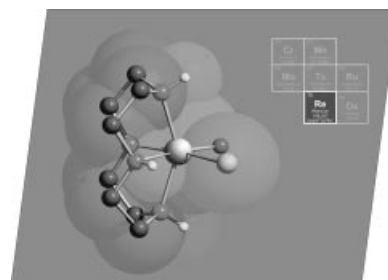


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COVER PICTURE

The cover picture shows the structure of the cation $[\text{ReO}(\text{cyclen-H})\text{I}]^+$. This complex and the analogous $[\text{ReO}(\text{cyclen-H})\text{Cl}]^+$ are the first examples of d transition metal oxo complexes anchored by a monoanionic cyclen ligand. The deprotonation of cyclen can be accounted by the enhanced Lewis acidity of the d^2 rhenium center. Although the geometric constraints of *cis*-octahedral cyclen could impose the *cis*- ReO_2 unit, the resulting *cis*-dioxo complex, *cis*- $[\text{ReO}_2(\text{cyclen})]^+$, is very reactive, being readily converted into $[\text{ReO}(\text{cyclen-H})\text{X}]^+$. Details are discussed in the article by I. Santos et al. on p. 243 ff.



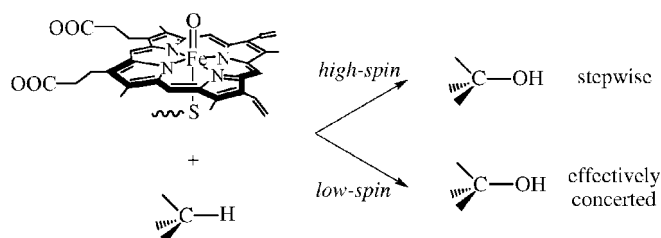
MICROREVIEW

Contents

- 207** S. Shaik,* S. Cohen, S. P. de Visser,
 P. K. Sharma, D. Kumar, S. Kozuch,
 F. Ogliaro, D. Danovich



The “Rebound Controversy”: An Overview and
 Theoretical Modeling of the Rebound Step in
 C–H Hydroxylation by Cytochrome P450



Keywords: Alkanes / Cytochrome P450 / Density functional calculations / Enzyme catalysis / Free radicals / C–H hydroxylation

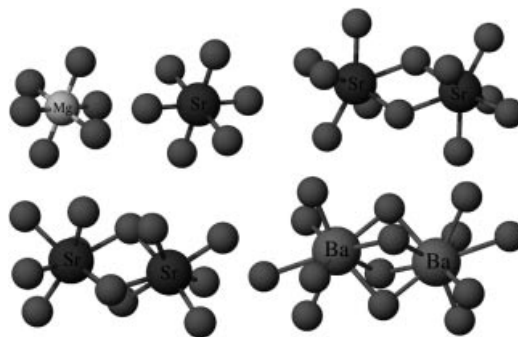
Two-state reactivity in C–H hydroxylation

SHORT COMMUNICATIONS

- 227** J. M. Harrowfield, W. R. Richmond,
B. W. Skelton, A. H. White*

Solid-State Models of Ion Solvation: Crystal Structures of Dimethyl Sulfoxide Solvates of Alkaline Earth Cations

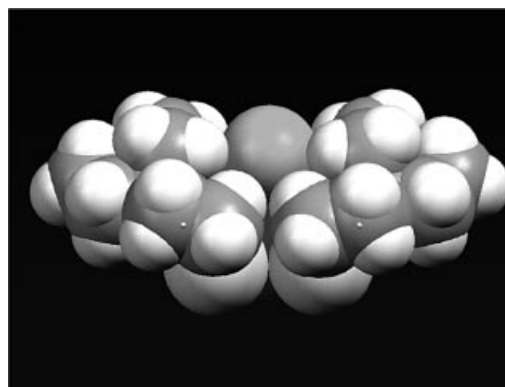
Keywords: Alkaline earth metals / Dimethyl sulfoxide solvates / Solid state structures / Solvent effects



- 231** M. L. Golden, S. P. Jeffery, M. L. Miller,
J. H. Reibenspies, M. Y. Darensbourg*

The Construction of $(\text{N}_2\text{S}_2)\text{Ni-Pd}$ Clusters: A Slant-Chair, a Basket and a C_4 -Paddlewheel Structure

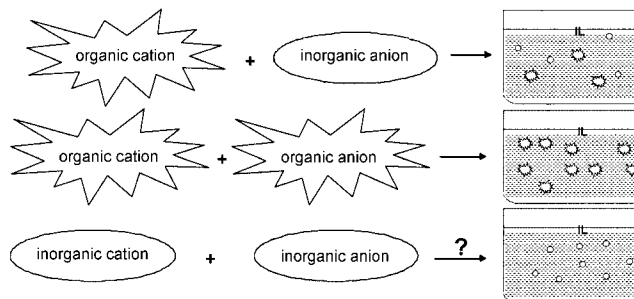
Keywords: Metallothiolate ligands / Phosphane mimics / Nickel / Palladium / Cluster compounds



- 237** L. Dai, S. Yu, Y. Shan,* M. He

Novel Room Temperature Inorganic Ionic Liquids

Keywords: Inorganic ionic liquids / Ionic liquids / Polyoxometalates / Transition metals / Green chemistry

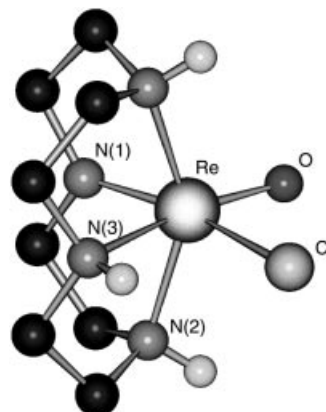


FULL PAPERS

- 243** C. Xavier, A. Paulo, A. Domingos,
I. Santos*

Synthesis and Structural Studies of Rhenium(v) Complexes Stabilized by a Monoanionic Cyclen Ligand

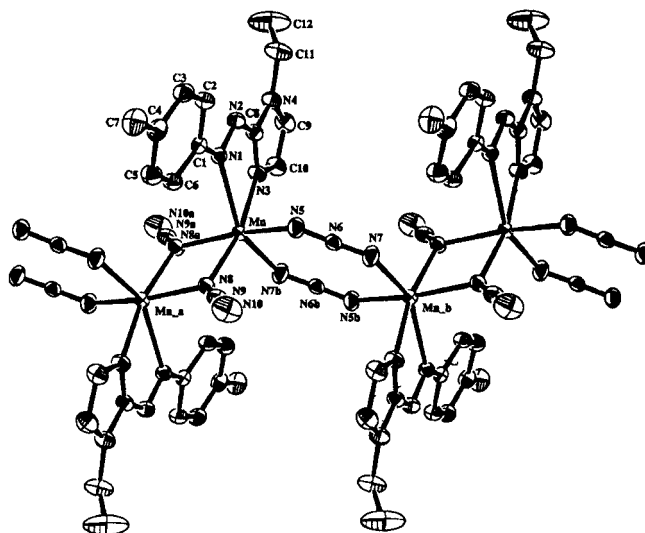
Keywords: Rhenium / Oxo ligands / Macrocycles / N ligands



U. Ray, S. Jasimuddin, B. K. Ghosh,
M. Monfort, J. Ribas,* G. Mostafa,
T.-H. Lu, C. Sinha*

A New Alternating Ferro-Antiferromagnetic One-Dimensional Azido-Bridged (Arylazoimidazole)manganese(II), $[\text{Mn}(\text{TaiEt})(\text{N}_3)_2]_n$ [TaiEt = 1-Ethyl-2-(*p*-tolylazo)imidazole], Exhibiting Bulk Weak Ferromagnetic Long-Range Ordering

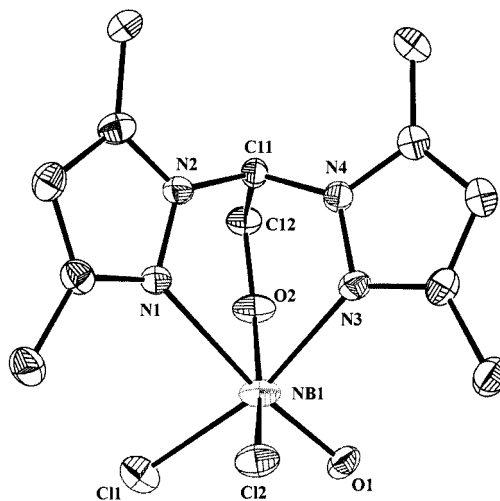
Keywords: Magnetic properties / Manganese / N ligands / Polymers



A. Otero,* J. Fernández-Baeza,
A. Antiñolo, J. Tejada, A. Lara-Sánchez,
L. Sánchez-Barba, A. M. Rodríguez

New Complexes of Niobium(V) and Tantalum(V) with Monoanionic NNO Heteroscorpionate Ligands

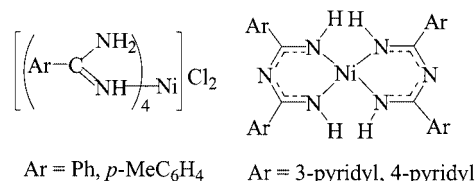
Keywords: Niobium / Tantalum / Tripodal ligands / Oxo ligands / Alkoxide ligands



J. Guo, W.-K. Wong,* W.-Y. Wong

Syntheses and Crystal Structures of Tetrakis(arylamidine)nickel(II) Chloride and Bis[2,4-dipyridyl-1,3,5-triazapentadienato]nickel(II)

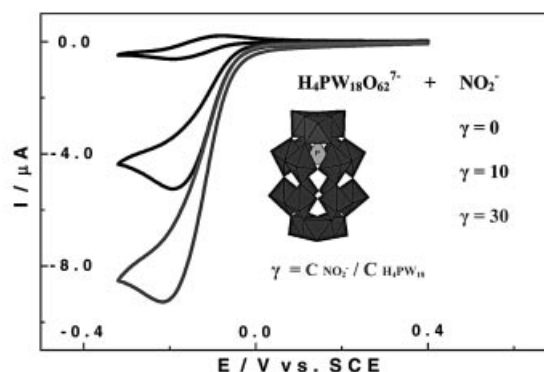
Keywords: Hydrogen bonds / Nickel / N ligands / Magnetic properties / Macrocyclic ligands



I.-M. Mbomekalle, B. Keita, Y. W. Lu,
L. Nadjo,* R. Contant, N. Belai,
M. T. Pope

Synthesis, Characterization and Electrochemistry of the Novel Dawson-Type Tungstophosphate $[\text{H}_4\text{PW}_{18}\text{O}_{62}]^{7-}$ and First Transition Metal Ions Derivatives

Keywords: Polyoxometalates / Tungsten / Heteropolyanions / Electrochemistry / Electrocatalysis

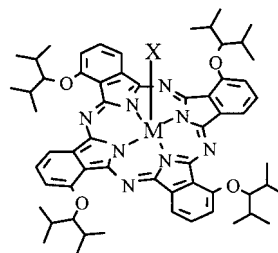


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**W. Liu, C.-H. Lee, H.-S. Chan,
T. C. W. Mak, D. K. P. Ng***

Synthesis, Spectroscopic Properties, and Structure of [Tetrakis(2,4-dimethyl-3-pentyloxy)phthalocyaninato]metal Complexes

Keywords: Macrocyclic compounds / Inclusion compounds / N ligands



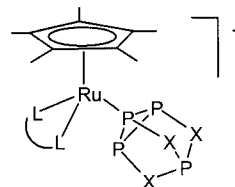
293

**M. Di Vaira, I. de los Rios, F. Mani,
M. Peruzzini, P. Stoppioni***



η^1 -P_{basal} Coordination of P₄X₃ (X = S, Se)
Molecules toward 16e Ruthenium Fragments

Keywords: Ruthenium / Cyclopentadienyl ligands / Bidentate ligands / Density functional calculations

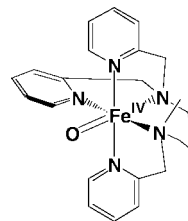


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**V. Baland, M.-F. Charlot, F. Banse,*
J.-J. Girerd,* T. A. Mattioli, E. Bill,
J.-F. Bartoli, P. Battioni, D. Mansuy**

Spectroscopic Characterization of an Fe^{IV} Intermediate Generated by Reaction of XO[−] (X = Cl, Br) with an Fe^{II} Complex Bearing a Pentadentate Non-Porphyrinic Ligand – Hydroxylation and Epoxidation Activity

Keywords: Iron / Oxo ligands / Bioinorganic chemistry / Epoxidation / Hydroxylation

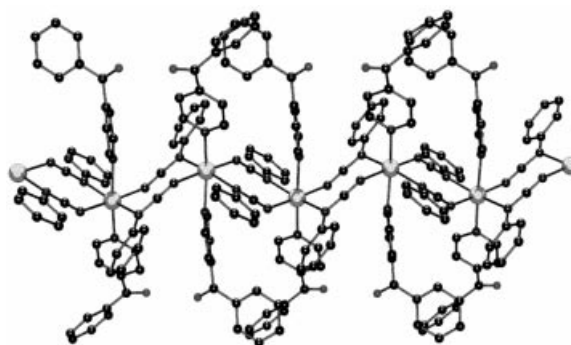


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**A. Escuer, N. Sanz, F. A. Mautner,
R. Vicente***

Phenylcyanamido Ligand Building Molecular, 1-D, and 2-D Systems – Syntheses, Crystal Structures and Magnetic Properties

Keywords: Manganese / Magnetic properties / Phenylcyanamido ligands / Bridging ligands

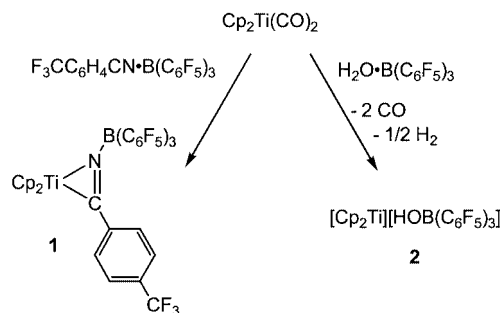


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R. Choukroun,* C. Lorber, L. Vendier

Reactivity of $[\text{Cp}_2\text{Ti}(\text{CO})_2]$ towards Nitrile and Water Adducts of $\text{B}(\text{C}_6\text{F}_5)_3$: Formation of $[\text{Cp}_2\text{Ti}(\eta^2\text{-F}_3\text{CC}_6\text{H}_4\text{CN})\cdot\text{B}(\text{C}_6\text{F}_5)_3]$ and $[\text{Cp}_2\text{Ti}]\cdot[\text{HOB}(\text{C}_6\text{F}_5)_3]$ with a $\text{Ti}\cdots\text{F}$ Interaction

Keywords: Titanium / Boranes / N ligands / Structure elucidation / Hydrolysis



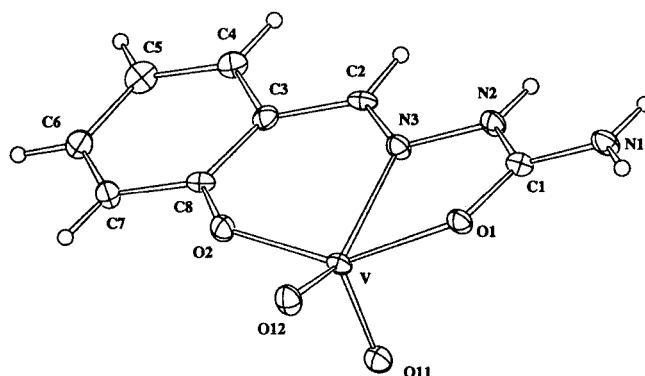
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P. Noblía, E. J. Baran, L. Otero, P. Draper,
H. Cerecetto, M. González, O. E. Piro,
E. E. Castellano, T. Inohara, Y. Adachi,
H. Sakurai, D. Gambino*



New Vanadium(V) Complexes with Salicylaldehyde Semicarbazone Derivatives: Synthesis, Characterization, and in vitro Insulin-Mimetic Activity – Crystal Structure of $[V^VO_2(\text{salicylaldehyde semicarbazone})]$

Keywords: Vanadium / Tridentate ligands / N,O,O ligands / Insulin-mimetic agents

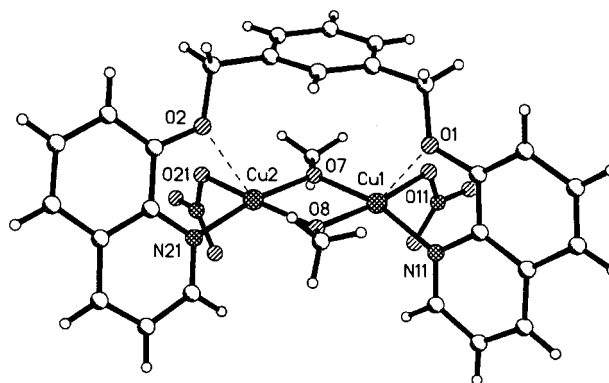


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M. R. A. Al-Mandhary, P. J. Steel*

X-ray Crystallographic Study of Copper(II), Cobalt(II) and Silver(I) Complexes of Ligands Containing Two Oxine Subunits Linked by Xylene Spacer Groups

Keywords: N,O ligands / Copper / Cobalt / Silver / Bridging ligands

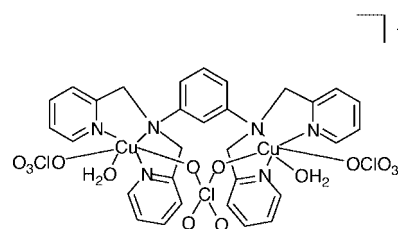


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S. P. Foxon, G. R. Torres, O. Walter,
J. Z. Pedersen, H. Toftlund, M. Hüber,
K. Falk, W. Haase, J. Cano, F. Lloret,
M. Julve,* S. Schindler*

Syntheses, Structures, and Magnetic Properties of Copper(II) Complexes with 1,3-[Bis(2-pyridylmethyl)amino]benzene (1,3-tpbd) as Ligand

Keywords: Copper / Magnetic properties / EPR spectroscopy / Spin polarisation / Dinuclear complexes

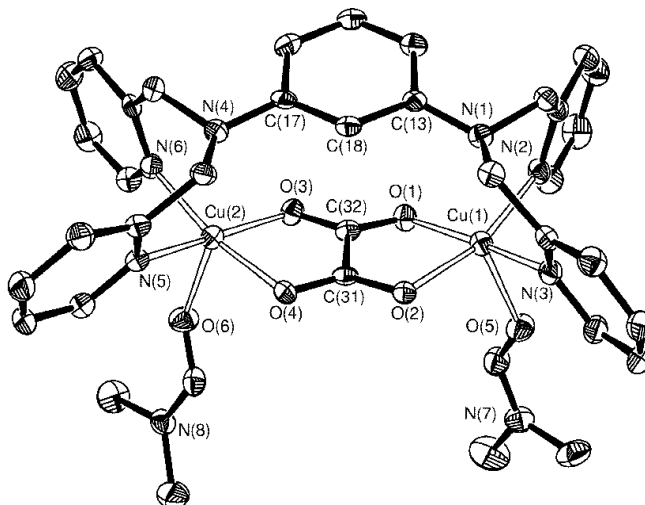


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S. P. Foxon, O. Walter, R. Koch, H. Rupp,
P. Müller, S. Schindler*

Tuning the Magnetic Properties of a Dinuclear Copper Complex: From Ferromagnetic to Anti-ferromagnetic Coupling

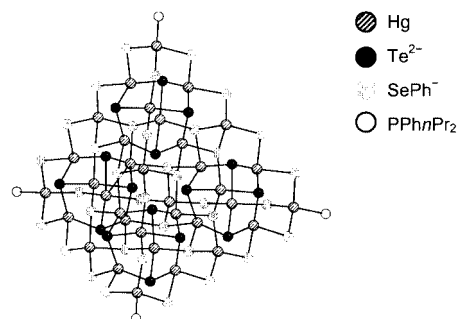
Keywords: Magnetism / Copper / Azides / Dinuclear complexes



349 A. Eichhöfer,* P. Deglmann

Mercury–Chalcogenide Clusters: Synthesis and Structure of $[\text{Hg}_{10}\text{Te}_4(\text{SePh})_{12}(\text{PPh}_2\text{Pr}_2)_4]$, $[\text{Hg}_{10}\text{Te}_4(\text{TePh})_{12}(\text{PPh}_2\text{Pr}_2)_4]$ and $[\text{Hg}_{34}\text{Te}_{16}(\text{SePh})_{36}(\text{PPh}_2\text{Pr}_2)_4]$

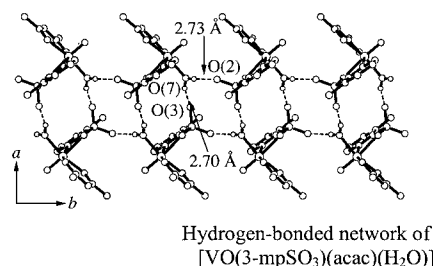
Keywords: Cluster compounds / Mercury / Tellurium / Selenium / DFT calculations



356 T. S. Lobana,* I. Kinoshita,* K. Kimura,
T. Nishioka, D. Shiomi, K. Isobe

Pyridine-2-sulfonates as Versatile Ligands for the Synthesis of Novel Coordinative and Hydrogen-Bonded Supramolecules

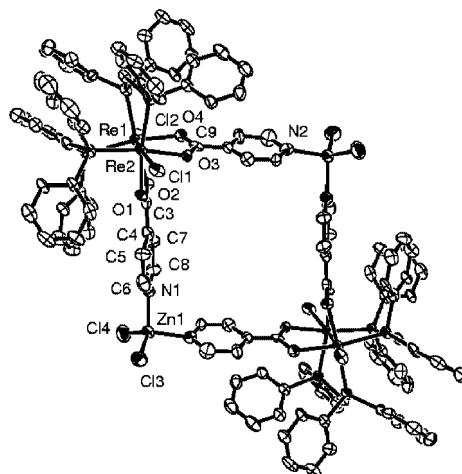
Keywords: Coordination polymers / Hydrogen bonds / Supramolecular chemistry / Magnetic properties / Stacking interactions



368 J. K. Bera, J. Bacsá, B. W. Smucker,
K. R. Dunbar*

Heterometallic Molecular Squares and Polymers Based On Self-Assembly Reactions of Multiply Bonded Dirhenium Complexes

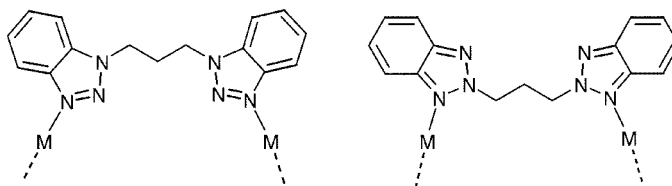
Keywords: Self-assembly / Polymers / Supramolecular chemistry / Rhenium / Multiple bonds



376 P. Børsting, P. J. Steel*

Synthesis and X-ray Crystal Structures of Cobalt and Copper Complexes of 1,3-Bis(benzotriazolyl)propanes

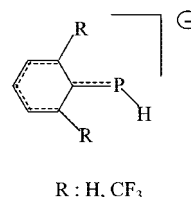
Keywords: Copper / Cobalt / Cluster compounds / Bridging ligands / N ligands



381 K. Miqueu, J.-M. Sotiropoulos,
G. Pfister-Guillouzo,* V. Rudzevich,
V. Romanenko, G. Bertrand

Role of the 2,6-Bis(trifluoromethyl)phenyl Group on the Acidity of the Corresponding Phosphane

Keywords: Photoelectron spectroscopy / DFT calculations / Phosphanide anions / Phosphanes

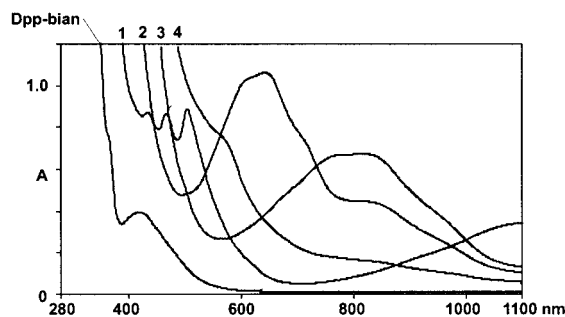


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I. L. Fedushkin,* A. A. Skatova,
V. A. Chudakova, V. K. Cherkasov,
G. K. Fukin, M. A. Lopatin

Reduction of 1,2-Bis[(2,6-diisopropylphenyl)-imino]acenaphthene (dpp-bian) with Alkali Metals – A Study of the Solution Behaviour of (dpp-bian)ⁿ⁻[M⁺]_n (M = Li, Na; n = 1–4) with UV/Vis, ESR and ¹H NMR Spectroscopy

Keywords: Lithium / Sodium / Bis(imino)acenaphthene / Polyanions



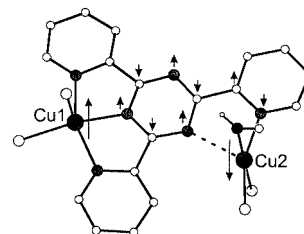
UV-VIS spectra of mono- (1), di- (2), tri- (3) and tetraanion (4) of dpp-bian with lithium as counterion in TMEDA at 293 K

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T. Glaser,* T. Lügger, R. Fröhlich

Synthesis, Crystal Structures, and Magnetic Properties of a Mono- and a Dinuclear Copper(II) Complex of the 2,4,6-Tris(2-pyridyl)-1,3,5-triazine Ligand

Keywords: Magnetic properties / Copper / N ligands / Coordination chemistry



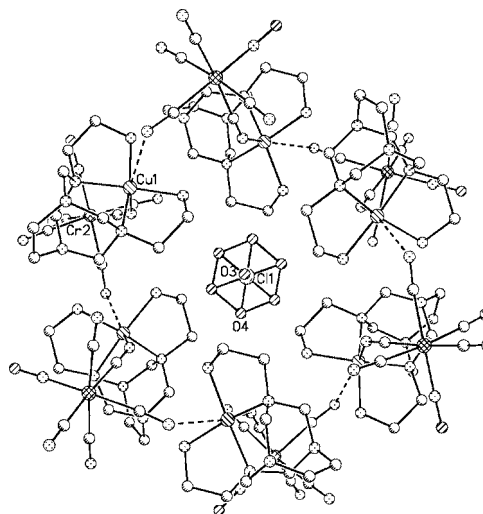
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H.-Z. Kou,* B. C. Zhou, S.-F. Si,
R.-J. Wang



Cyano-Bridged Dimetallic Polynuclear Cu₆Cr, Cu₆Cr₆, Cu₂W, and CuW Arrays: Synthesis, Crystal Structure, and Magnetism

Keywords: Cyano bridges / Magnetic properties / Tungsten / Copper / Chromium

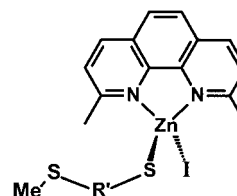


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J. Seebacher, M. Ji, H. Vahrenkamp*

(Neocuproin)zinc Thiolates: Attempts at Modeling Cobalamin-Independent Methionine Synthase

Keywords: Zinc / Metal complexes / Thiolates / Bioinorganic chemistry

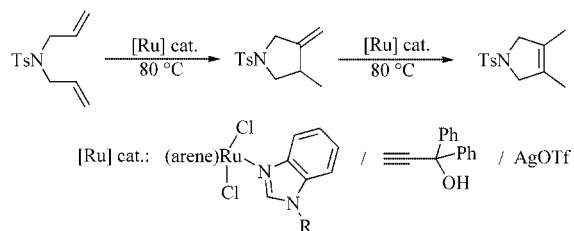


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I. Özdemir, E. Çetinkaya, B. Çetinkaya,*
M. Çiçek, D. Sémeril, C. Bruneau,*
P. H. Dixneuf

Access to 3-Methyl-4-methylene-*N*-tosylpyrrolidine and 3,4-Dimethyl-*N*-tosylpyrroline by Ruthenium-Catalyzed Cascade Cycloisomerization/Isomerization Reactions

Keywords: Ruthenium / Benzimidazole / Homogeneous catalysis / Olefination



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O. Crespo, V. V. Brusko, M. C. Gimeno,
M. L. Tornil, A. Laguna,* N. G. Zabirow

Gold and Silver Complexes with the Ligands *N*-[Bis(isopropoxy)thiophosphoryl]thiobenzamide and *N*-[Bis(isopropoxy)thiophosphoryl]-*N'*-phenylthiourea

Keywords: Gold / Silver / Sulfur / Thiourea / Thioamide

