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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 a harlequin dancing in a room surrounded by transition metals. This character is a theatrical metaphor representing an ambiphilic ligand and its interaction with transition elements, which is the topic of the Microreview. The multiple arms describe the multidentate nature of this family of ligands. One side of his face is sad and represents the Lewis acid (Z) component of the ambiphilic ligand, while the other side is smiling and represents the L moiety, which is the donating component of the ligand. Details are presented by F.-G. Fontaine et al. on p. 5439ff. The artwork was designed by Marie Tremblay.

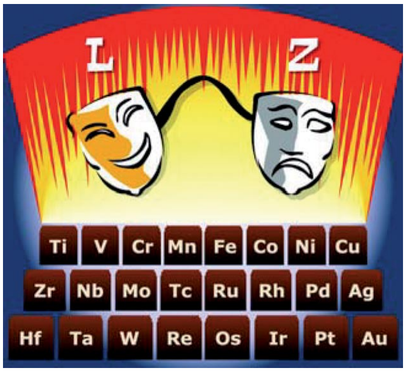
MICROREVIEW

Ambiphilic Ligands

F.-G. Fontaine,* J. Boudreau,
M.-H. Thibault 5439–5454

Coordination Chemistry of Neutral $(L_n)-Z$ Amphoteric and Ambiphilic Ligands

Keywords: Ambiphilic ligands / Amphoteric ligands / Bifunctional ligands / Lewis acids



Ambiphilic and amphoteric molecules, which have both a donor and an acceptor group, have great potential in many applications. This microreview will focus on the coordination chemistry of a subclass of these molecules, in which the donor groups can be represented as L_n ligands. The various strategies to overcome aggregation and the reactivity and properties of these complexes will be discussed.

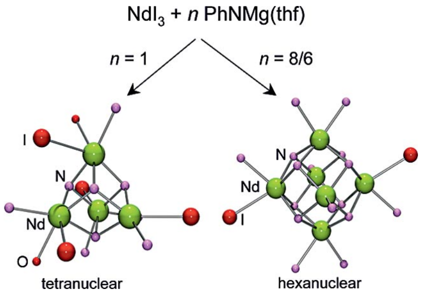
SHORT COMMUNICATIONS

Advances in f-Element Chemistry

J.-C. Berthet,* P. Thuéry,
M. Ephritikhine 5455–5459

Polyimido Clusters of Neodymium and Uranium, Including a Cluster with an $M_6(\mu_3\text{-N})_8$ Core

Keywords: f elements / Neodymium / Uranium / Imido complexes / Cluster compounds / Structure elucidation



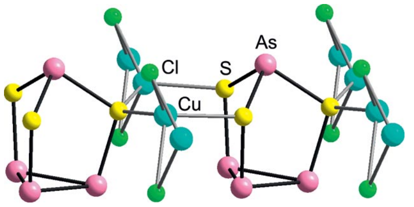
Novel imido clusters of Nd^{3+} involving four or six metal centres and with a cubane or rhombododecahedron core structure were obtained from the reaction of NdI_3 and $\{[PhNMg(thf)]_6\}$ in thf or pyridine. Similar reaction with $UI_3(py)_4$ led to a tetranuclear U^{IV} derivative.

Cage Compounds

P. Schwarz, J. Wachter,*
M. Zabel 5460–5463

Novel Coordination Modes for E_4S_3 Cage Molecules (E = P, As) in Unprecedented Quaternary $As_4S_3(CuCl)_n$ (n = 1,2) Solid-State Phases

Keywords: Arsenic / Sulfur / Copper / Halides / Coordination modes / Solid-state structures



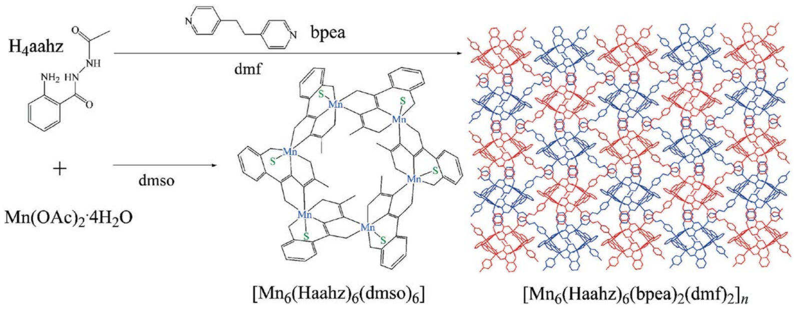
First examples of the coordination chemistry of the As_4S_3 cage are reported. Compounds $(As_4S_3)(CuCl)_n$, which form in interdiffusion experiments of solutions of $As_4S_3{\cdot}M(CO)_5$ in CH_2Cl_2 and $CuCl_n$ in CH_3CN (n = 1) or CH_3OH (n = 2), represent first examples of the novel S-only coordination mode of the intact E_4S_3 cage molecules (E = P, As).

Metal–Organic Frameworks

J. Choi, J. Park, M. Park, D. Moon, M. S. Lah* 5465–5470

A 2D Layered Metal–Organic Framework Constructed by Using a Hexanuclear Manganese Metallamacrocycle as a Supramolecular Building Block

Keywords: Metallacycles / Macrocycles / Supramolecular chemistry / Metal–organic frameworks / Layered compounds



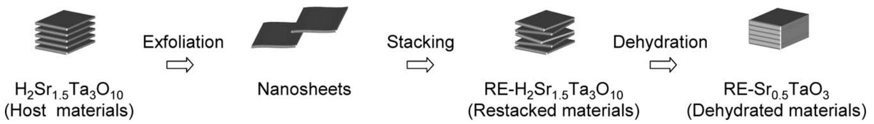
A hexanuclear metallamacrocycle was synthesized by using *N*-acetylaminobenzhydrazide and a manganese ion. The metal–organic framework based on a hexanuclear metallamacrocycle as a supramolecular building block is quite different from those obtained from similar ligands.

Nanosheet Processing

K. Inaba,* S. Suzuki, Y. Noguchi, M. Miyayama, K. Toda, M. Sato 5471–5475

Metastable $Sr_{0.5}TaO_3$ Perovskite Oxides Prepared by Nanosheet Processing

Keywords: Nanotechnology / Nanostructures / Tantalum / UV/Vis spectroscopy / Surface chemistry



Metastable $Sr_{0.5}TaO_3$ was prepared by using layer-structured $H_2Sr_{1.5}Ta_3O_{10}$ by direct dehydration and nanosheet processing. Nanosheet processing can provide a possible route for the synthesis of materials with novel disordered structures.

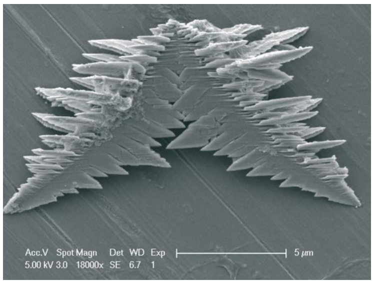
Cerium Oxide Dendrites

D. E. Zhang,* Z. W. Tong,* S. Z. Li, X. B. Zhang, A. L. Ying 5476–5481

A Novel Route Toward Fabrication of Twofold-Shaped CeO_2 Dendrites

Keywords: Nanotechnology / Crystal growth / Absorption / Cyclic voltammetry

Highly uniform twofold-shaped CeO_2 dendrites were prepared by using an approach that involves the thermal decomposition of the precursor. Precursors (average size 10 μm) were prepared from $Ce(NH_4)_2(NO_3)_6$ and $CO(NH_2)_2$ in a H_2O/diethanolamine solution. DEA plays an important role in the formation of the products. The dendritic pattern of the precursor is almost retained in the CeO_2 product.



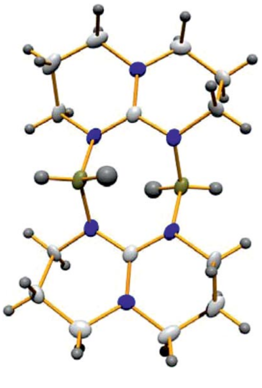
Mechanism of Dehydrogenation

O. Ciobanu, F. Allouti, P. Roquette, S. Leingang, M. Enders, H. Wadepohl, H.-J. Himmel* 5482–5493

Thermal and Catalytic Dehydrogenation of the Guanidine–Borane Adducts $H_3B·hppH$ (hppH = 1,3,4,6,7,8-hexahydro-2*H*-pyrimido[1,2-*a*]pyrimidine) and $H_3B·N(H)C(NMe_2)_2$: A Combined Experimental and Quantum Chemical Study

Keywords: Dehydrogenation / Homogeneous catalysis / Heterogeneous catalysis / Hydrogen / Boron / Density functional calculations

H_2 elimination from guanidine–boranes: Several reaction pathways have to be considered in the thermal and catalytic dehydrogenation of guanidine–boranes.



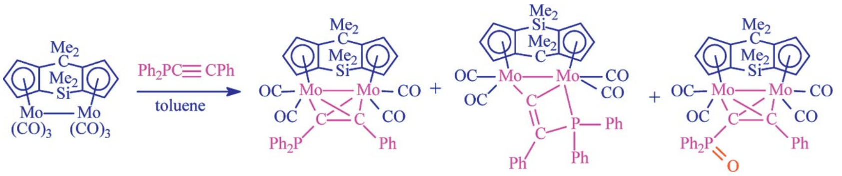
CONTENTS

Mo Complex Reactivity

B. Li, S. Xu, H. Song,
B. Wang* 5494–5504

Reactions of $(Me_2C)(Me_2Si)[(\eta^5\text{-}C_5H_3)\text{-}Mo(CO)_3]_2$ with Phosphanylalkynes: Rearrangement of Phosphanylalkynes into Phosphido-Substituted Vinylidenyl Ligands by Cleavage of the P–C(alkyne) Bond and Formation of a P–C(alkene) Bond

Keywords: Molybdenum / Phosphorus / Alkynes / Rearrangement / Bridging ligands / X-ray diffraction



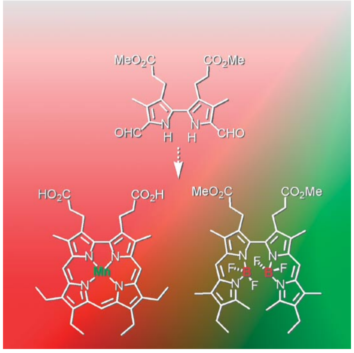
Thermal reactions of $(Me_2C)(Me_2Si)[(\eta^5\text{-}C_5H_3)Mo(CO)_3]_2$ (**1**) with a series of phosphanylalkynes $Ph_nP(C\equiv CR)_{3-n}$ were reported. P–C(alkyne) bond cleavage and phosphanylalkyne rearrangement products were obtained, in addition to the complexes in which the phosphanylalkynes acted as disubstituted acetylenes.

Biomimetic Porphyrinoids

M. Bröring,* F. Brégier, R. Krüger,
C. Kleeberg 5505–5512

Functional Porphyrinoids from a Biomimetically Decorated Bipyrrole

Keywords: Porphyrinoids / Corroles / Heme analogues / Boron / Fluorescence



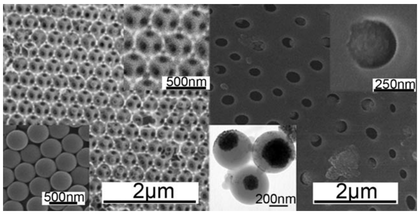
Functional analogues for hemes and phytofluors, a Mn corrole and a bis(bodipy) carrying two adjacent propionate substituents, are available in two steps from a simple bipyrrolic precursor. Hydrolysis of the ester groups to the free acid is successful for the corrole and yields buffer-soluble material, while for the dinuclear bis(bodipy), hydrolysis of B–F bonds is observed.

Hybrid Macroporous Materials

W.-Q. Fan, J. Feng, S.-Y. Song, Y.-Q. Lei,
Y. Xing, R.-P. Deng, S. Dang,
H.-J. Zhang* 5513–5518

Erbium-Complex-Doped Near-Infrared Luminescent and Magnetic Macroporous Materials

Keywords: Macroporous materials / Near-infrared luminescence / Magnetism



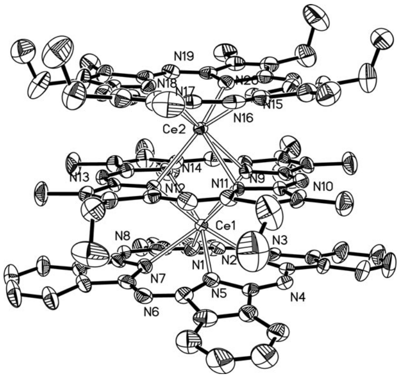
A near-infrared luminescent macroporous material and a near-infrared luminescent/magnetic bifunctional macroporous material, which may offer the opportunity to develop new materials suitable for optical amplifiers, were synthesized by using polystyrene microspheres and Fe_3O_4@polystyrene core–shell nanoparticles, respectively, as templates.

Cerium Sandwich-Type Complexes

N. Pan,* Y. Bian, M. Yokoyama, R. Li,
T. Fukuda, S. Neya,* J. Jiang,*
N. Kobayashi* 5519–5523

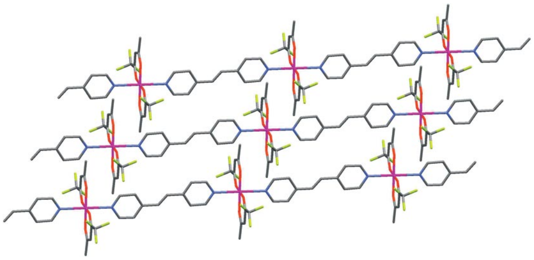
Sandwich-Type Heteroleptic *opposite*-(Diazaporphyrinato)cerium Complexes: Synthesis, Spectroscopy, Structure, and Electrochemistry

Keywords: Cyclic voltammetry / Phthalocyanines / Porphyrins / Sandwich complexes



The sandwich-type heteroleptic tetrapyrrole cerium complex $Ce_2(dap)_2(pc)$ was synthesized from $[Ce(acac)_3]\cdot nH_2O$, Li_2pc, and metal-free D_{2h}-type diazaporphyrin. The molecular structure indicated an unexpected asymmetrical disposition of the ligands, with two adjacent dap moieties and one outer pc ring.

Co and Cu 1D Chain Complexes



One-dimensional chain derivatives of the general formula $[M(acac)_2(\mu\text{-bipyridine})]$ were obtained from (acetylacetonato)cobalt(II) or (trifluoromethylacetylacetonato)copper(II) derivatives and bipyridine-like bridging ligands. Magnetic susceptibility studies show weak antiferromagnetic interactions along the chain.

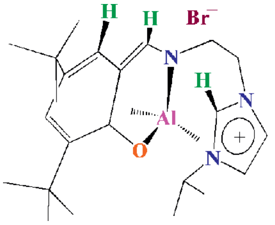
J. Atienza, A. Gutiérrez,*
M. Felisa Perpiñán,
A. E. Sánchez .... **5524−5531**

Cobalt and Copper Coordination Polymers Containing Acetylacetonato-Derived Ligands and Bidentate Pyridine Coligands: Synthesis, Crystal Structures and Magnetic Properties

Keywords: Chain structures / X-ray diffraction / Magnetic properties / N ligands / O ligands

Hydrogen Bonding Interactions

The synthesis, solution properties and reactivity of novel alkylaluminium complexes bearing a modified phenoxyimine ligand containing a pendant imidazolium moiety are reported. Investigation of solution structures by NMR spectroscopy revealed the involvement of the coordinated ligand in hydrogen bonding with halide anions.



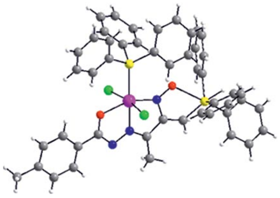
S. Milione,* F. Grisi,* R. Centore,
A. Tuzi .... **5532−5539**

Aluminium Complexes of a Phenoxyimine Ligand with a Pendant Imidazolium Moiety: Synthesis, Characterisation and Evidence for Hydrogen Bonding in Solution 💻

Keywords: Aluminium / N,O ligands / Hydrogen bonds

Ligand Transformation

Reactions between $[Ru(PPh_3)_3Cl_2]$ and biacetylmonoxime acetyl-/aroylhydrazones (H_2L) provide ruthenium(III) complexes *trans*-$[Ru(^tL)(PPh_3)Cl_2]$, where $^tL^-$ represents the N,N,O-donor transformed ligand. In this unique metal-assisted chemical transformation of H_2L, the $-CH_3$ group at the oxime end becomes $=CHPHPh_3$.



R. Raveendran, S. Pal* .... **5540−5546**

$[Ru(PPh_3)_3Cl_2]$-Mediated Transformation of $-CH_3$ into $=CHPHPh_3$ in Biacetylmonoxime Acetyl-/Aroylhydrazones: Ruthenium(III) Complexes with the Transformed Ligands 💻

Keywords: Ruthenium / Ligand transformation / Redox properties

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* Author to whom correspondence should be addressed.

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

If not otherwise indicated in the article, papers in issue 34 were published online on November 17, 2008