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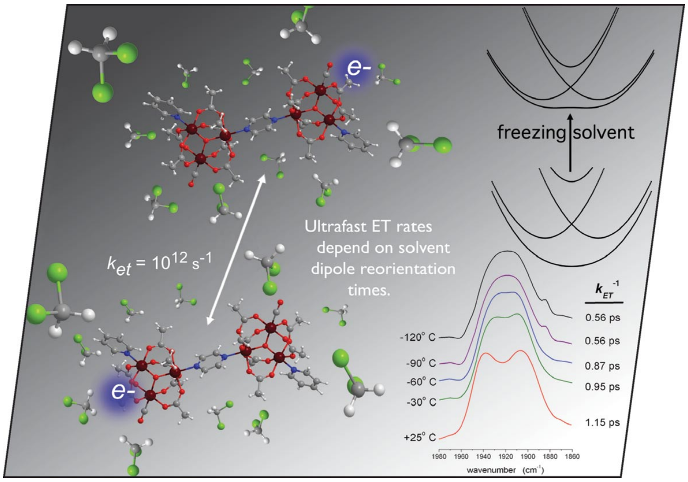
A union formed by chemical societies in Europe (ChemPubSoc Europe) has taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry*. Three further members of ChemPubSoc Europe (Austria, Czech Republic and Sweden) are Associates of the two journals.

COVER PICTURE

The cover picture shows a Class II/III mixed-valence system, $\{[Ru_3O(OAc)_6(CO)(pyridine)]_2-pyrazine\}^{-1}$, which undergoes picosecond intramolecular electron transfer (right). In nearly delocalized mixed-valence complexes, rates of ET depend highly on solvent dynamics. Freezing of the solution causes a localized-to-delocalized transition, and rates of ET increase. We find that, for Class II/III mixed-valence complexes, solvent dynamical parameters control rates of ET and tend to localize otherwise delocalized electronic states. Details are presented in the Microreview by C. P. Kubiak et al. on p. 585ff.



CONTENTS

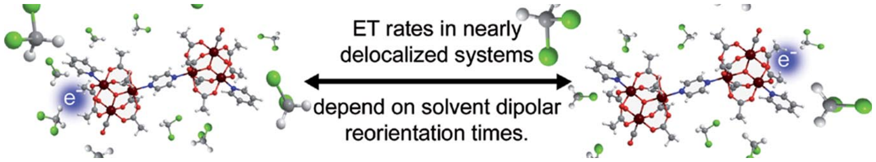
MICROREVIEW

Ultrafast Mixed Valency

S. D. Glover, J. C. Goeltz, B. J. Lear, C. P. Kubiak* 585–594

Mixed Valency at the Nearly Delocalized Limit: Fundamentals and Forecast

Keywords: Mixed-valent compounds / Electron transfer / Spectroelectrochemistry / Self-assembly / Ruthenium



This article reviews our work with mixed-valence dimers of ruthenium trimers which lie on the precipice of delocalization. Applied studies addressing supramolecular cooperativity and electrostatic control of electronic distribution in mixed-valence systems are also discussed.

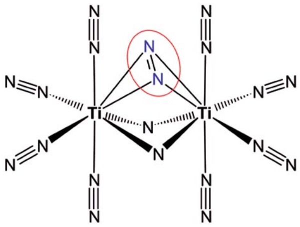
SHORT COMMUNICATIONS

Dinitrogen Activation

L. Manceron,* O. Hübner, H.-J. Himmel* 595–598

Dinitrogen Activation by the Ti_2N_2 Molecule: A Matrix Isolation Study

Keywords: Dinitrogen / N_2 activation / Bond activation / Matrix isolation / Titanium / Nitrides



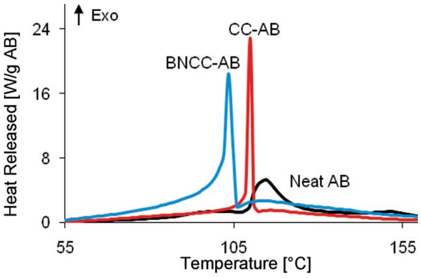
N_2 activation by a nitride: reaction of matrix-isolated $Ti_2(\mu\text{-}N)_2$ with N_2 affords several new N_2 complexes with different degrees of N_2 bond activation. In neat solid N_2 matrices, the complex $[\{(N_2)_4Ti\}_2(\mu\text{-}N)_2(\mu\text{-}\eta^2{:}\eta^2\text{-}N_2)]$ is formed.

Hydrogen Storage Materials

S. Sepehri, B. B. García, G. Z. Cao* 599–603

Influence of Surface Chemistry on Dehydrogenation in Carbon Cryogel Ammonia Borane Nanocomposites

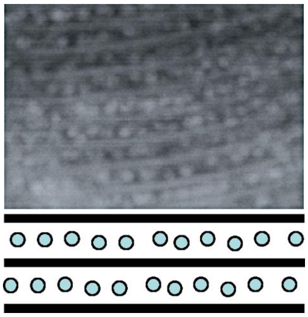
Keywords: Hydrogen storage / Nanoparticles / Carbon cryogel / Boron / Nitrogen / Mesoporous materials



Incorporating ammonia–borane (AB) into the pores of carbon cryogels lowers the dehydrogenation temperatures of AB. Boron- and nitrogen-modification of carbon cryogels can promote the destabilization of AB further and thus lower its dehydrogenation temperature and activation energy relative to the unmodified carbon cryogel scaffold with the same pore size.

FULL PAPERS

Nickel–Carbon Nanostructures



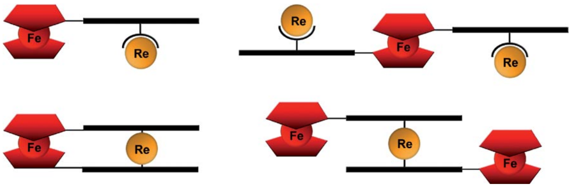
Mesoporous carbon materials with ultrathin carbon pore walls and highly dispersed and uniform Ni nanoparticles have been prepared by using SBA-15 silicas as hard templates and 2,3-dihydroxynaphthalene as a carbon precursor. These unique nickel–carbon nanostructures have accessible porosity with relatively large surface areas and pore volumes.

P. F. Fulvio, C. Liang, S. Dai, M. Jaroniec* 605–612

Mesoporous Carbon Materials with Ultra-Thin Pore Walls and Highly Dispersed Nickel Nanoparticles

Keywords: Mesoporous carbon / Nickel / Nanostructures / Mesoporous materials

Multimetallic Structures



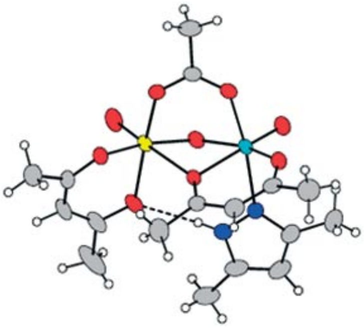
Aminoethylglycine (aeg) derivatives Fe[C_5H_4-CO-aeg-O*t*Bu][C_5H_5] and Fe[C_5H_4-CO-aeg-O*t*Bu]$_2$ have been synthesized and further reacted with dpa-ph-CO_2H or py-AcO. These products are treated with Re to assemble heterometallic structures, which are characterized by spectroscopic methods including fluorescence emission spectroscopy and by electrochemistry.

L. A. Levine, S. I. Kirin, C. P. Myers, S. A. Showalter, M. E. Williams* 613–621

Heterometallic Ferrocene-Rhenium Complexes Linked by an Aminoethylglycine Scaffold

Keywords: Sandwich complexes / Ferrocene / Rhenium / Heterometallic complexes / Peptides

Divanadium Complexes



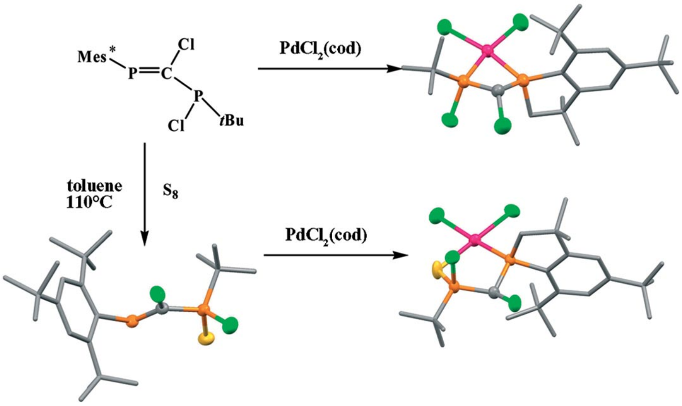
Reaction of [VO(acac)$_2$] with $CH_3CONHNH_2$ provides [(Hdmpz)OV^{IV}(μ-acac)(μ-O)(μ-O_2CCH_3)V^{V}O(acac)] (Hdmpz = 3,5-dimethylpyrazole) with a valence-localized electronic structure in the solid state as well as in the solution phase. Crystallization leads to enantiomerically enriched bulk material. Both enantiomers of the complex are observed in solution in the presence of L- and D-arabinose.

A. Sarkar, S. Pal* 622–627

An Unsymmetrical Mixed-Valent Divanadium(IV/V) Complex

Keywords: Vanadium / Structure elucidation / Mixed-valent compounds / Chirality / Dinuclear complexes

Vicinal Diphosphapropenes



New substituted 2,3-dichloro-1-λ^{3}σ^2-P,3-λ^{3}σ^3-P-diphosphapropenes and their reaction products with W(CO)$_5$(thf) and PdCl$_2$(cod) are reported. The palladium atom induces an intramolecular addition of CH(*t*Bu) of Mes* to the P=C bond with the formation of a phosphaindane ring.

R. Septelean, G. Nemes, J. Escudié,* I. Silaghi-Dumitrescu, H. Ranaivonjatovo, P. Petrar, H. Gornitzka, L. Silaghi-Dumitrescu,* N. Saffon 628–634

vic-Dichlorodiphosphapropenes – Synthesis and Coordination Ability

Keywords: Phosphorus / Tungsten / Palladium / Structure elucidation

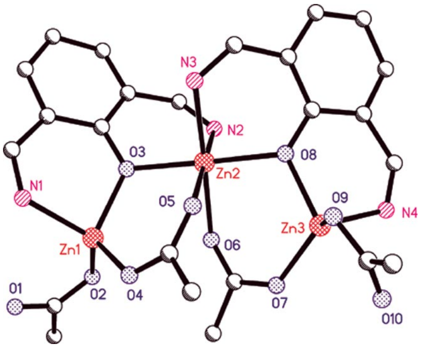
CONTENTS

Polymer Production

M. D. Jones,* M. G. Davidson, C. G. Keir, L. M. Hughes, M. F. Mahon, D. C. Apperley 635–642

Zinc(II) Homogeneous and Heterogeneous Species and Their Application for the Ring-Opening Polymerisation of *rac*-Lactide

Keywords: Zinc / Polylactide / Heterogeneous catalysis / Homogeneous catalysis / N,O ligands



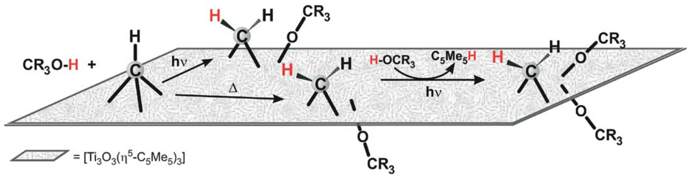
Eight new Zn^{II} complexes have been prepared and fully characterised. In the solid state the complexes are either monometallic or trimetallic, depending on the nature of the ligand. The Zn^{II} species have been tested for the ring-opening polymerisation of *rac*-lactide in the melt, conversions upto 90% yield have been achieved. A heterogeneous analogue has also been prepared, which is also active and more controlled for the ROP of *rac*-lactide.

Hydrogen Transfer

J. J. Carbó, O. González-del Moral, A. Martín, M. Mena, J.-M. Poblet, C. Santamaría* 643–653

Hydron-Transfer Processes Involving an Organotitanium Oxide and Alcohols

Keywords: Titanium / Alcohols / Alkylidyne ligands / Hydrogen transfer / Density functional calculations



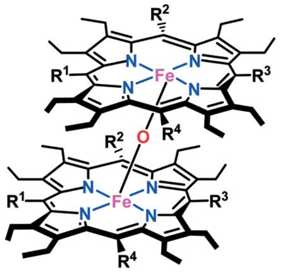
Complexes **1** and **2** react with alcohols via a hydron transfer to the μ_3-alkylidyne moiety to give the alkylidene derivatives $[\{Ti(\eta^5\text{-}C_5Me_5)(\mu\text{-}O)\}_3(\mu\text{-}CHR)(OR')]$, which contain the alkoxide ligand and the alkylidene fragment in a *cis* or *trans* disposition with respect to the Ti_3O_3 ring. Bulky alcohols are able to replace a pentamethylcyclopentadienyl ligand from the starting compounds.

Nonplanar Iron Porphyrins

R. Patra, S. Bhowmik, S. K. Ghosh, S. P. Rath* 654–665

The Effect of Steric Crowding on Porphyrin Conformation and Ring Orientations in a Series of Iron(III) μ-Oxo Dimers Containing *meso*-Nitrooctaethylporphyrins

Keywords: Iron / Porphyrinoids / Structure–activity relationships / Structure elucidation



R^1	R^2	R^3	R^4	Complex
NO_2	H	H	H	$[Fe(mn\text{-}OEP)]_2O$
NO_2	NO_2	H	H	$[Fe(din\text{-}OEP)]_2O$
NO_2	NO_2	NO_2	H	$[Fe(trn\text{-}OEP)]_2O$
NO_2	NO_2	NO_2	NO_2	$[Fe(tn\text{-}OEP)]_2O$

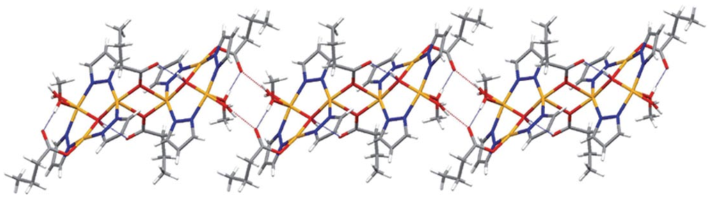
The structural and electronic effects of the progressive addition of bulky and electron-withdrawing NO_2 groups at the adjacent *meso* carbon positions of Fe^{III}-μ-oxo octaethylporphyrin dimers are examined.

Oligonuclear Cu Compounds

C. Di Nicola, F. Garau, Y. Y. Karabach, L. M. D. R. S. Martins, M. Monari, L. Pandolfo,* C. Pettinari,* A. J. L. Pombeiro* 666–676

Trinuclear Triangular Copper(II) Clusters – Synthesis, Electrochemical Studies and Catalytic Peroxidative Oxidation of Cycloalkanes

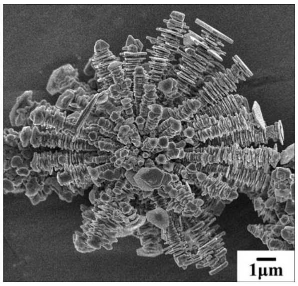
Keywords: Cluster compounds / Copper / Oxidation / Electrochemistry / Copper(II) trinuclear complexes / Catalytic peroxidative oxidation



Triangular trinuclear copper derivatives have been prepared and characterised. The complexes were successfully investigated as oxidation catalysts for cycloalkanes. The supramolecular arrangement of two trinuclear derivatives as well as the crystal structure of copper(II) 2-methylbutyrate are also presented.

Nickel Nanoflowers

Novel flowery nanostructures of face-centered-cubic nickel assembled from hexagonal platelets were fabricated through the one-step reduction of nickel chloride with hydrazine in ammonia solution; no surfactant or external magnetic field was used.



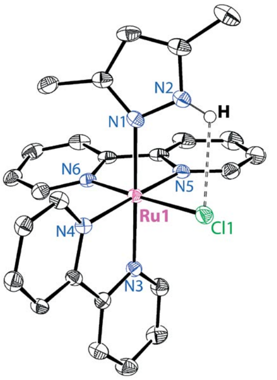
X. Ni,* H. Zheng, Q. Yang, K. Tang, G. Liao 677–682

Ammonia-Assisted Fabrication of Flowery Nanostructures of Metallic Nickel Assembled from Hexagonal Platelets

Keywords: Nickel / Nanostructures / Hydrothermal synthesis / Self-assembly

Mono-Pyrazolyl Ru Complexes

A series of mono-pyrazolyl complexes of $\{Ru(bpy)_2Cl\}$ was prepared and structurally and electronically characterized. The ligands behave as weak π-acceptors in the protonated (azole) form, but are strong π-donors in the deprotonated (azolate) state. The unusually high basicity of the pyrazole/pyrazolate couple in these complexes is partly attributed to an intramolecular N–H···Cl hydrogen bond.



H. Jude, F. N. Rein, W. Chen, B. L. Scott, D. M. Dattelbaum,* R. C. Rocha* 683–690

Pyrazole and Pyrazolyl Complexes of *cis*-Bis(2,2′-bipyridine)chlororuthenium(II): Synthesis, Structural and Electronic Characterization, and Acid-Base Chemistry 💻

Keywords: Ruthenium / Pyrazole / Pyrazolate / Acidity / Hydrogen bonds

CORRECTION

Keywords: Polyamides / Anticancer agents / Platinum / Terpyridine / Solid phase synthesis

Terpyridineplatinum(II) Incorporation in *N*-Methylpyrrole-Based Polyamides by Solid Phase Techniques

M. van Holst, D. Le Pevelen, J. Aldrich-Wright* 691

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* Author to whom correspondence should be addressed.

💻 Supporting information on the WWW (see article for access details).