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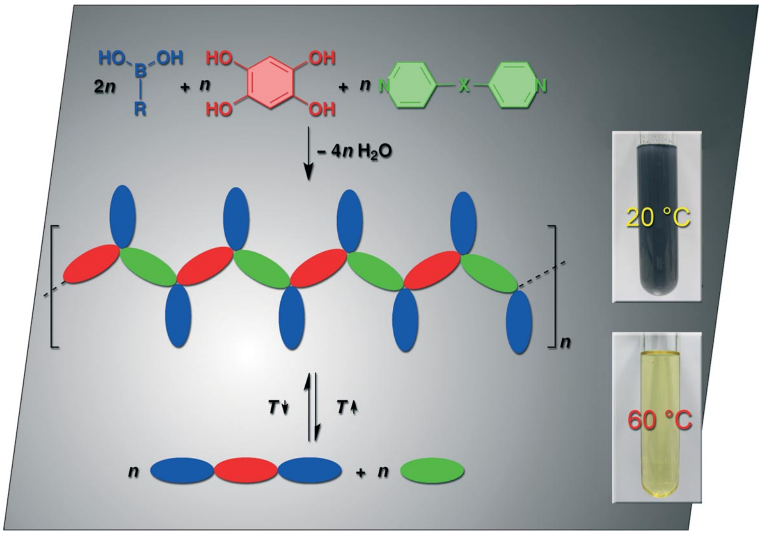
The EUChemSoc Societies have taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry.* Three further EUChemSoc Societies (Austria, Czech Republic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

COVER PICTURE

The cover picture shows the formation of deeply colored boronate ester polymers by three-component reactions of boronic acids with 1,2,4,5-tetrahydroxybenzene and dipyridyl compounds. The strong color of the polymers is due to efficient intrastrand charge transfer excitations from the tetraoxobenzene to the dipyridyl linker. Upon dissolution of the polymers in hot chloroform, most of the B−N connections are broken, which indicates that polymer formation is a reversible process. More details on these reactions are described in the article by K. Severin et al. on page 5177ff.



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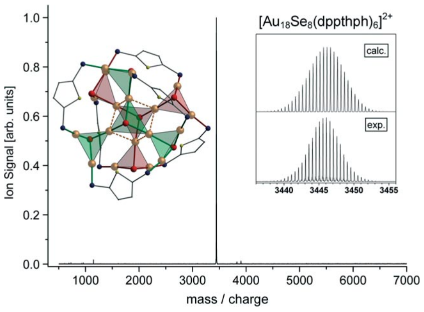
SHORT COMMUNICATIONS

Aurophilic Interactions

P. Sevillano, O. Fuhr, O. Hampe, S. Lebedkin, C. Neiss, R. Ahlrichs, D. Fenske,* M. M. Kappes 5163–5167

Synthesis, Characterization and Quantum Mechanical Calculations of $[Au_{18}Se_8(dppthph)_6]Cl_2$

Keywords: luster complexes / SCS-MP2 calculations / FT-ESI mass spectrometry / Gold / Photoluminescence measurements / Selenium



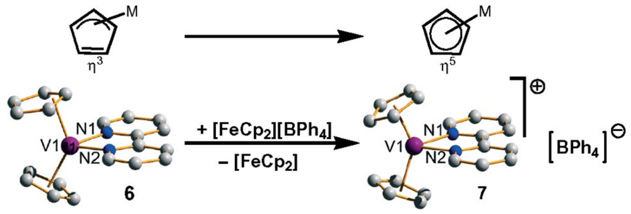
ESI MS demonstrates that in the gas phase the dimeric cation in $[Au_{18}Se_8(dppthph)_6]Cl_2$ is stabilized by six aurophilic Au···Au interactions. SCS-MP2 calculations predict a height of the Coulomb barrier for symmetric dissociation into two $[Au_9Se_2(dppthph)_3]^+$ subunits of 122 kJ/mol. In the solid state the compound crystallizes in two differently colored modifications.

Haptotropic Rearrangement

M. Jordan, W. Saak, D. Haase, R. Beckhaus* 5168–5172

Ring-Slipped (2,2′-Bipyridine)(η^3-cyclopentadienyl)(η^5-cyclopentadienyl)vanadium(II) and Its Oxidation to (2,2′-Bipyridine)bis(η^5-cyclopentadienyl)vanadium(III) Tetraphenylborate

Keywords: Coordination modes / Vanadium / Oxidation / Metallocenes / 2,2′-Bipyridine / Haptotropic rearrangement



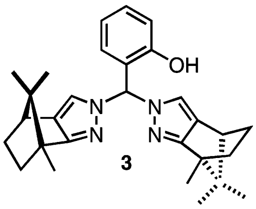
A haptotropic rearrangement of vanadocene(2,2′-bipyridine) derivatives is described. In the case of vanadium(II) an η^3,η^5-metallocene unit is observed, whereas the vanadium(III) complex is characterized by a classical bent η^5,η^5 coordination mode.

Heteroscorpionate Ligands

J. Elflein, F. Platzmann, N. Burzlaff* 5173–5176

One-Pot Synthesis of an Enantiopure N,N,O Scorpionate Ligand Derived from (+)-Camphor

Keywords: Chiral pool / Ligand design / Zinc / Rhenium / Camphor

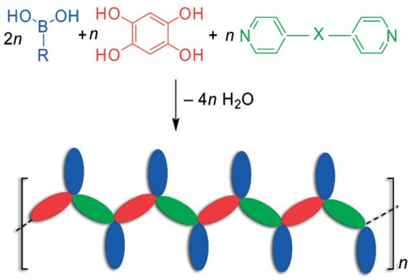


A one-pot synthesis of the new enantiopure heteroscorpionate ligand $HOPhbpm^{3cam}$ (**3**) was described. Ligand **3** was obtained by a pyridine-catalysed Peterson rearrangement, and κ^2- and κ^3-coordination of the ligand is observed. Ligand **3** was shown to form a tetrahedral zinc complex as well as an octahedral rhenium complex.

FULL PAPERS

Multicomponent Self-Assembly

The three-component reaction of aryl boronic acids with 1,2,4,5-tetrahydroxybenzene and 1,2-bis(4-pyridyl)ethylene or 4,4′-bipyridine leads to the formation of boronate ester polymers, which are deeply colored due to efficient intrastrand charge-transfer excitations.



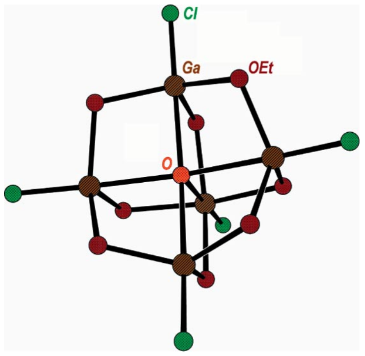
N. Christinat, E. Croisier, R. Scopelliti, M. Cascella, U. Röthlisberger, K. Severin* 5177–5181

Formation of Boronate Ester Polymers with Efficient Intrastrand Charge-Transfer Transitions by Three-Component Reactions

Keywords: Boron / Charge transfer / Polymers / Self-assembly

Oligonuclear Gallium Compounds

Metathesis of solid $GaCl_3$ with NaOEt/EtOH provided oxoalkoxide chloride complexes of gallium. Residues that were redissolved in either toluene/MeCN or toluene/pyridine gave after storage $Ga_5(\mu_5\text{-}O)(\mu\text{-}OEt)_8Cl_5$ (**1**) or $[Ga_{12}(\mu_4\text{-}O)_2(\mu_3\text{-}O)_5(\mu\text{-}OEt)_{10}Cl_{12}Py_4]Py$ (**2**), respectively, both at room temperature and in relatively high yields.



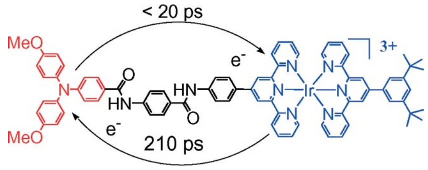
E. V. Suslova, V. G. Kessler,* S. Gohil, N. Y. Turova 5182–5188

Oxoethoxide Chlorides – Representatives of Oligonuclear Alkoxide Complexes of Gallium: Penta- and Dodecanuclear Molecules

Keywords: Gallium oxides / Sol–gel precursors / Oligonuclear complexes / X-ray / Mass spectrometry

Photoinduced Charge Separation

The recombination step of the photoinduced charge-separated state in a dyad **DII-Ir**, where the component units are separated by a bridge composed of two benzamide groups, is slowed by a factor of three with respect to a dyad **D-Ir** characterized by a bridge with a single benzamide group. The use of **DII-Ir** in the elaboration of triads with improved charge-separation properties is discussed.



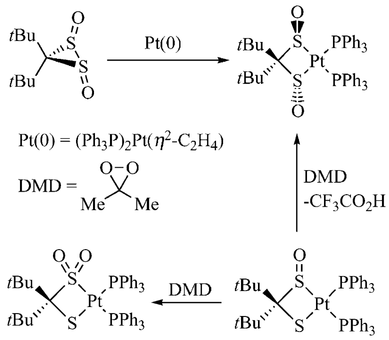
L. Flamigni,* B. Ventura, E. Baranoff, J.-P. Collin,* J.-P. Sauvage* ... 5189–5198

A Triphenylamine/Bis(terpyridine)Ir^{III} Dyad for the Assembly of Charge-Separation Constructs with Improved Performances

Keywords: Charge separation / Electron transfer / Iridium / Photochemistry / Supramolecular chemistry

Oxidation of Metal Thiolates

Oxidation of 3,3-di-*tert*-butyldithiirane 1-oxide with dimethyldioxirane (DMD) gave the title 1,2-dioxide, and its treatment with a Pt^0 complex provided the (disulfenato)Pt^{II} complex. Oxidation of the related sulfenato–thiolato complex with DMD gave the sulfinato–thiolato complex and the same reaction in the presence of CF_3COOH provided the disulfenato complex.



A. Ishii,* M. Ohishi, N. Nakata 5199–5206

Preparation of 3,3-Di-*tert*-butylthiirane *trans*-1,2-Dioxide and Its Reaction with a Platinum(0) Complex To Give a (Disulfenato)platinum(II) Complex: Regioselectivity of the Oxidation of a Related (Sulfenato–thiolato)platinum(II) Complex

Keywords: Platinum / Dithiirane / *vic*-Disulfoxide / Oxidative addition / Oxidation

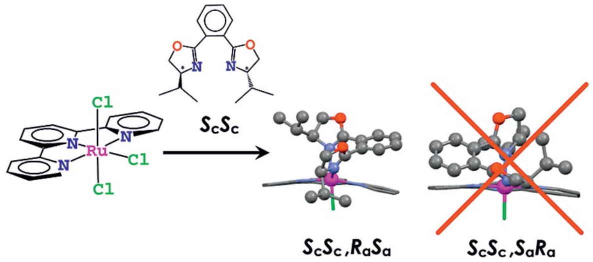
CONTENTS

Chiral Epoxidation Catalysts

X. Sala, N. Santana, I. Serrano, E. Plantalech, I. Romero, M. Rodríguez,* A. Llobet,* S. Jansat, M. Gómez, X. Fontrodona .... **5207−5214**

The Spectroscopic, Electrochemical and Structural Characterization of a Family of Ru Complexes Containing the C_2-Symmetric Didentate Chiral 1,3-Oxazoline Ligand and Their Catalytic Activity

Keywords: Ruthenium / N ligands / Epoxidation / Chiral ligands / Atropisomerism



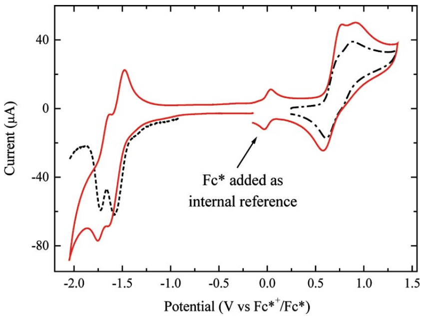
The complete characterization of a family of chiral complexes containing terpy and oxazoline ligands, where a single atropisomer is obtained as a function of the chiral ligand configuration, is presented, together with a preliminary study of their catalytic activity in olefin epoxidation.

Communication between Co Redox Centers

A. Arnanz, C. Moreno,* M.-L. Marcos, J. González-Velasco, S. Delgado .... **5215−5225**

Synthesis, Characterization, Structures and Comparative Electrochemical Study of 2,4-Bis(trimethylsilylethynyl)thiophene Coordinated Carbonylcobalt Units

Keywords: Thiophene / Carbonylcobalt complexes / Electrochemistry



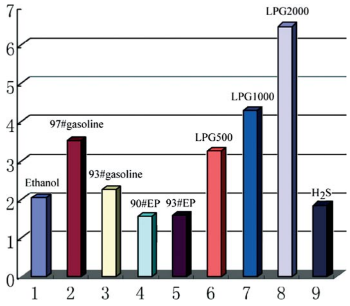
$Co_2(CO)_6$ and $Co_2(CO)_4(dppm)$ derivatives of 2,4-bis(trimethylsilylethynyl)thiophene have been synthesized and characterized. A comparative electrochemical study of these complexes and those derived from 2,5-bis(trimethylsilylethynyl)thiophene has been made.

Gas-Sensing Materials

L. Mi, H. Hou,* J. Xu, H. Xu, Z. Song, M. Tang, Y. Fan .... **5226−5233**

Inclusion Complexes for Use in Room-Temperature Gas-Sensor Design

Keywords: Inclusion compounds / Semiconductors / Sensors / Density functional calculations / Bridging ligands



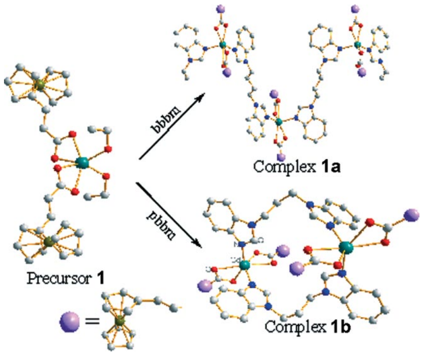
The four inclusion complexes synthesized herein show that conjugated inclusion complexes with an odd number of electrons should be useful for highly selective room-temperature gas-sensor design.

Precursor Complexes

X. Wang, L. Li, H. Hou,* J. Wu, Y. Fan .... **5234−5245**

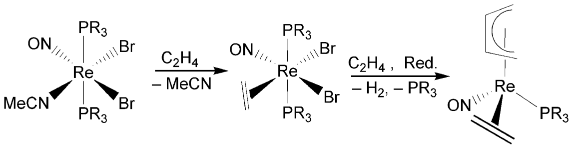
Substitution, Addition, and Recombination Reactions of Precursor Complexes with Ferrocenyl Carboxylate Units

Keywords: Crystal engineering / Bridging ligands / Substituent effects / Precursors



The structural integrity of the precursor complexes was maintained in the substitution or addition reactions of these complexes with ligands at room temperature, but a recombination reaction occurred under harsher refluxing conditions and four "recombinant" complexes were gained.

Rhenium Olefin Complexes



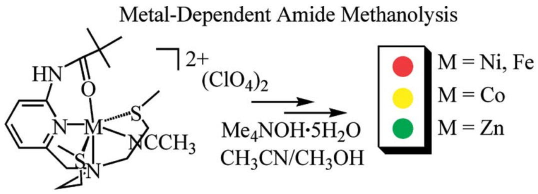
Various phosphane and nitrosyl-substituted pseudo-octahedral or pentacoordinate ethylene complexes of rhenium(+I) and (−I) were prepared. Detailed NMR and DFT analyses were used to unravel rotational isomerism of the olefinic ligands.

A. Choualeb, O. Blacque,
H. W. Schmalle, T. Fox, T. Hiltebrand,
H. Berke* 5246–5261

Olefin Complexes of Low-Valent Rhenium

Keywords: Rhenium / Olefin complexes / Nitrosyl complexes / DFT calculation

Amide Methanolysis



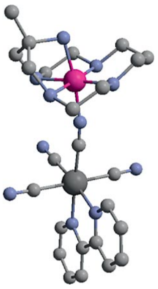
Divalent nickel, cobalt and iron complexes of an N$_2$S$_2$ ligand have been prepared and characterized. The amide methanolysis reactivity of these complexes upon treatment with hydroxide anion in methanol was examined. Differences in reactivity are rationalized on the basis of structural differences in the "parent" protonated complexes.

G. K. Ingle, M. M. Makowska-Grzyka,
A. M. Arif, L. M. Berreau* 5262–5269

Divalent Nickel, Cobalt and Iron Complexes of an Amide-Appended N$_2$S$_2$ Ligand: Synthesis, Characterization and Reactivity with Hydroxide Anion

Keywords: N,S ligands / Amides / Metal effects / Deprotonation

Mixed-Valent Compounds



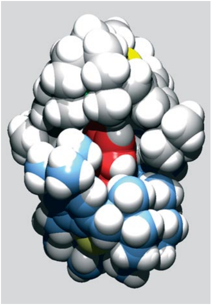
The metal-to-metal charge-transfer energies of a new series of cyano-bridged mixed-valent Ru^{II}/Co^{III} and Fe^{II}/Co^{III} complexes are shown to be affected by variations to both the redox potentials of the donor and acceptor centers and the reorganizational energy brought about by replacing terminal cyano ligands with a bipyridyl ligand.

P. V. Bernhardt,* F. Bozoglian,
M. Font-Bardía, M. Martínez,*
A. P. Meacham, B. Sienra,
X. Solans 5270–5276

The Influence of Ligand Substitution at the Electron Donor Center in Molecular Cyano-Bridged Mixed-Valent Co^{III}/Fe^{II} and Co^{III}/Ru^{II} Complexes

Keywords: Mixed-valent compounds / Cyanides / Binuclear complexes

Encapsulated Carboxylate Ligands



Three tetranuclear nickel(II) complexes in which pairs of dinuclear nickel(II) complexes are linked by acetylenedicarboxylate, terephthalate, and isophthalate dianions have been prepared and structurally characterized. The Ni$^{II}_4$ complexes are well separated from each other in the solid state and allow the presence of any magnetic exchange interactions through the encapsulated dicarboxylato bridge to be determined without interference by intermolecular coupling interactions.

J. Klingele, M. H. Klingele, O. Baars,
V. Lozan, A. Buchholz, G. Leibeling,
W. Plass, F. Meyer, B. Kersting* ....
... 5277–5285

Tetranuclear Nickel(II) Complexes Composed of Pairs of Dinuclear LNi$_2$ Fragments Linked by Acetylenedicarboxylate, Terephthalate, and Isophthalate Dianions: Synthesis, Structures and Magnetic Properties

Keywords: Macrocyclic ligands / Dicarboxylato ligands / Nickel / Polynuclear complexes / Magnetic properties

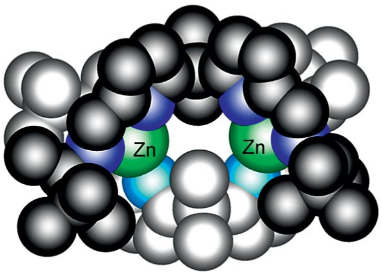
CONTENTS

Chiral Dinuclear Mesocates

S. D. Reid, C. Wilson, C. I. De Matteis, J. B. Love* **5286–5293**

Using Chiral Ligand Substituents To Promote the Formation of Dinuclear, Double-Stranded Iron, Manganese, and Zinc Mesocates

Keywords: Ligand design / Helical structures / Ligand effects / Supramolecular chemistry / Chirality



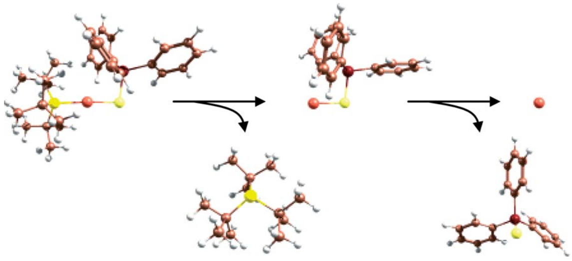
Incorporation of sterically demanding chiral imine substituents to the acyclic N_4-donor iminopyrrole ligand H_2L disrupts the expected formation of the dinuclear, double-stranded helicates $[M_2(L)_2]$ to instead preferentially form chiral mesocates (M = Mn, Fe, Zn).

Copper–Chalcogenide Bonding

H. Jacobsen,*
M. J. Fink **5294–5299**

Decomposition Cascades of Dicoordinate Copper(I) Chalcogenides

Keywords: Bond energy / Copper / Chalcogens / Density functional calculations / Dispersive interactions



A density functional study of bond energies of various complexes that contain a copper chalcogenide core provides relates to thermal behavior and possible CVD usage of this class of compounds.