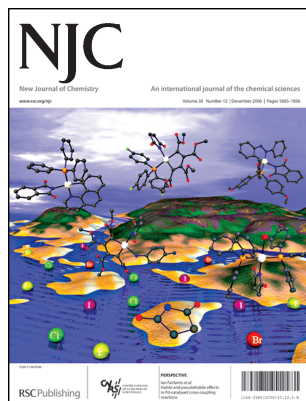


## IN THIS ISSUE

ISSN 1144-0546 CODEN NJCHES 30(12) 1685-1856 (2006)



### Cover

See Ian J. S. Fairlamb *et al.*, *New J. Chem.*, 2006, **30**, 1695. Halides and pseudohalides have pronounced effects on palladium-mediated cross-coupling reactions. The image—a salt sea, with imidato metal structures above. Image reproduced by permission of A. C. Whitwood.

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### C89

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December 2006/Volume 3/Issue 12

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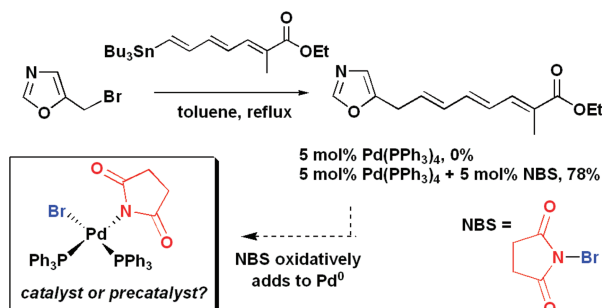
## PERSPECTIVE

### 1695

#### Halide and pseudohalide effects in Pd-catalysed cross-coupling reactions

Ian J. S. Fairlamb,\* Richard J. K. Taylor, Jose Luis Serrano and Gregorio Sanchez

The presence of halide and pseudohalide dramatically affect the outcome of transition-metal catalysed reactions, both in terms of selectivity and activity. In this perspective, the roles and effects of these anionic ligands in topical and important Pd-catalysed cross-coupling reactions will be discussed.



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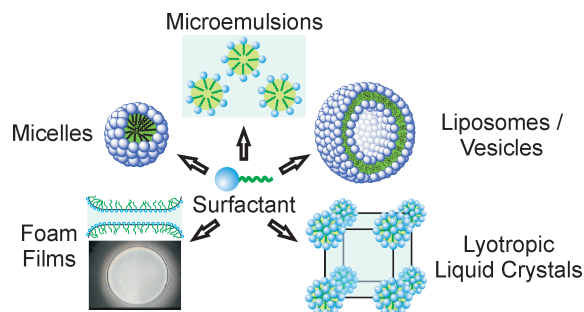
## PERSPECTIVE

1705

## New speciality surfactants with natural structural motifs

Dirk Blunk,\* Patric Bierganns, Nils Bongartz,  
Renate Tessendorf and Cosima Stubenrauch

The main characteristic of surfactants is their ability to self-organise which leads to manifold supramolecular structures, *e.g.* micelles, liposomes, microemulsions, lyotropic liquid crystals, and foam films. This structural variety is the basis for a wide range of sophisticated applications.



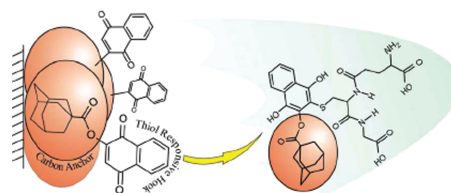
## PAPERS

1718

## Molecular anchors—mimicking metabolic processes in thiol analysis

Robert B. Smith,\* Claire Canton, Nathan S. Lawrence,  
Callum Livingstone and James Davis

The solubilisation and removal of hydrophobic quinone derivatives through conjugation with glutathione has been investigated as the basis of a novel detection strategy for the thiol.

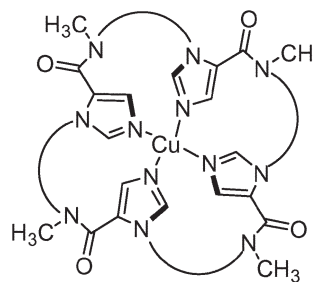


1725

## Computer-guided design of a Cu(II) receptor and sensor

Chen Lin and Dale G. Drueckhammer\*

A macrocyclic fluorescent Cu(II) sensor was prepared and studied incorporating four imidazole 4-carboxamide ligands connected by a fluorescent linker designed using the computer program CAVEAT.

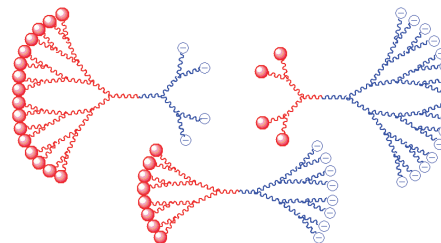


1731

## Design of tailored multi-charged phosphorus surface-block dendrimers

Valérie Maraval, Alexandrine Maraval, Grégory Spataro,  
Anne-Marie Caminade,\* Jean-Pierre Majoral,\*  
Dong Ha Kim and Wolfgang Knoll\*

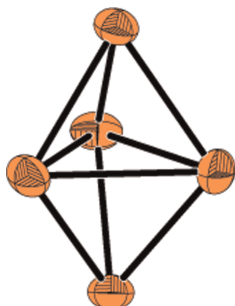
Synthesis of tailored multi-charged phosphorus bis-dendrons *via* assembly of dendrons through their core.



## PAPERS



1737

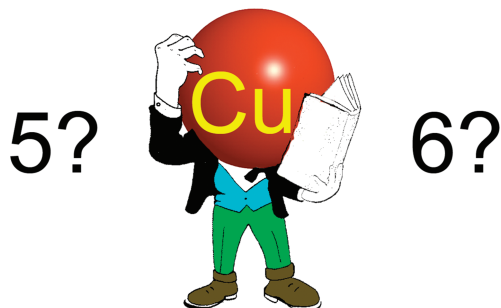


**Ge<sub>5</sub><sup>2−</sup> Zintl anions: synthesis and crystal structures of [K([2.2.2]-crypt)]<sub>2</sub>Ge<sub>5</sub> · 4NH<sub>3</sub> and [Rb([2.2.2]-crypt)]<sub>2</sub>Ge<sub>5</sub> · 4NH<sub>3</sub>**

Christof Suchentrunk and Nikolaus Korber\*

While the chemistry of the *nido*-cage nonagermanides Ge<sub>9</sub><sup>4−</sup> and Ge<sub>9</sub><sup>3−</sup> is now considerably advanced, information on the *closo*-cage pentagermanide is scarce. We report on the generation of this anion by the extraction of alkali metal–germanium alloys in liquid ammonia.

1740



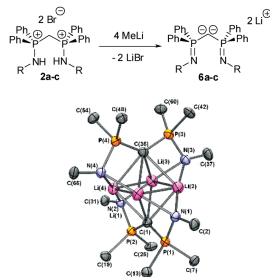
**What is the coordination number of copper(II) in metallosupramolecular chemistry?**

Valérie Chaurin, Edwin C. Constable\* and Catherine E. Housecroft

Copper(II) is a confused ion and it is dangerous to assume any particular coordination number in metallosupramolecular chemistry.



1745



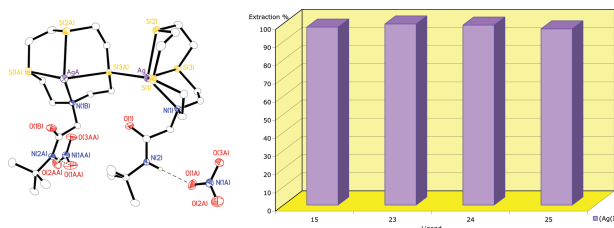
**A new and convenient approach towards bis(iminophosphoranyl)methane ligands and their dicationic, cationic, anionic and dianionic derivatives**

Matthieu Demange, Leila Boubekeur, Audrey Auffrant, Nicolas Mézailles, Louis Ricard, Xavier Le Goff and Pascal Le Floch\*

Bis(aminophosphoranyl)methane dications which are readily synthesized from dppm, bromine and primary amines serve as precursors for the preparation of a new family of cationic, neutral, monoanionic and dianionic *N,N* ligands.



1755



**Design and synthesis of heteroditopic aza-thioether macrocycles for metal extraction**

Mark W. Glenny, Marie Lacombe, Jason B. Love, Alexander J. Blake, Leonard F. Lindoy, Robert C. Luckay, Karsten Gloe, Bianca Antonioli, Claire Wilson and Martin Schröder\*

A range of pendant arm aza-thioether macrocycles containing hydrogen-bonding moieties are reported, and their ability to extract and transport Ag(I) ions with high selectivity confirmed.



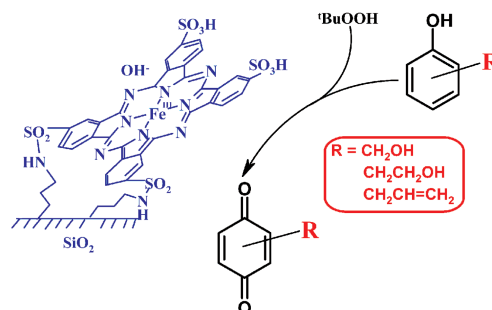
## PAPERS

1768

### Access to functionalized quinones *via* the aromatic oxidation of phenols bearing an alcohol or olefinic function catalyzed by supported iron phthalocyanine

Olga V. Zalomaeva and Alexander B. Sorokin\*

A novel covalent grafting of iron phthalocyanine onto SiO<sub>2</sub> affords an improved catalyst for the heterogeneous oxidation of phenols bearing oxidizable functional groups to quinones, while keeping these groups intact to afford valuable synthetic building blocks.

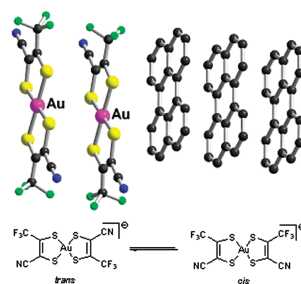


1774

### Perylene salts of unsymmetrical nickel and gold dithiolene complexes with 3:2 stoichiometry: conformational polymorphism and strong antiferromagnetic interactions

Olivier Jeannin and Marc Fourmigué\*

The *n*-Bu<sub>4</sub>N<sup>+</sup> salt of the gold dithiolene complex [Au(tfadt)<sub>2</sub>]<sup>−</sup> crystallizes in separate *cis* and *trans* isomers; its perylene salt, as a *trans* isomer, exhibits an unusual 3:2 stoichiometry with strong antiferromagnetic interactions within perylene [Per]<sub>3</sub><sup>2+</sup> triads.

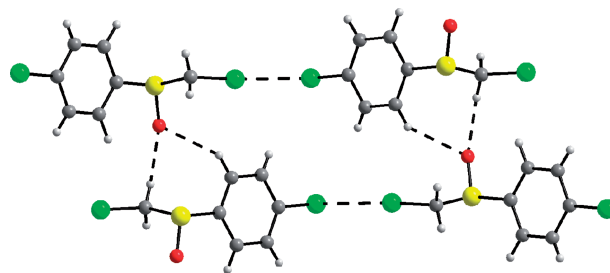


1782

### Self-assemblies of chiral *p*-haloaryl sulfoxides through C–H...O short contacts and halogen involving interactions

Francesco Naso, Cosimo Cardellicchio,\* Maria Annunziata M. Capozzi, Francesco Capitelli and Valerio Bertolasi

Single crystal X-ray structure determination of four crystals of alkyl or aryl *p*-haloaryl sulfoxides is reported. Intra- and intermolecular short contacts are discussed.

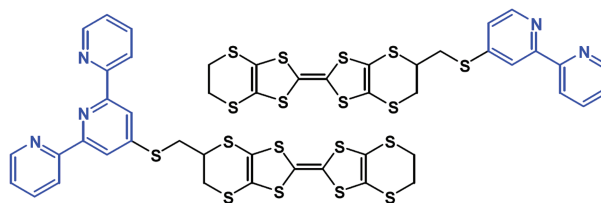


1790

### Synthetic strategies for preparing BEDT-TTF derivatives functionalised with metal ion binding groups

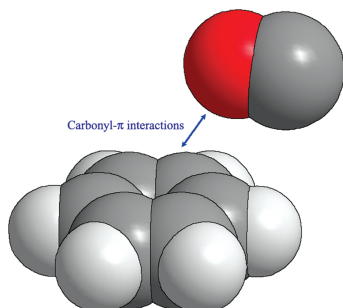
Qiang Wang, Peter Day, Jon-Paul Griffiths, Hui Nie and John D. Wallis\*

Synthetic approaches to BEDT-TTF based donors bearing metal ion binding groups are described, either installing the metal ion binding group early in the synthesis, or by preparing hydroxymethyl-BEDT-TTF followed by tosylation and substitution.



## PAPERS

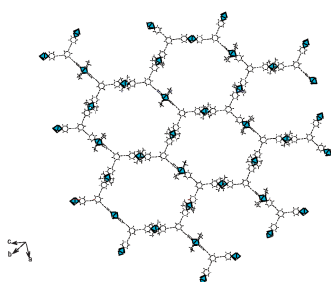
1801

**Experimental evidence for carbonyl– $\pi$  electron cloud interactions**

Julien E. Gautrot,\* Philip Hodge,\* Domenico Cupertino and Madeleine Helliwell

Experimental evidence of carbonyl– $\pi$  interactions and their influence on UV-Vis spectra and redox potentials is given.

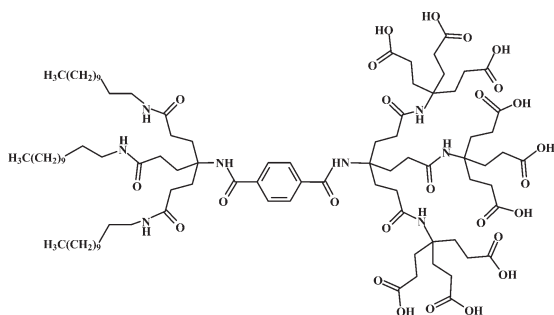
1808

**New coordination polymer networks based on copper(II) hexafluoroacetylacetonate and pyridine containing building blocks: synthesis and structural study**

Silke Winter, Edwin Weber,\* Lars Eriksson and Ingeborg Csöregi\*

New 1- and 2-D coordination polymers **A–D**, composed of  $\text{Cu}(\text{hfacac})_2$  and oligofunctional pyridino tectons, were synthesized and investigated by IR and X-ray diffraction methods including a sensorial study.

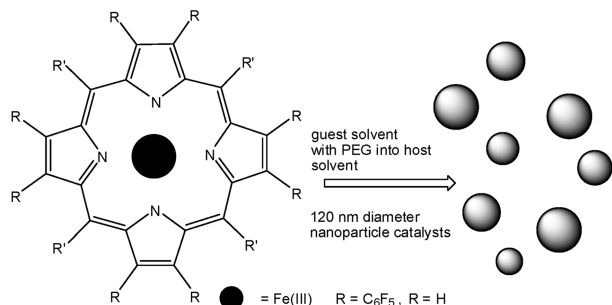
1820

**Synthesis, Langmuir and Langmuir–Blodgett film behaviour of new dendritic amphiphiles**

Claudia Akpo, Edwin Weber\* and Jürgen Reiche

New amphiphilic compounds, featuring a construction with dendronized hydrophilic and hydrophobic segment groups connected to a specific aromatic or aliphatic spacer unit, have been synthesized and shown to form well-defined Langmuir films at the air–water interface, as well as Langmuir–Blodgett transfer to a silicon wafer.

1834

**Porphyrin nanoparticles as supramolecular systems**

Charles Michael Drain,\* Gabriela Smeureanu, Sandeep Patel, Xianchang Gong,\* Jayne Garono and Julius Arijeloye

Porphyrin nanoparticles are self-organized supramolecular systems that have catalytic and luminescent properties that are unique to the 100–200 nm particle size.

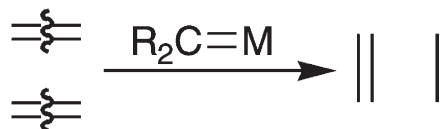
## OPINIONS

1844

## Corrections to a history of olefin metathesis

Thomas J. Katz

A response to the paper on olefin metathesis by Didier Astruc, *New J. Chem.*, 2005, **29**, 42.

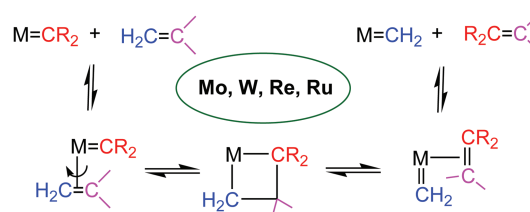


1848

## Answer to Katz's criticisms on the history of metathesis

Didier Astruc

Answers are provided to all the points raised by T. J. Katz in his Opinion "Corrections to a history of olefin metathesis".



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