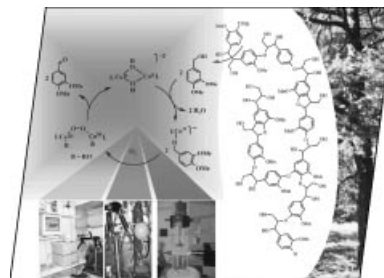


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COVER PICTURE

The cover picture shows the proposed mechanism of the Co(salen)-catalyzed oxidation of a lignin model compound in water, as elucidated by several in-situ spectroscopic techniques. Catalytic oxygen activation can help to prevent the formation of hazardous side products in organic oxidations, especially if harmless solvents are used. The target in this work is lignin, which is found in wood and must be removed as selectively as possible before paper production. In view of avoiding chlorine as the oxidant, the idea is to catalytically enhance the oxygen delignification stage in the pulp bleaching sequence. Details are discussed in the article by T. Repo, B. M. Weckhuysen et al. on p. 2591 ff.



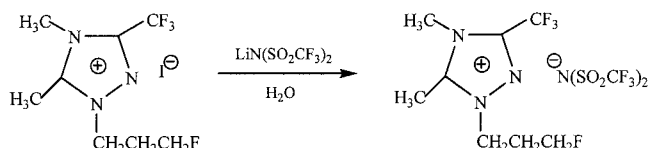
MICROREVIEW

Contents

2573 Hong Xue, Jean'ne M. Shreeve*

Ionic Liquids with Fluorine-Containing Cations

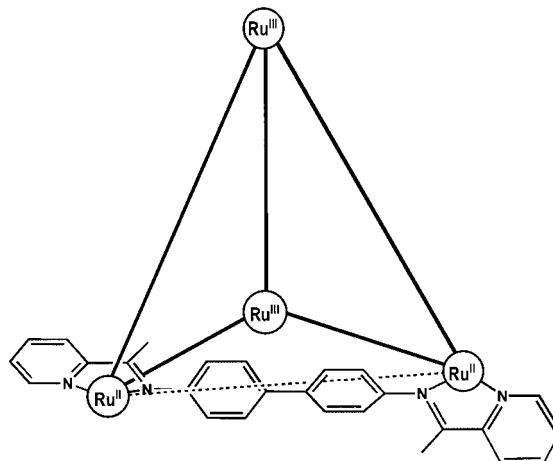
Keywords: Ionic liquids / Fluorine / Cations / Quaternization



SHORT COMMUNICATIONS

2581 P. Cai, M.-X. Li, C.-Y. Duan,* F. Lu,
Q.-J. Meng

Synthesis and Properties of the Geometrically
Controlled Mixed-Valence Tetrahedral $\text{Ru}^{\text{II}}_2\text{-}$
 $\text{Ru}^{\text{III}}_2\text{L}_6$ Cluster

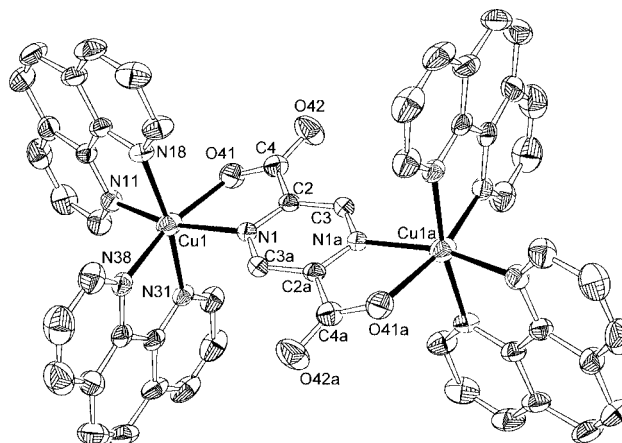


Keywords: Ruthenium / Mixed-valent compounds /
Tetrahedral cluster

2586 G. Beobide, O. Castillo,*
U. García-Couceiro, J. P. García-Terán,
A. Luque, M. Martínez-Ripoll, P. Román



A Binuclear Copper(II) Complex Containing
the Pyrazine-2,5-dicarboxylate Ligand: Study of
the Magnetic Exchange through the Pyrazine
Bridge



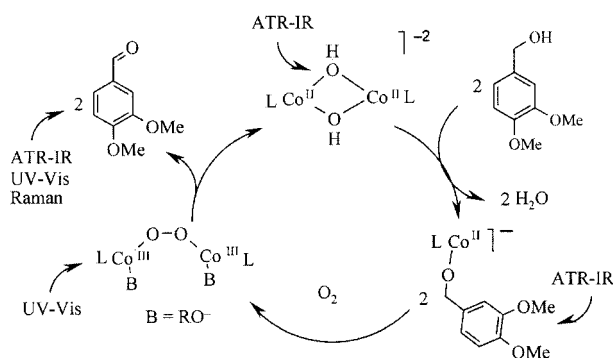
Keywords: Copper / Density functional calculations /
Magnetic properties / N ligands / Pyrazine

FULL PAPERS

2591 K. Kervinen, H. Korpi, J. G. Mesu,
F. Soulimani, T. Repo,* B. Rieger,
M. Leskelä, B. M. Weckhuysen*

Mechanistic Insights into the Oxidation of
Veratryl Alcohol with Co(salen) and Oxygen in
Aqueous Media: An in-situ Spectroscopic Study

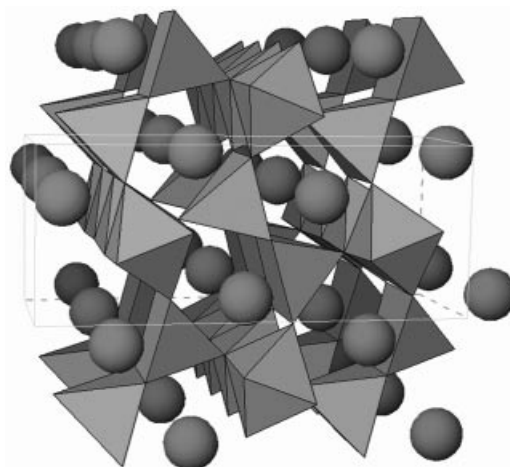
Keywords: Cobalt complexes / Schiff bases / Homo-
geneous catalysis / IR spectroscopy /
Raman spectroscopy / UV/Vis spectroscopy



- 2600** J. A. Alonso,* M. J. Martínez-Lope,
M. T. Casais, J. L. Martínez,
V. Pomjakushin

Synthesis, Structural, and Magnetic Characterization of YCrMnO_5

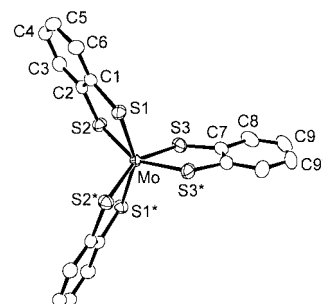
Keywords: Magnetic properties / Ferrimagnetic ordering / High-oxygen-pressure synthesis / Crystal structure refinement / Neutron powder diffraction / X-ray diffraction



- 2607** C. Schulze Isfort, T. Pape, F. E. Hahn*

Synthesis and X-ray Molecular Structure of $(\text{PNP})_2[\text{Mo}^{\text{IV}}(\text{C}_6\text{H}_4\text{S}_{2-1,2})_3]$ Completing the Structural Characterization of the Series $[\text{Mo}(\text{C}_6\text{H}_4\text{S}_{2-1,2})_3]^{n-}$ ($n = 0, 1, 2$)

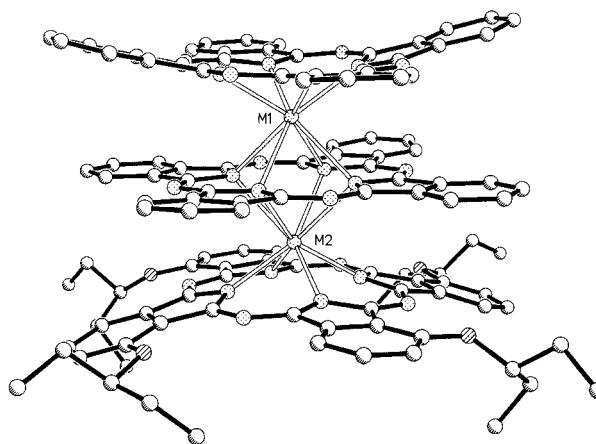
Keywords: Molybdenum / S ligands / X-ray diffraction / Coordination modes



- 2612** Y. Bian, L. Li, D. Wang, C.-F. Choi,
D. Y. Y. Cheng, P. Zhu, R. Li, J. Dou,
R. Wang, N. Pan, D. K. P. Ng,
N. Kobayashi, J. Jiang*

Synthetic, Structural, Spectroscopic, and Electrochemical Studies of Heteroleptic Tris(phthalocyaninato) Rare Earth Complexes

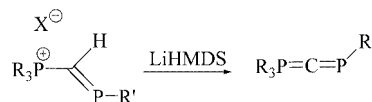
Keywords: Phthalocyanines / Sandwich complexes / Rare earths / Triple-decker complexes / Heteroleptic complexes



- 2619** D. Martin, H. Gornitzka, A. Baceiredo,*
G. Bertrand*

C-Phosphoniophosphaalkenes as Precursors of $1\sigma^4,3\sigma^2$ -Diphosphaallenes: Scope and Limitations

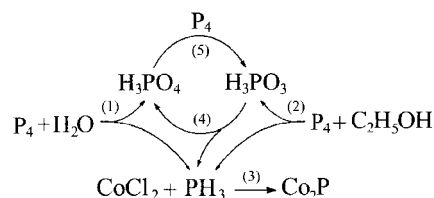
Keywords: Phosphorus / Phosphaalkenes / Phospha-cumulenes / Phosphorus ylides



2625 H. Hou, Q. Peng, S. Zhang, Q. Guo, Y. Xie*

A “User-Friendly” Chemical Approach Towards Paramagnetic Cobalt Phosphide Hollow Structures: Preparation, Characterization, and Formation Mechanism of Co_2P Hollow Spheres and Tubes

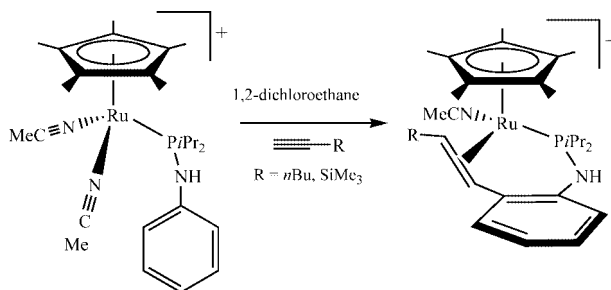
Keywords: Cobalt / Materials science / Nanostructures / Phosphides



2631 M. Jiménez-Tenorio, M. C. Puerta, P. Valerga*

C–H vs. N–H Bond Activation in Aminophosphane Ligands: Reaction of $[\text{Cp}^*\text{Ru}(\text{MeCN})_2(\text{PR}^1_2\text{NHR}^2)]^+$ ($\text{R}^1 = \text{Ph}$, $i\text{Pr}$; $\text{R}^2 = \text{Ph}$, C_6F_5) with Alkynes

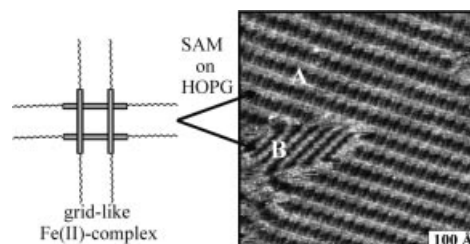
Keywords: Alkyne ligands / C–H activation / Half-sandwich complexes / Phosphane ligands / Ruthenium



2641 A. Mourran, U. Ziener, M. Möller,* E. Breuning, M. Ohkita, J.-M. Lehn*

Two Morphologies of Stable, Highly Ordered Assemblies of a Long-Chain-Substituted $[2 \times 2]$ -Grid-Type Fe^{II} Complex Adsorbed on HOPG

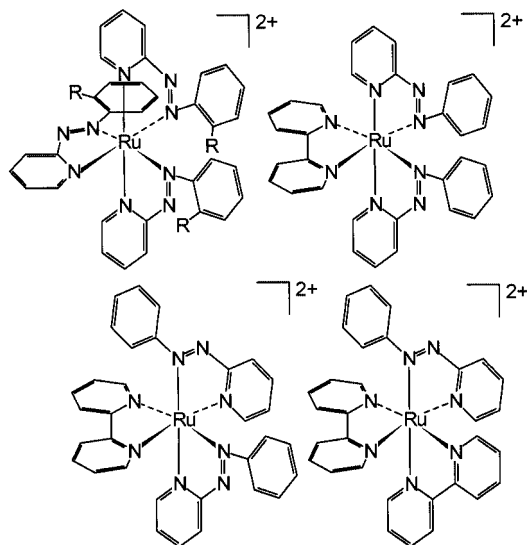
Keywords: Iron / Long alkyl chains / Scanning tunneling microscopy / Highly oriented pyrolytic graphite / Nanopatterning / Self-assembly



2648 A. C. G. Hotze, E. P. L. van der Geer, H. Kooijman, A. L. Spek, J. G. Haasnoot, J. Reedijk*

Characterization by NMR Spectroscopy, X-ray Analysis and Cytotoxic Activity of the Ruthenium(II) Compounds $[\text{RuL}_3](\text{PF}_6)_2$ ($\text{L} = 2\text{-Phenylazopyridine}$ or $o\text{-Tolylazopyridine}$) and $[\text{Ru}'_2\text{L}''](\text{PF}_6)_2$ ($\text{L}', \text{L}'' = 2\text{-Phenylazopyridine}$, $2,2'\text{-Bipyridine}$)

Keywords: Ruthenium / Tris(chelate) complexes / 2D NMR / Cytotoxicity



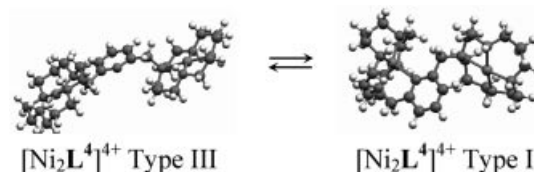
2658

**S. El Ghachtouli, C. Cadiou,
I. Déchamps-Olivier, F. Chuburu,*
M. Aplincourt, V. Turcry, M. Le Baccon,
H. Handel**



Spectroscopy and Redox Behaviour of Dicopper(II) and Dinickel(II) Complexes of Bis(cyclen) and Bis(cyclam) Ligands

Keywords: Copper / Nickel / Bis(cyclen) ligands / Bis(cyclam) ligands / Electrochemistry / EPR spectroscopy

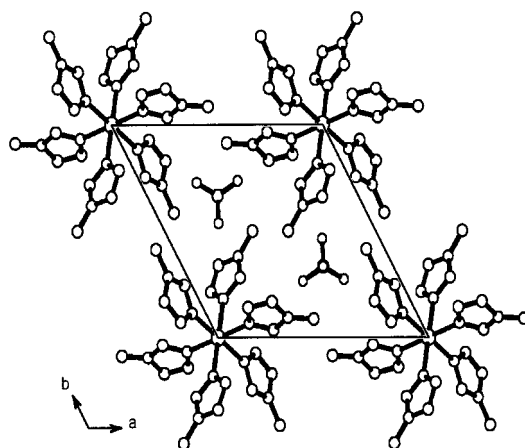


2669

**D. S. Jacob, S. Makhluף, I. Brukental,
R. Lavi, L. A. Solovyov, I. Felner, I. Nowik,
R. Persky, H. E. Gottlieb, A. Gedanken***

Sonochemical Synthesis and Characterization of $\text{Ni}(\text{C}_4\text{H}_6\text{N}_2)_6(\text{PF}_6)_2$, $\text{Fe}(\text{C}_4\text{H}_6\text{N}_2)_6(\text{BF}_4)_2$, and $\text{Ni}(\text{C}_4\text{H}_6\text{N}_2)_6(\text{BF}_4)_2$ in 1-Butyl-3-methylimidazole with Hexafluorophosphate and Tetrafluoroborate

Keywords: Ionic liquids / Sonochemistry / Iron / Nickel / Imidazole / X-ray powder diffraction / Structure analysis

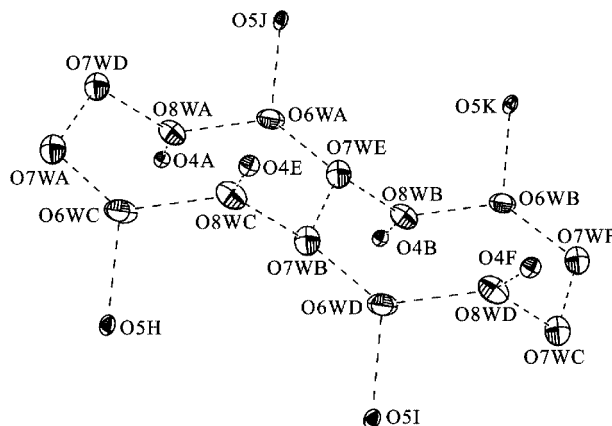


2678

**D. Li, Y. Wang,* X. Luan, P. Liu, C. Zhou,
H. Ma, Q. Shi**

1-D Open-Channelled 3-D Supramolecular Self-Assembled Frameworks Encapsulating Unprecedented Cyclic (H₂O)₈ Clusters or Solvent Molecules

Keywords: Hydroxybutanedioic acid / Copper / Bipyridine / Phenanthroline / Self-assembly / 1-D open channel

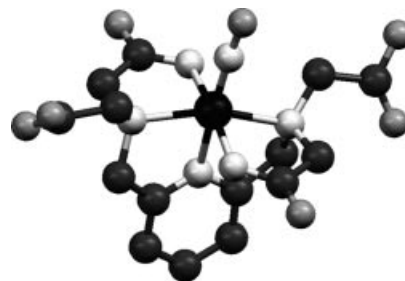


2685

**T. Storr, B. R. Cameron,* R. A. Gossage,
H. Yee, R. T. Skerlj, M. C. Darkes,
S. P. Fricker, G. J. Bridger, N. A. Davies,
M. T. Wilson, K. P. Maresca, J. Zubietta**

Ru^{III} Complexes of Edta and Dtpa Polyamino-carboxylate Analogues and Their Use as Nitric Oxide Scavengers

Keywords: Bioinorganic chemistry / Ruthenium / Polyaminocarboxylates / Nitric oxide scavenging

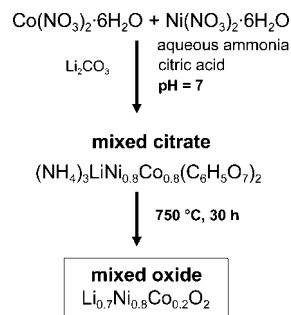


2698 Y. Mosqueda, E. Pérez-Cappe, P. Aranda,
E. Ruiz-Hitzky*



Preparation of an $\text{Li}_{0.7}\text{Ni}_{0.8}\text{Co}_{0.2}\text{O}_2$ Electrode Material From a New Li–Co–Ni Mixed-Citrate Precursor

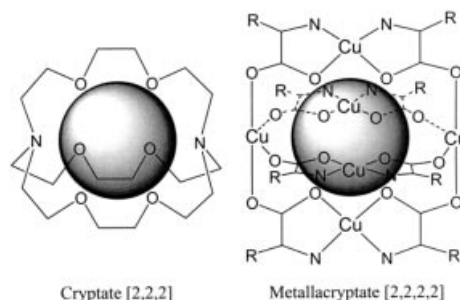
Keywords: Citrates / Electrode materials / Lithium batteries / Mixed-valent compounds / Oxides



2706 S.-C. Xiang, S.-M. Hu, J.-J. Zhang,
X.-T. Wu,* J.-Q. Li

A New Spherical Metallacryptate Compound $[\text{Na} \{ \text{Cu}_6(\text{Thr})_8(\text{H}_2\text{O})_2(\text{ClO}_4)_4 \}] \cdot \text{ClO}_4 \cdot 5\text{H}_2\text{O}$: Magnetic Properties and DFT Calculations

Keywords: Spherical metallacryptate / Magnetic properties / Density functional calculations / Broken symmetry / Threonine

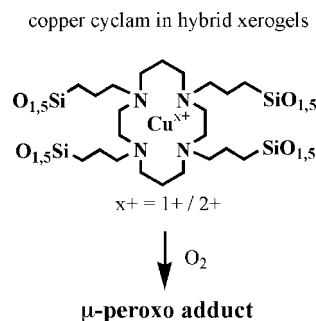


2714 J. Goulon,* C. Goulon-Ginet, A. Rogalev,
F. Wilhelm, N. Jaouen, D. Cabaret, Y. Joly,
G. Dubois, R. J. P. Corriu, G. David,
S. Brandés, R. Guillard*



A Study Using X-ray Absorption and Emission Spectroscopy of Dioxygen-Binding Xerogels Incorporating Cyclam Units Complexed with Copper Salts

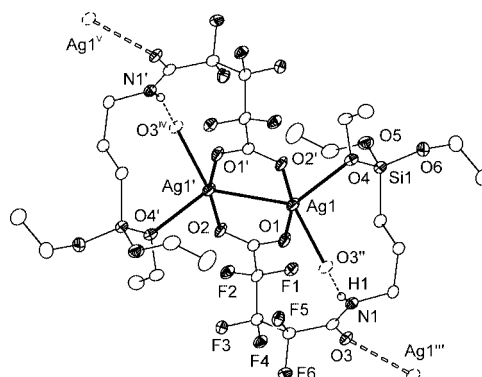
Keywords: X-ray absorption spectroscopy / Tetraaza-macrocyclic ligand / Dioxygen binding / Peroxo ligand / Copper



2727 K. Vehlow, K. Köhler*, S. Blechert,
S. Dechert, F. Meyer

Trialkoxysilyl-Functionalized Silver(I) Carboxylates: New Building Blocks for the Synthesis of Immobilizable and Immobilized Homogeneous Catalysts

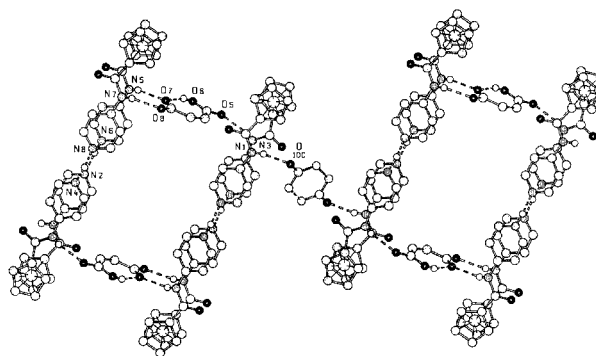
Keywords: Silver / Carboxylate ligands / Fluorinated ligands / Immobilization / Silica / Catalysis



2737 D. Braga,* S. L. Giaffreda, M. Polito,
F. Grepioni*

Design, Preparation and Characterization of the Adducts of the Bis-Amido Cobalticinium Complex $[\text{Co}^{\text{III}}(\eta^5\text{-C}_5\text{H}_4\text{CONHC}_5\text{H}_4\text{N})_2][\text{PF}_6]$ with Fumaric and Maleic Acids

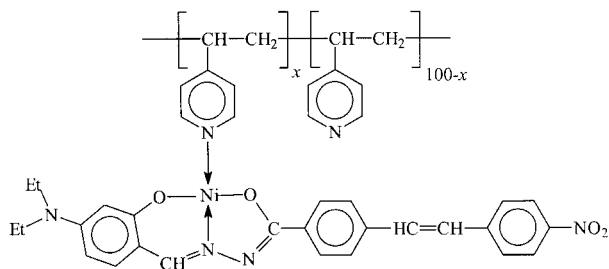
Keywords: Organometallic complexes / Amides / Hydrogen bonding / Crystal engineering / Supramolecular chemistry



2747 U. Caruso, R. Centore,* B. Panunzi,
A. Roviello, A. Tuzi

Grafting Poly(4-vinylpyridine) with a Second-Order Nonlinear Optically Active Nickel(II) Chromophore

Keywords: N ligands / Nickel / Nonlinear optics / Poly(4-vinylpyridine)



Metallo-polymers for second-order nonlinear optics

2754 H. Braunschweig,* M. Kraft, K. Radacki,
S. Stellwag

[1]Borahafnocenophanes: Synthesis, Structure and Catalytic Activity

Keywords: Boron / Hafnium / Metallocenophanes / *ansa*-Metallocenes / Ethylene polymerisation

