

Dalton Discussion 9:
Functional Molecular Assemblies
University of Manchester
19 - 21 April 2006

PROGRAMME

Wednesday 19 April 2006

Session 1: Constructing hybrid materials

Session Chair: Professor Paul O'Brien
University of Manchester, UK

Keynote 1

Writing with molecules on molecular printboards

D.N. Reinhoudt*, B. Jan Ravoo * and O. Crespo-Biel
University of Twente, The Netherlands

Novel tripod ligands for prickly self- assembled monolayers

Ulrich Siemeling*, Tobias Weidner, Andreas Kramer, Clemens Bruhn, Michael Zharnikov,
Andrey Shaporenko and Frank Träger
University of Kassel, Germany

Hybrid organic-inorganic nanomaterials based on polythiophene dendronized nanoparticles

Rigoberto Advincula*
University of Houston, USA

The assembly of rotaxane-like dye/cyclodextrin/surface complexes on aluminium trihydroxide or goethite

Peter A. Tasker*, Rachel J.Cooper, Philip J, Camp, Ross J. Gordon, David K. Henderson,
Dorothy C. Henry, Hamish McNab, Sonali S De Silva, Daniel Tackley and Paul Wright
University of Edinburgh, UK

Surface-assisted coordination chemistry and self-assembly

Nian Lin, Sebastian Stepanow, Frank Vidal, Klaus Kern*, Mohammad S. Alam, Stefan Strömsdörfer, Viacheslav Dremov, Paul Müller, Aitor Landa, and Mario Ruben*
Max-Planck-Institut für Festkörperforschung and Forschungszentrum Karlsruhe GmbH, Germany

Thursday 20 April 2006

Session 2: Molecular magnetism and quantum information processing

Session Chair: Professor Richard Winpenny
University of Manchester, UK

Keynote 2

Magnetically ordered molecule-based assemblies

Joel S. Miller*
University of Utah, USA

Cobalt(II)-octacyanotungstate(V) organic—inorganic hybrid ferromagnetic material with pyrazine and 4,4'- bipyridine

Robert Podgajny*, Barbara Sieklucka, Maria Balanda, Marcin Sikora, Marta Borowiec, Leszek Spalek and Czeslaw Kapusta
Jagiellonian University, Poland

Molecular routes for spin cluster qubits

Marco Affronte*, Filippo Troiani, Alberto Ghirri, Stefano Carretta, Paolo Santini, Vladis Corradini, Chris Muryn, Grigore Timco and Richard E. Winpenny
CNR-INFM-S3 National Research Centre, Italy

Magnetic anisotropy of two trinuclear and tetranuclear Cr^{III}Ni^{II} cyanide-bridged complex with spin ground states S=4 and 5

Talal Mallah*, Jean-Noël Rebilly, Laure Catala, Gaëlle Charron, Guillaume Rogez, Eric Rivière, Régis Guillot and Anne-Laure Barra
Université Paris-Sud, France

Symmetry-breaking substitutions of [Re(CN)₈]³⁻ into the centered, face-capped octahedral clusters (CH₃OH)₂₄M₉M'₆(CN)₄₈ (M=Mn, Co; M'=Mo, W)

Jeffrey R. Long*, Danna E. Freedman and Miriam V. Bennett
University of California, USA

Supramolecular 'flat' Mn₉ grid complexes- towards functional molecular platforms

Laurence K. Thompson*, Victoria A. Milway, S.M. Tareque Abedin, Virginie Niel, Timothy L. Kelly, Louise N. Dawe, Subrata K. Dey, David W. Thompson, David O. Miller, Mohammad Sahabul Alam and Paul Müller
Memorial University, Canada

Session 3: Self-assembly

Session Chair: Professor Michael D. Ward
University of Sheffield, UK

Keynote 3

Control of molecular interactions by the hollow of coordination cages

Makoto Fujita*, Victor Maurizot, Michito Yoshizawa and Masaki Kawano
University of Tokyo, Japan

Inorganic crown ethers: the host-guest chemistry of a high nuclearity

'celtic-ring' isopolyoxotungstate $[H_{12}W_{36}O_{120}]^{12-}$

De-Liang Long, Oliver Brücher, Carsten Streb and Leroy Cronin*
University of Glasgow, UK

Reinforced molecular recognition as an alternative to rigid receptors

Sijbren Otto*
University of Cambridge, UK

The $\{Fe^{III}[Fe^{III}(L)_2]_3\}$ star-type single-molecule magnet: crystallization topology, Mössbauer studies, magnetization measurements EPR spectroscopy, scanning-tunneling spectroscopy and theoretical calculations

Rolf W. Saalfrank*, Andreas Scheurer, Ingo Bernt, Frank W. Heinemann, Andrei V. Postnikov, Volker Schünemann, Alfred X. Trautwein, Mohammad S. Alam, Holger Rupp and Paul Müller
Universität Erlangen-Nürnberg, Germany

Self-assembly and host-guest chemistry of big metallocupramolecular M_4L_4 tetrahedra

Markus Albrecht*, Ingo Janser, Simon Burk and Patrick Weis
RWTH Aachen, Germany

Ligands and complexes with supramolecular aromatic-aromatic interactions: Iron(II) complexes of 2,2':6,2''-terpyridines with pendant naphthalene groups

Edwin Constable*, Hoi Shan Chow, Catherine E. Housecroft*, Markus Neuburger and Silvia Schaffner
University of Basel, Switzerland

Friday 21 April 2006

Session 4: Sensors and molecular recognition

Session Chair: Professor Stephen Faulkner
University of Manchester, UK

Keynote 4

Engineering emissive europium and terbium complexes for molecular imaging and sensing

David Parker*, Shashi Pandya and Junhua Yu
Durham University, UK

Perfect polar stacking of parallel beloamphiphile layers. Synthesis, structure and solid-state optical properties of the unsymmetrical acetophenone azine DCA

Rainer Glaser*, Nathan Knotts, Ping Yu, Linghui Li, Meera Chandrasekhar, Christopher Martin and Charles L. Barnes
University of Missouri, USA

Kinetically locked, trinuclear Ru^{II} metallo-macrocycles: synthesis, electrochemical and optical properties

Jim A. Thomas*, Naz Shan, James D. Ingram, Timothy L. Easun, Steven J. Vickers, Harry Adams and Michael D. Ward
University of Sheffield, UK

Self-assembly of luminescent ternary complexes between seven coordinate lanthanide (III) complexes and chromophore-bearing carboxylates and phosphonates

Simon J A Pope*, Benjamin P Burton-Pye, Rory Berridge, Tahir Khan, Peter J Skabara and Stephen Faulkner
University of Manchester, UK

Boron dipyrromethene dyes: a rational avenue for sensing and light emitting devices

Raymond Ziessel*, Laure Bonardi, Pascal Retailleau and Giles Ulrich
Université Louis Pasteur, France