear Complexes of Fully π-Conjugated salphen Ligands Synthesized by Using 2,6-Dihydroxynaphthalene Carbaldehydes

Keywords: N,O ligands / Through-bond interactions / Transition metals / Conjugation / Molecular electronics



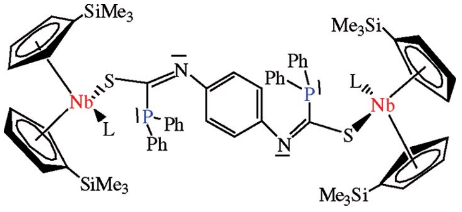
The 2,6-dihydroxynaphthalene moiety was used to synthesize novel dinuclear 3d transition-metal complexes, in which two salphen units were fused into a unique π-conjugated system. The electronic spectra of the dinuclear complexes showed quite intense peak(s) and an extremely redshifted absorption edge relative to those of the corresponding mononuclear complexes.

Insertion Reactions

A. Antiñolo,* S. García-Yuste, A. Otero,* R. Reguillo-Carmona 539–544

Insertion Reactions of Isothiocyanates into the Nb–P Bond of Phosphide–Niobocene Complexes

Keywords: Insertion / Niobium / Phosphorus / Isothiocyanates / Phosphanes



L = CO , CNXylyl , CNCy

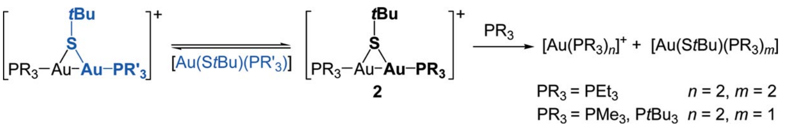
The phosphanylthioformamide-containing niobocene $[\{Nb(\eta^5\text{-}C_5H_4SiMe_3)_2(L)\}_2\{\mu\text{-}(\kappa^1\text{-}S\text{-}1,4\text{-}SC\{PPh_2\}\{=N\})_2(C_6H_4)\}]$ (L = CO, CNXylyl, CNCy) have been prepared and represent the first examples in which the ligand has been synthesized by an insertion reaction between an isothiocyanate and a phosphidoniobocene derivative.

Cleavage of Au–Au and Au–S Bonds

P. Diversi,* A. Cuzzola, F. Ghiotto 545–553

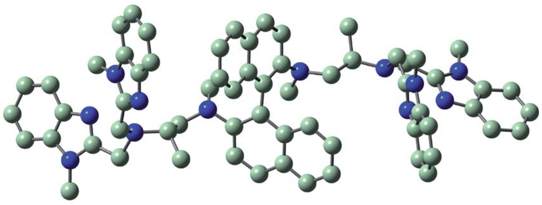
Chemistry of Polynuclear Cationic Gold(I) Thiolates of Formula $[Au_2(StBu)(L_2)][BF_4]$

Keywords: Gold / Thiolates / Aurophilicity / Phosphanes / Mass spectrometry (ESI)



The cationic (phosphane)gold(I) thiolates of formula $[Au_2(StBu)(PR_3)_2][BF_4]$ (**2**) react with free phosphane to give $[Au(PR_3)_n][BF_4]$ and $[Au(StBu)(PR_3)_m]$. Compounds **2** undergo exchange of the $[Au(StBu)(PR_3)]$ moiety in the presence of $[Au(StBu)(PR'_3)]$.

Chiral Copper Complexes



(*R*)-(+)-DABN-L-Ala-Bz_4

The spectroscopic, EPR and ligand-binding properties of dinuclear and trinuclear copper(II) complexes with the chiral ligand (*R*)-(+)-DABN-L-Ala-Bz_4 were characterized by several spectroscopic techniques. The complexes were tested as catalysts in the oxidation of biogenic catechols and flavonoids by dioxygen, and the trinuclear complex showed enantiodifferentiating capacity.

Keywords: Copper / Ligand effects / EPR spectroscopy / Oxidation / Enzyme models

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* Author to whom correspondence should be addressed.

Supporting information on the WWW (see article for access details).