

Dalton Discussion 5: Ligand Design for Functional Complexes

Noordwijkerhout, The Netherlands

10 – 12 April 2003

PROGRAMME

Thursday 10 April 2003

Session 1: Ligand Design in Metal Separation, Transport, Recovery and Recycling

Keynote 1

Exploiting supramolecular chemistry in metal recovery: Novel zwitterionic extractants for nickel(II) salts

J C Campbell, J Davidson, D K Henderson, H A Miller, A Parkin, S Parsons, P G Plieger, R M Swart, P A Tasker* and L C West

University of Edinburgh, UK

Anion effects in selective bifunctional metal salt extractants based on azathioether macrocycles: co-operative cation-anion binding?

M W Glenny, A J Blake, C Wilson and M Schröder*

University of Nottingham, UK

Tailoring hydrophilic *N,N*-dialkyl-*N'*-acylthioureas suitable for Pt(II), Pd(II) and Rh(II) chloride pre-concentration from acid aqueous solutions, and their complex separation by reversed-phase HPLC

A N Mautjana, J D S Miller, A Gie, S A Bourne and K R Koch*

University of Stellenbosch, South Africa

Towards promising oxoanion extractants: azacages and open-chain counterparts

D Farrell, Karsten Gloe*, Kerstin Gloe, G Goretzki, V McKee, J Nelson,

M Nieuwenhuyzen, I Pál, H Stephan, R M Town and K Wichmann

Technische Universität Dresden, Germany

New powerful reagents based on dihalogen/*N,N'*-dimethylperhydro diazepine-2,3-dithione adducts for gold dissolution: the IBr case

L Cau, P Deplano, L Marchiò, M L Mercuri*, L Pilia, A Serpe and E F Trogu

Università di Cagliari, Italy

Friday 11 April 2003

Session 2: Ligand Design in Biomimetics

Keynote 2

Complexity with simplicity: a steric continuum of chelating diamines with copper(I) and dioxygen

T D P Stack

Stanford University, USA

A phenol-imidazole pro-ligand that can exist as a phenoxyl radical, alone and when complexed to copper(II) and zinc(II)

L Benisvy, A J Blake, D Collison, E S Davies, C D Garner*, E J L McInnes, J McMaster, G Whittaker and C Wilson

University of Nottingham, UK

Development of bio-inspired chelates with hydrogen bond donors: synthesis and structure of monomeric metal acetate complexes with intramolecular hydrogen bonds

M K Zart, T N Sorrell, D Powell and A S Borovik*

University of Kansas, USA

Design and synthesis of copper complexes of novel ligands based on the pyridine thiolate group

I Kinoshita*, L J Wright, S Kubo, K Kimura, A Sakata, T Yano, R Miyamoto, T Nishioka and K Isobe

Osaka City University, Japan

Thioether-ligated nickel(I) complexes for the activation of dioxygen

K Fujita, A L Rheingold and C G Riordan*

University of Delaware, USA

Transition metal complexes of bis(imidazol-2-yl) derivatives of dipeptides

K Ösz, K Várnagy, H Süli-Vargha, D Sanna, G Micera and I Sóvágó*

University of Debrecen, Hungary

Session 3: Ligand Design in Homogeneous Catalysis

Keynote 3

Bite angle effects in diphosphine metal catalysts: steric or electronic?

Z Freixa and P W N M van Leeuwen*

University of Amsterdam, The Netherlands

Monodentate phosphoramidites; versatile ligands in catalytic asymmetric intramolecular Heck reactions

B L Feringa*, R Imbos and A J Minnaard

University of Groningen, The Netherlands

Cu(I)(2,5,8,11-tetramethyl-2,5,8,11-tetraazadodecane)+ as a catalyst for Ullmann's reaction

I Rusonik, H Cohen and D Meyerstein*

Ben-Gurion University of the Negev, Israel

Pd complex-catalysed copolymerisation of a bicyclic methylene-cyclopropane with carbon monoxide to afford a new polyketone

D Takeuchi, A Yasuda and K Osakada*

Tokyo Institute of Technology, Japan

Bicyclic phosphines as ligands for cobalt-catalysed hydroformylation

C Crause*, L Bennie, L Damoense, C L Dwyer, C Grove, N Grimmer, W J van Rensburg, M M Kirk, K M Mokheseng, S Otto and P J Steynberg

Sasol Technology R&D, South Africa

Synthesis of C₂-symmetric aza- and azaoxa-macrocyclic ligands derived from (1R,2R)-1,2-diaminocyclohexane and their applications in catalysis

S Pulacchini, K F Sibbons, K Shastri, M Motevalli, M Watkinson*, H Wan, A Whiting and A P Lightfoot

University of London, UK

Saturday 12 April 2003

Session 4: Ligand Design in Molecular Materials and Devices

Keynote 4

Newer optical-based molecular devices from older coordination chemistry

A P de Silva*, B McCaughan, B O F McKinney and M Querol
Queen's University of Belfast, UK

The spin-states and spin-crossover behaviour of iron(II) complexes of 2,6- dipyrazol-1-ylpyrazine derivatives

J Elhaik, V A Money, S A Barrett, C A Kilner, I Radosavljevic Evans and M A Halcrow*
University of Leeds, UK

Extending the luminescence lifetime of ruthenium(II) poly(pyridine) complexes in solution at ambient temperature

A Harriman*, A Khatyr and R Ziessel
University of Newcastle, UK

Molecular design of proton-induced molecular switch based on rod-shaped Ru dinuclear complexes with bis-tridentate 2,6-bis(benzimidazol-2-yl)pyridine derivatives

M-A Haga*, T Takasugi, A Tomie, M Ishizuya, T Yamada, M D Hossain and M Inoue
Chuo University, Japan

Mononuclear and dinuclear iridium(III) complexes. Synthesis and photophysics

L de Cola*, J W Hofstraat and E A Plummer
University of Amsterdam, The Netherlands

Design and synthesis of multifunctional thiacalixarenes and related metal derivatives for the preparation of sol-gel hybrid materials with non-linear optical properties

C Desroches, C Lopes, V Kessler and S Parola*
Laboratoire des Multimatériaux et Interfaces, France

Metallomesogens by ligand design

R W Date, E F Iglesias, K E Rowe, J M Elliot and D W Bruce*
University of Exeter, UK