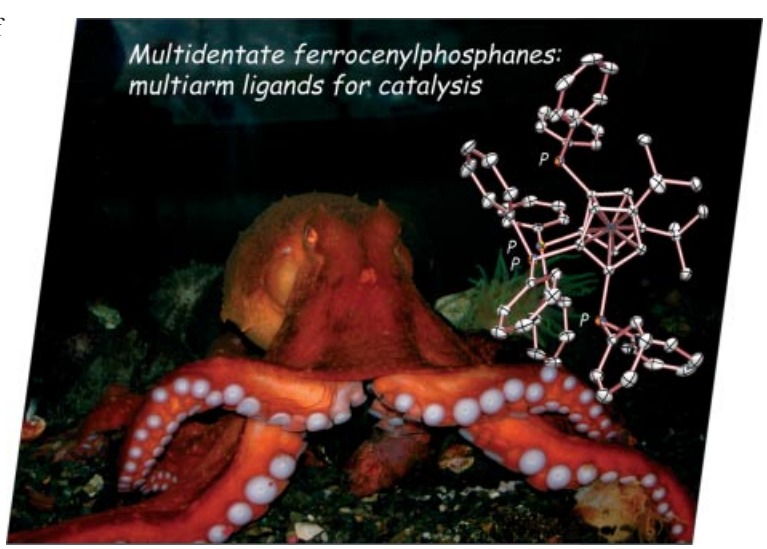
The EUChemSoc Societies have taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry.* Three further EUChemSoc Societies (Austria, Czech Republic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

COVER PICTURE

The cover picture shows an X-ray illustration of the multidentate ferrocenylpolyphosphane 1,1′,2,2′-tetrakis(diphenylphosphanyl)-4,4′-di-*tert*-butylferrocene. The cisoid conformation of the molecule, evidenced at the solid state, is conserved in solution; the phosphorus arrangement led to a rarely demonstrated multiple-coordination behaviour towards palladium, possibly useful in ultra-low catalyst loading reactions due to an improved stabilization of the metal atom. The multiple phosphane arms and their orientation resemble the elegant and intelligent creature that is the Giant Pacific Octopus (specimen from the Alaska SeaLife Centre in Seward, photo published with the kind permission of Mollie Tubbs and Jason Wettstein). The catalytic performance in palladium cross-coupling at ultra-low catalyst loading is presented in the Microreview by J.-C. Hierso et al. on p. 3767ff.



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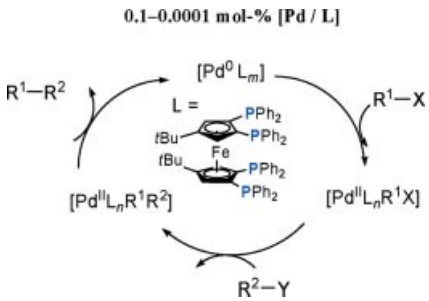
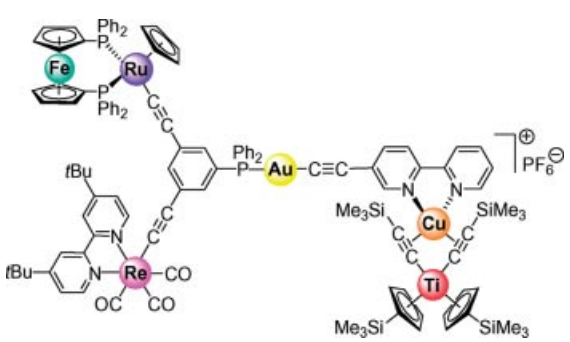
MICROREVIEW



The search for catalytic longevity and ultra-low catalyst loadings on the basis of multidentarity effects and robustness of new ferrocenylphosphane ligands were focused on high-value palladium-catalyzed C−C cross-coupling reactions. Low-loading catalysis was also explored with success for C−N cross-coupling in the allylic amination of achiral substrates.

SHORT COMMUNICATIONS

Synthetic routes are reported for the complexes [MI(alkyne)(CO){H$_n$B(mt)$_{4-n}$}] (mt = methimazolyl; n = 1, 2; M = Mo, W). The reaction of [MoI(PhC≡CPh)(CO){HB(mt)$_3$}] with Na[HB(mt)$_3$] provides [Mo(PhC≡CPh)(CO){HB(mt)$_3$}$_2$] which features both κ^3-*S*,*S*′,*S*″ (mauve) and κ^1-*S* (cyan) coordination modes.

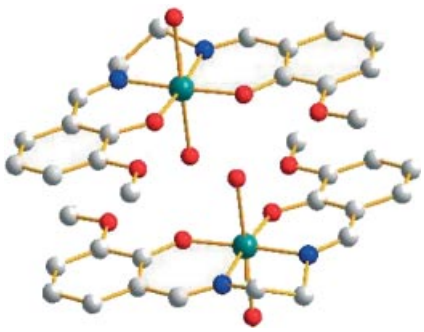


The synthesis of a heterohexanuclear Fe-Ru-Re-Au-Cu-Ti metal complex and its characterisation by ^{1}H, ^{31}P{^{1}H} NMR and IR spectroscopy, elemental analysis and ESI mass spectrometry are reported.

FULL PAPERS

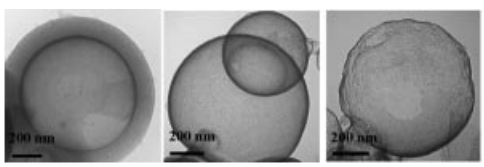
Supramolecular Glue

Perchlorate counterions were found to act as supramolecular glue through hydrogen-bonding interactions, promoting the assembly of μ-aqua manganese−Schiff-base dimers into a 1D network of complexes.



Keywords: Manganese / Self-assembly / Anions / Schiff bases / Peroxidase

Hollow Mesoporous Spheres



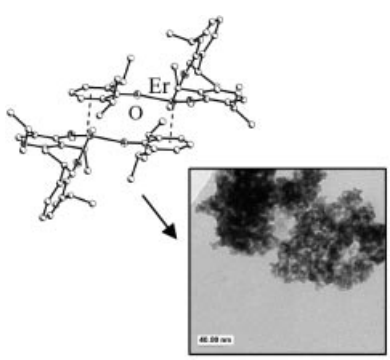
Mesoporous Carbon Silica Metal Oxide hollow spheres

PF−PEO polymer blend can be used as a novel organic template to synthesize mesoporous carbon or silica hollow spheres. The mesoporous carbon hollow spheres can act as a hard template for the preparation of mesoporous oxide hollow spheres.

Keywords: Polymer blends / Mesoporous materials / Metal oxides / Organic templates

Amphoteric Dopants

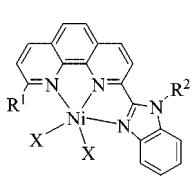
The reaction of $Er[N(SiMe_3)_2]_3$ with a series of alcohols (HOR) in selected solvents led to the isolation of a family of $Er(OR)_3$ compounds (**1**−**19**, **11** shown). Representative members of the $Er(OR)_3$ precursors were used for the production of a PErZT precursor solution, which was subsequently used to generate thin films and nanoparticles as well as Er_2O_3 nanoparticles (shown).



Keywords: Ceramics / Perovskites / Nanomaterials / Lanthanide alkoxides / PZT

Ethylene Oligomerization

Nickel(II) complexes ligated by 2-(benzimidazol-2-yl)-1,10-phenanthrolines were synthesized and characterized. Upon activation with Et_2AlCl, these complexes exhibited excellent activities for ethylene oligomerization with high selectivities for 1-butene.

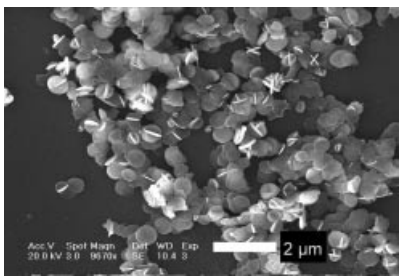


Keywords: Nickel / Tridentate complexes / Phenanthrolines / Ethylene oligomerization / Oligomerization

CONTENTS

Europium-Doped Nanodisks

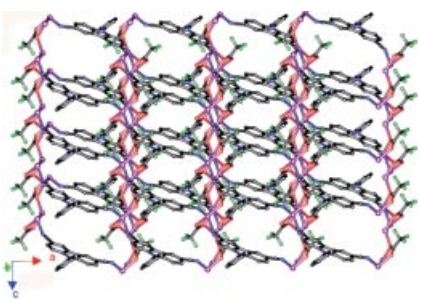
Singly crystalline $LaF_3:Eu^{3+}$ nanodisks with a hexagonal structure were synthesized by a simple method. The mechanism of formation of the nanodisks was explored; furthermore, the size of the disks can be simply moderated by varying the concentration of the initial reactants.



Keywords: Materials science / Crystal growth / Rare earths / Fluorescence

Silver Coordination Polymers

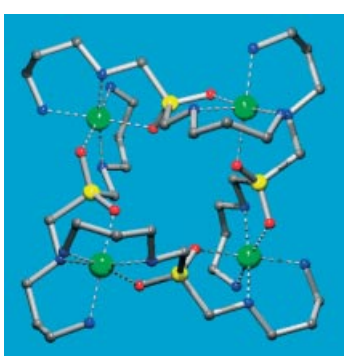
One rigid bent bridging ligand with highly planar π-conjugated spacers, 3,6-dicyano-9-phenylcarbazole (dcphcz), was designed and synthesized. The coordination of the ligand dcphcz with a series of Ag^I salts with different counterions has been investigated. Four new Ag-containing coordination polymers with different polymeric motifs, $\{[Ag(dcphcz)]BF_4\}_n$, $\{[Ag(dcphcz)]ClO_4\}_n$, $\{[Ag(dcphcz)][Ag_2(dcphcz)(H_2O)_2](SO_3CF_3)_3{\cdot}C_6H_6{\cdot}(H_2O)_2\}_n$, and $[Ag_2(dcphcz)(CF_3COO)_2]_n$, were obtained.



Keywords: Silver / N ligands / Supramolecular chemistry / Luminescence / Coordination polymers / Metal-organic frameworks

Aminophosphinic Acids

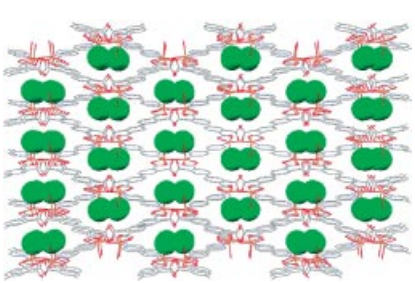
The acid–base properties of two tetraaminophosphinic acid ligands and their complexation with Cu^{2+}, Ni^{2+}, and Zn^{2+} ions were studied by potentiometry. Both ligands behave similarly to linear tetraamines. The phosphinic acid moiety shows weak coordination ability. In the solid state, nitrogen atoms coordinate the metal ions mostly in a square-planar fashion.



Keywords: Aminophosphinates / Complexes / Stability constants / Potentiometry

Hydrogen-Bonded Helices

Three metal–organic coordination polymers were synthesized under hydrothermal conditions. The bptc ligand takes part in three different coordination modes, and compound **1** exhibits a 3D network with 1D open channels that contain free solvent water molecules. Two kinds of chiral, helical, hydrogen-bonded chains exist in the neighboring holes.



Keywords: Copper / Manganese / Coordination polymers / Hydrogen bonds

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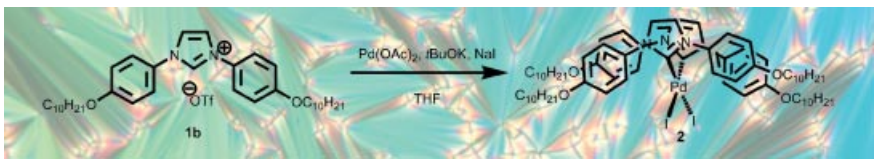
Mesomorphic Compounds

Liquid Crystal Imidazolium Salts: Towards Materials for Catalysis and Molecular Electronics

Keywords: iquid crystals / Imidazolium ions / Pd–carbenes / Homogenous catalysis / Conducting materials

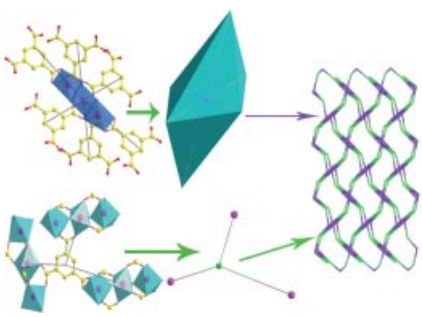


The imidazolium ion exhibits liquid crystalline behaviour over a significant temperature range and serves as a N-heterocyclic carbene ligand for Pd-catalysed cross-coupling reactions. A lamellar crystal structure of the Pd^{II} *cis*-carbene with decyl tails was obtained, and the charged carrier mobilities of the C_{10} salt in the smectic-A phase was measured.

Rutile Frameworks

Rarely Decorated Rutile Frameworks Built from Triangular Organic Spacers and Distorted Octahedral Co_3 Building Blocks

Keywords: Solvothermal syntheses / Rutile / Cobalt / Polymers



The first exploration of the synthesis of metal–organic frameworks in solutions of dmso resulted in rare noninterpenetrating decorated rutile frameworks with the $(4.6^2)_2(4^2.6^{10}.8^3)$ topology, built on three-connected organic spacers and six-connected Co_3 nodes.

If not otherwise indicated in the article, papers in issue 23 were published online on July 31, 2007

