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COVER PICTURE

The cover picture shows a symbolic representation of the fate of vanadate in human blood. Since the transition metal vanadium is named after Vanadis, the Nordic goddess of beauty, she is represented by the famous Venus de Milo sculpted in metal. Her cloth is decorated with the functional groups of the ligands that can form a complex (“dress”) with the metal while travelling in the blood vessels, the latter being symbolised by the caverns in the background. The water in the caves represents the aqueous solutions in which speciation studies have been carried out in the group of Professor Lage Pettersson. Further references to these studies are found as cave paintings on the walls: a distribution diagram and a set of ^{51}V NMR spectra. The studies have been carried out in the framework of the COST D21/009 working group. The geographical locations of the research groups within this working group are shown by illuminated dots on the map of Europe in the background. The goal of the studies was to better understand the ability of vanadium to lower blood glucose levels (represented by the sugar cubes washed ashore on the left) and thus its potential as an orally applicable drug against diabetes. A Microreview, covering the results of the above mentioned speciation studies dealing with the fate of vanadate in human blood, is represented by A. Gorzsás, I. Andersson, and L. Pettersson on p. 3559 ff. The digital artwork for this cover was created by András Gorzsás.



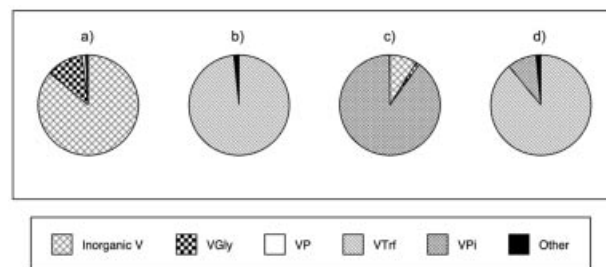
MICROREVIEW

Contents

3559 A. Gorzsás,* I. Andersson, L. Pettersson

On the Fate of Vanadate in Human Blood

Keywords: Vanadium / Bioinorganic chemistry /
 Equilibria in aqueous solution / Diabetes

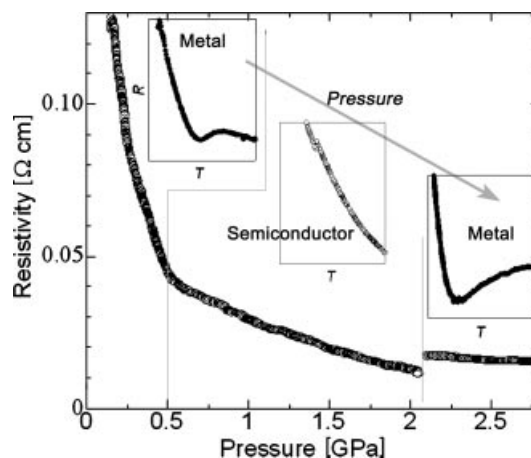


SHORT COMMUNICATIONS

- 3567** A. Kobayashi, A. Tokunaga, R. Ikeda,
H. Sagayama, Y. Wakabayashi, H. Sawa,
M. Hedo, Y. Uwatoko, H. Kitagawa*

Pressure-Induced Metal–Semiconductor–Metal
Transitions in an MMX-Chain Complex,
 $\text{Pt}_2(\text{C}_2\text{H}_5\text{CS}_2)_4\text{I}$

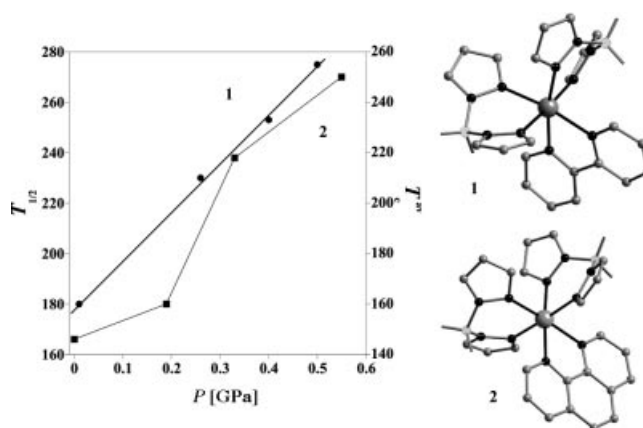
Keywords: Mixed-valent compounds / Conducting
materials / MMX chain / Metal–insulator
transition / High pressure



- 3571** A. Galet, A. B. Gaspar, G. Agusti,
M. C. Muñoz, G. Levchenko, J. A. Real*

Pressure Effect Investigations on the Spin
Crossover Systems $\{\text{Fe}[\text{H}_2\text{B}(\text{pz})_2]_2(\text{bipy})\}$ and
 $\{\text{Fe}[\text{H}_2\text{B}(\text{pz})_2]_2(\text{phen})\}$

Keywords: Spin transition / Bistability / Cooperative
effects / Pressure / Phase Transitions

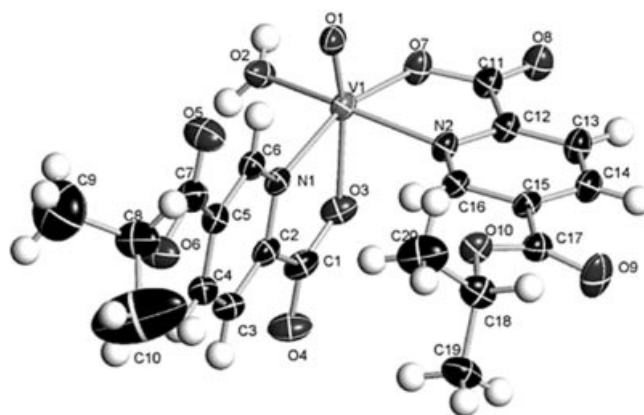


FULL PAPERS

- 3575** J. Gärtjens,* B. Meier, Yu. Adachi,
H. Sakurai, D. Rehder

Characterization and Insulin-Mimetic Potential
of Oxidovanadium(IV) Complexes Derived from
Monoesters and -carboxylates of 2,5-Dipicol-
inic Acid

Keywords: Vanadium / N,O Ligands / Picolinates /
Insulin mimesis

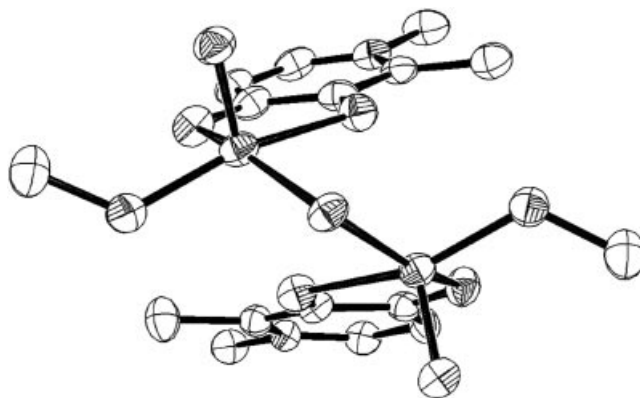


3586

F. Avecilla,* C. F. G. C. Geraldés,
A. L. Macedo, M. M. C. A. Castro*

Crystal Structure of the V^V Dimer [V₂O₂(μ-O)(dmpp)₂(OCH₃)₂] and Its Equilibrium with the V^V Trimer [V₃O₃(μ-O)₃(dmpp)₃(H₂O)]-(H₂O)₂ in Methanol/Water Solutions

Keywords: Vanadium / Pyridinone complexes / NMR spectroscopy / X-ray crystallography



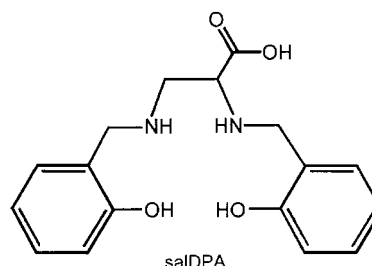
3595

J. Costa Pessoa,* S. Marcão, I. Correia,
G. Gonçalves, A. Dörnyei, T. Kiss,*
T. Jakusch, I. Tomaz, M. M. C. A. Castro,
C. F. G. C. Geraldés, F. Avecilla



Vanadium (IV and V) Complexes of Reduced Schiff Bases Derived from the Reaction of Aromatic *o*-Hydroxyaldehydes and Diamines Containing Carboxyl Groups

Keywords: Salen-like ligands / N,O ligands / Vanadium / Coordination modes / Equilibrium and structural studies

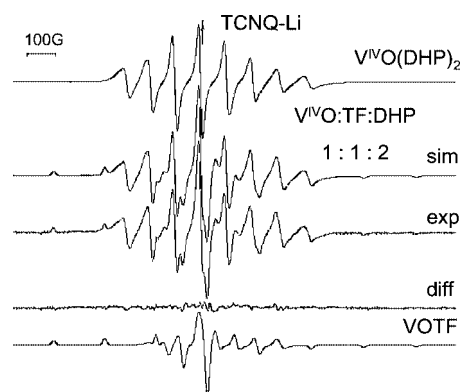


3607

T. Kiss,* T. Jakusch, S. Bouhsina,
H. Sakurai, É. A. Enyedy

Binding Constant of V^{IV}O to Transferrin

Keywords: V^{IV}O–Transferrin complexes / EPR spectroscopy / UV spectroscopy / Stability constants



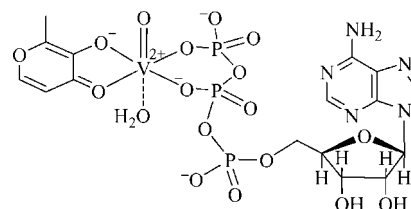
3614

Á. Dörnyei, S. Marcão, J. Costa Pessoa,*
T. Jakusch, T. Kiss*



Interactions of Insulin-Mimetic Vanadium Complexes with the Cell Constituents ATP and Glutathione

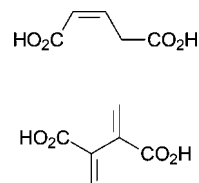
Keywords: Insulin mimetics / Vanadium oxido complexes / Coordination modes



- 3622** W. Buckel,* A. J. Pierik, S. Plett,
A. Alhapel, D. Suarez, S. Tu, B. T. Golding*

Mechanism-Based Inactivation of Coenzyme B₁₂-Dependent 2-Methyleneglutarate Mutase by (Z)-Glutaconate and Buta-1,3-diene-2,3-dicarboxylate

Keywords: 2-Methyleneglutarate / Mutase / Coenzyme B₁₂ / Inhibition / Buta-1,3-diene-2,3-dicarboxylic acid / Glutaconic acid



- 3627** G. Pilet,* J. Grins, M. Edén,
S. Esmailzadeh

La₁₇Si₉Al₄N_{32-x}O_x ($x \leq 1$): A Nitridoaluminosilicate with Isolated Si/Al-N/O Clusters

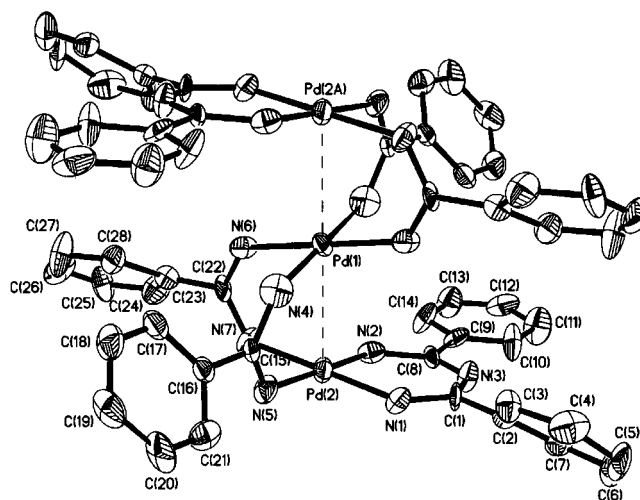


Keywords: Aluminosilicates / Anions / Lanthanides

- 3634** J.-P. Guo, W.-K. Wong,* W.-Y. Wong

The Template Effect of Palladium(II): Synthesis, Characterization, and Crystal Structures of 2,4-Substituted 1,3,5-Triazapentadienatopalladium(II) Complexes

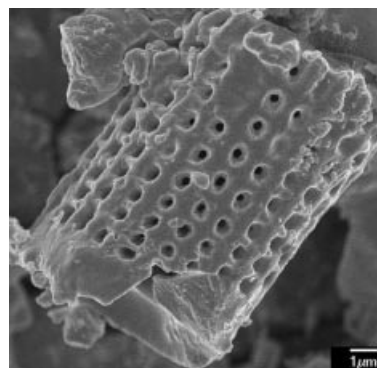
Keywords: Amidinate ligands / Hydrogen bonds / Palladium / N ligands



- 3641** X. Cai, G. Zhu,* W. Zhang, H. Zhao,
C. Wang,* S. Qiu, Y. Wei*

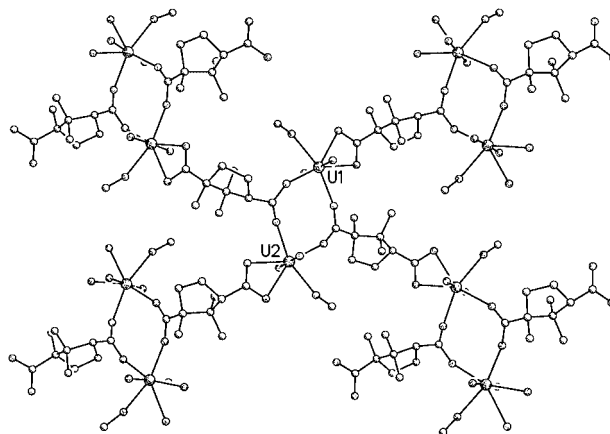
Diatom-Templated Synthesis of Ordered Meso/Macroporous Hierarchical Materials

Keywords: Hierarchical materials / Nanomaterials / Porosity / Sol-gel processes / Template synthesis



Solvothermal Synthesis and Crystal Structure of Uranyl Complexes with 1,1-Cyclobutanedicarboxylic and (1*R*,3*S*)-(+)-Camphoric Acids – Novel Chiral Uranyl–Organic Frameworks

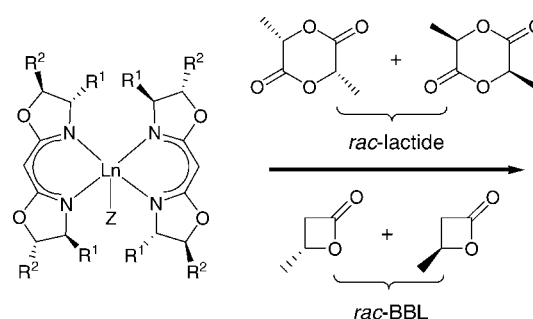
Keywords: Uranium / Carboxylate ligands / Metal–organic frameworks / Solvothermal synthesis / Structure elucidation



3652 A. Alaaeddine, A. Amgoune, C. M. Thomas, S. Dagorne, S. Bellemin-Laponnaz, J.-F. Carpentier*

Bis[bis(oxazolinato)] Complexes of Yttrium and Lanthanum: Molecular Structure and Use in Polymerization of DL-Lactide and DL-β-Butyrolactone

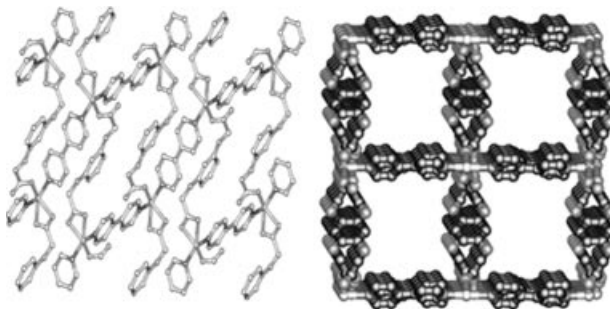
Keywords: Homogeneous catalysis / Lanthanides / N ligands / Polymerization



3659 X.-L. Hong, J. Bai,* Y. Song, Y.-Z. Li, Y. Pan*

Luminescent Open-Framework Antiferromagnet – Hydrothermal Syntheses, Structures, and Luminescent and Magnetic Properties of Two Novel Coordination Polymers: [Zn(pdoa)-(bipy)]_n and {[Mn(pdoa)(bipy)](bipy)}_n [pdoa = 2,2'-(1,3-phenylenedioxy)bis(acetate); bipy = 4,4'-bipyridine]

Keywords: Functional coordination polymers / Polycarboxylate ligands / 4,4'-Bipyridine / Luminescence

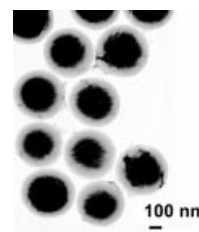


3667 C. Lin, H. Wang, D. Kong, M. Yu, X. Liu, Z. Wang, J. Lin*



Silica Supported Submicron SiO₂@Y₂SiO₅:Eu³⁺ and SiO₂@Y₂SiO₅:Ce³⁺/Tb³⁺ Spherical Particles with a Core–Shell Structure: Sol–Gel Synthesis and Characterization

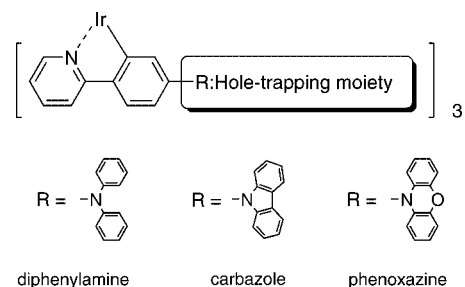
Keywords: Sol–gel processes / Luminescence / Core–shell structures / Silicates / Materials science



3676 K. Ono,* M. Joho, K. Saito, M. Tomura,
Y. Matsushita, S. Naka, H. Okada,
H. Onnagawa

Synthesis and Electroluminescence Properties of
fac-Tris(2-phenylpyridine)iridium Derivatives
Containing Hole-Trapping Moieties

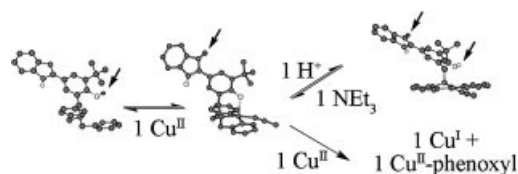
Keywords: Amines / Charge-carrier injection /
Doping / Iridium / Luminescence



3684 F. Michel, F. Thomas,* S. Hamman,
C. Philouze, E. Saint-Aman, J.-L. Pierre

Galactose Oxidase Models: Creation and
Modification of Proton Transfer Coupled to
Copper(II) Coordination Processes in Pro-
Phenoxyl Ligands

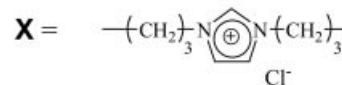
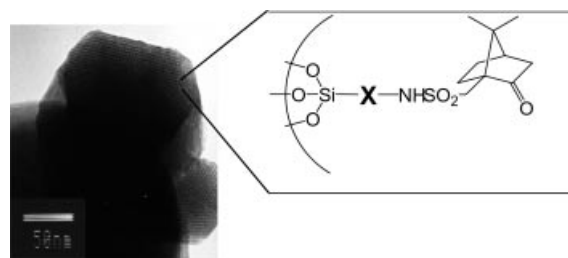
Keywords: Copper / Phenoxyl / Tripodal ligands /
Proton transfer / Radicals



3697 B. Gadenne, P. Hesemann, V. Polshettiwar,
J. J. E. Moreau*

Highly Ordered Functional Organosilicas by
Template-Directed Hydrolysis-Polycondensation
of Chiral Camphorsulfonamide Precursors

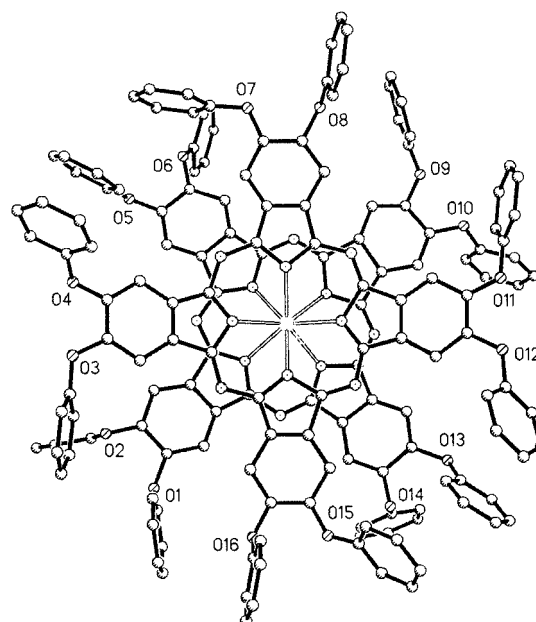
Keywords: Mesoporous materials / Organic-inorganic
hybrid composites / Sol-gel processes /
Supported catalysts / Template synthesis



3703 G. Lu, M. Bai, R. Li, X. Zhang, C. Ma,
P.-C. Lo, D. K. P. Ng, J. Jiang*

Lanthanide(III) Double-Decker Complexes with
Octaphenoxy- or Octathiophenoxyphthalocyaninato
Ligands – Revealing the Electron-
Withdrawing Nature of the Phenoxy and Thio-
phenoxy Groups in the Double-Decker
Complexes

Keywords: Phthalocyanine / Rare earth / Double-
decker / Phenoxy group / Thiophenoxy
group



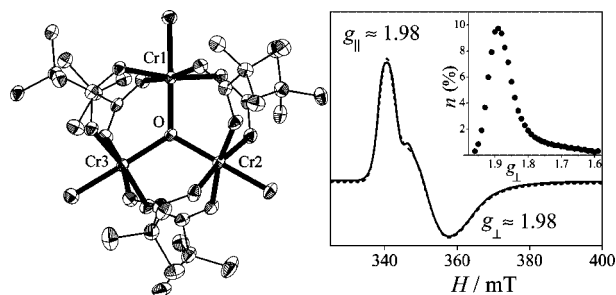
3710

V. Psycharis,* C. P. Raptopoulou,
A. K. Boudalis, Y. Sanakis, M. Fardis,
G. Diamantopoulos, G. Papavassiliou



Syntheses, Structural, and Physical Studies of Basic Cr^{III} and Fe^{III} Benzilates and Benzoates: Evidence of Antisymmetric Exchange and Distributions of Isotropic and Antisymmetric Exchange Parameters

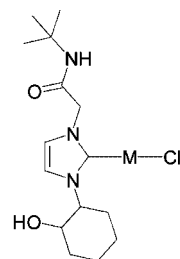
Keywords: Trinuclear oxo-centered chromium(III) and iron(III) complexes / Magnetic properties / Crystal structures / EPR spectroscopy / Mössbauer spectroscopy



3724

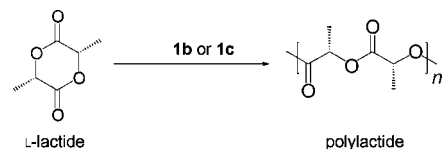
L. Ray, V. Katiyar, M. J. Raihan,
H. Nanavati, M. M. Shaikh, P. Ghosh*

First Example of a Gold(I) *N*-Heterocyclic-Carbene-Based Initiator for the Bulk Ring-Opening Polymerization of L-Lactide



M = Ag (1b), Au (1c)

Keywords: Carbenes / Functionalized NHC / Ring-opening polymerization (ROP) / Organometallic catalysis / Silver–NHC complex / Gold–NHC complex

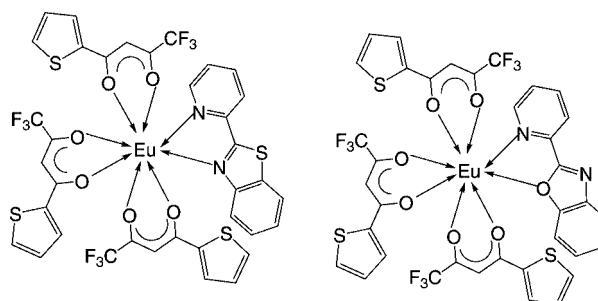


3731

L.-H. Gao, M. Guan, K.-Z. Wang,*
L.-P. Jin, C.-H. Huang

A Comparative Study of the Optical and Electroluminescent Properties of Eu^{III} Complexes with TTA and 2-(2'-Pyridyl)azoles: The Crystal Structure of [Eu(TTA)₃(PBO)]

Keywords: X-ray diffraction / Luminescence / Chelates / N/O ligands / Lanthanides



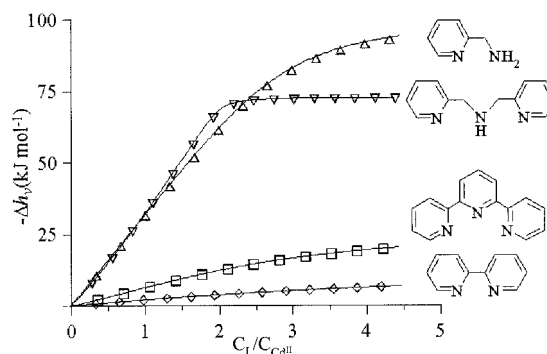
3738

S. Del Piero, P. Di Bernardo, R. Fedele,
A. Melchior,* P. Polese, M. Tolazzi*



Affinity of Polypyridines Towards Cd^{II} and Co^{II} Ions: a Thermodynamic and DFT Study

Keywords: Cadmium(II) / Cobalt(II) / Pyridine complexes / Thermodynamics / Density functional calculations

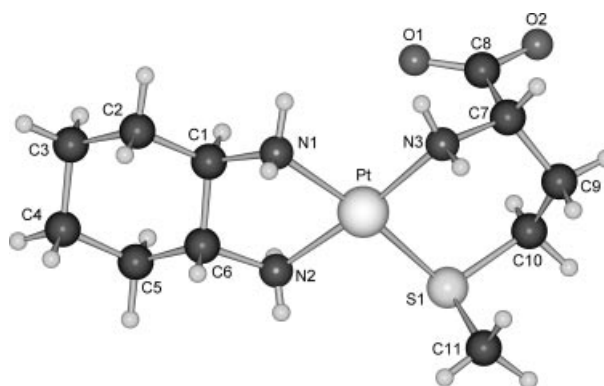


3746 C. Rothenburger, M. Galanski,* V. B. Arion,
H. Görls, W. Weigand,* B. K. Keppler*



Synthesis and Characterization of [(1*R*,2*R*)-*trans*-Diaminocyclohexane]platinum(II) Coordinated to Sulfur and Selenium Amino Acids

Keywords: Bioinorganic chemistry / Platinum / Amino acids / Sulfur / Selenium

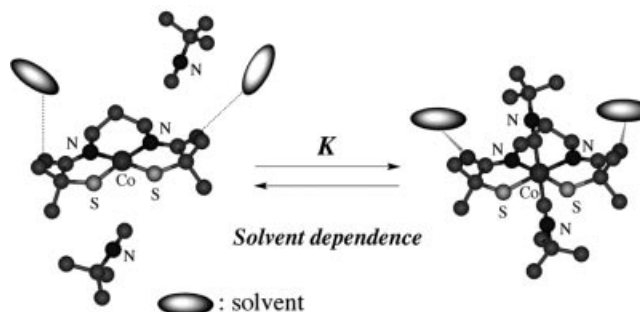


3753 T. Yano, H. Aii, S. Yamaguchi,
Y. Funahashi, K. Jitsukawa, T. Ozawa,*
H. Masuda*



Co^{III} Complexes with Square-Planar N₂S₂- and N₂(SO₂)₂-Type Ligands as An Active Site Structural Model for Nitrile Hydratase – Biological Implications of an Amidate Coordination

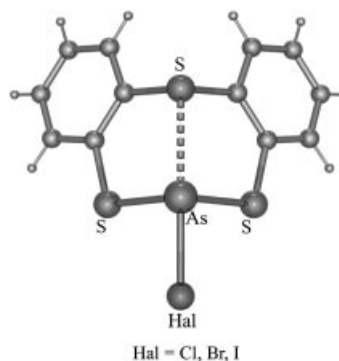
Keywords: Nitrile hydratase / Cobalt / Amidate ligand / Electrophilic interactions / Lewis acids



3762 S. González-Montiel, N. Andrade-López,
J. G. Alvarado-Rodríguez*

Synthesis, Characterisation and Properties of *As*-Monohalogenated Dibenzaoarsocines S(C₆H₄S)₂AsHal (Hal = Cl, Br, I) – A Study of the Transannular Interaction S→As

Keywords: Arsenic complexes / Main group elements / Hypervalent compounds / Structure elucidation



3769 E. Ortega, N. Kleigrewe, G. Kehr, G. Erker,*
R. Fröhlich

Product Diversity in the Reaction of [(norbornadiene){CpP(*i*Pr)₂}Rh] with Alkyl Iodides

Keywords: Rhodium / Phosphonium salts / Dimetallic complexes / Cyclopentadienyl ligands / Phosphorus ylides

