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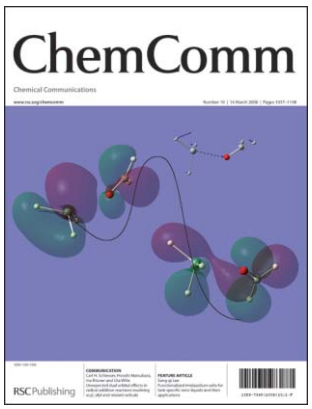

Cover
See Carl H. Schiesser *et al.*, page 1067.
Radicals masquerading as electrophiles. Depicting both radical (SOMO–LUMO) and electrophilic (LUMO–HOMO) transition state interactions when a silyl radical reacts with methanimine.
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Inside cover
See Reiko Kuroda *et al.*, page 1070.
Optical resolutions of 1,1′-binaphthyl-2,2′-dicarboxylic acid (ee 98%) and 2-hexanol (ee 62%) achieved by simple successive crystallization using (1*R*,2*R*)-diphenylethylenediamine.
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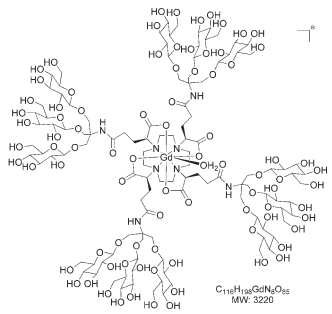

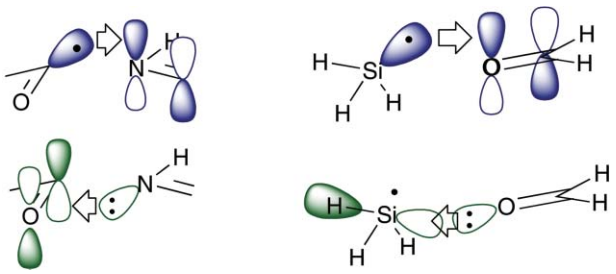

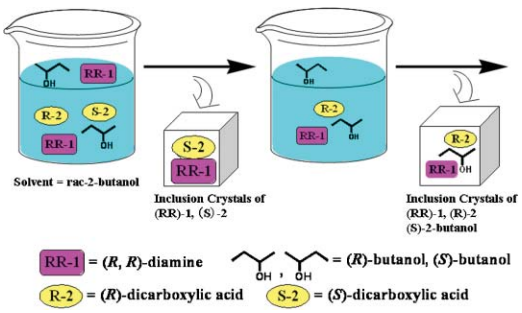

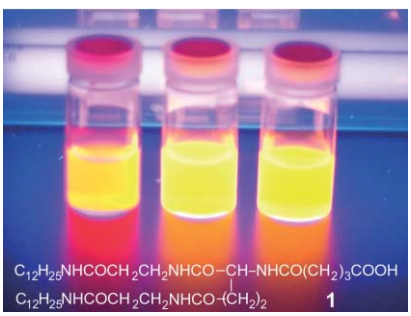

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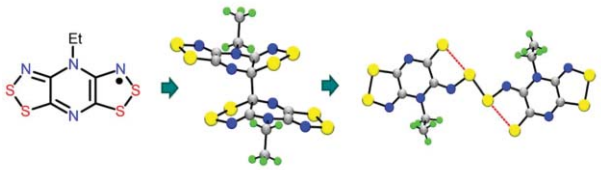

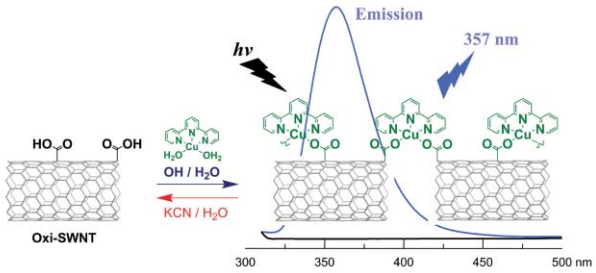

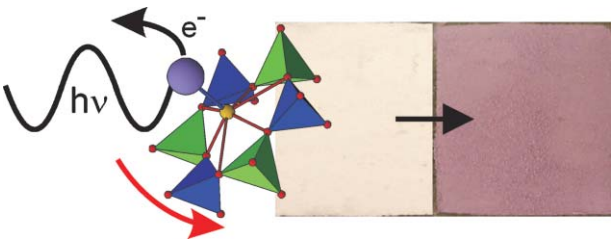

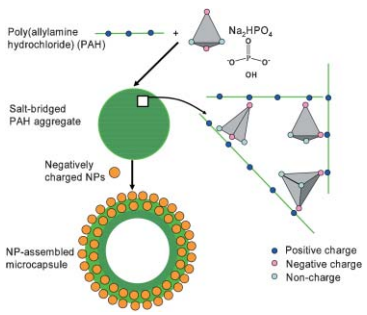

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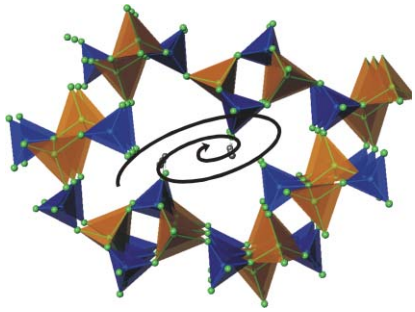

A chiral, 16-ring channel framework and a layered caesium zincoarsenate

Seth B. Wiggin and Mark T. Weller*

Two zincoarsenate frameworks, one with chiral channels delineated by 16 linked tetrahedra and the other having a pocketed layer structure, have been synthesised.

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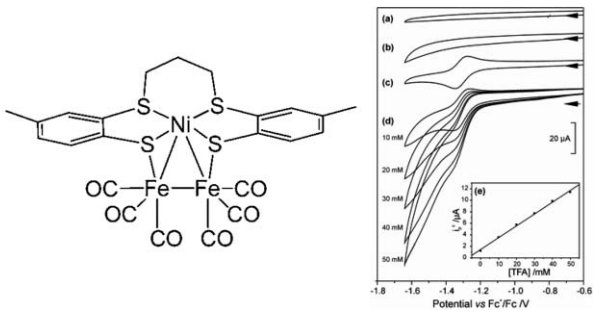

Electrocatalytic production of hydrogen by a synthetic model of [NiFe] hydrogenases

Alessandro Perra, E. Stephen Davies, Jason R. Hyde, Qiang Wang, Jonathan McMaster* and Martin Schröder*

The radical cluster anion $[Ni(L)Fe_2(CO)_6]^-$ models the activity of the [NiFe] hydrogenases and catalyses the reduction of protons to produce molecular hydrogen at relatively anodic potentials compared to analogues of the [Fe]-only hydrogenases.

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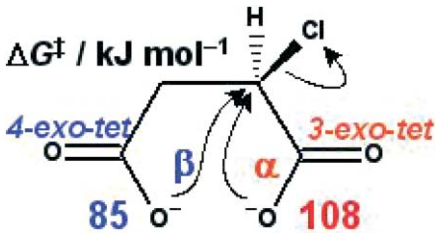

The Walden cycle revisited: a computational study of competitive ring closure to α- and β-lactones

J. Grant Buchanan, Richard A. Diggle, Giuseppe D. Ruggiero and Ian H. Williams*

Ring closure in chlorosuccinate gives β-lactone because O_{nuc} C Cl angle in transition structure is more favourable than for α-lactone formation in PCM(ε = 78.4)/B3LYP/6-31+G* calculations.

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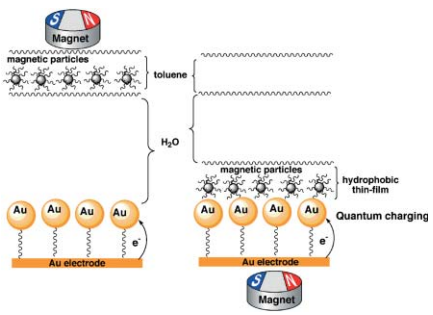

Magneto-switchable single-electron charging of Au-nanoparticles using hydrophobic magnetic nanoparticles

Eugenii Katz, Oleg Lioubashevski and Itamar Willner*

Reversible magneto-switchable quantum charging of a Au nanoparticle array associated with a Au electrode is observed in the presence of hydrophobic magnetic nanoparticles attracted to the functionalized electrode surface.

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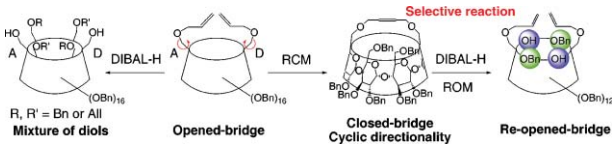
Sequential ring closing/opening metathesis for the highly selective synthesis of a triply bifunctionalized α-cyclodextrin

Olivia Bistri, Pierre Sinaÿ and Matthieu Sollogoub*

Metathesis versatility has been exploited to reveal the cyclic directionality of cyclodextrins and to selectively synthesise a unique cyclodextrin bearing three pairs of orthogonal protecting groups on its primary rim.



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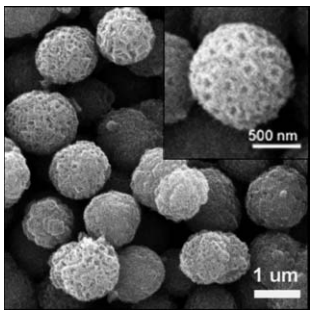
Synthesis of hierarchical nanoporous F-doped TiO_2 spheres with visible light photocatalytic activity

Wingkei Ho, Jimmy C. Yu* and Shuncheng Lee

Hierarchical porous F-doped TiO_2 microspheres exhibiting high visible light photocatalytic activity have been fabricated by a one-step low-temperature hydrothermal approach without using any templates.



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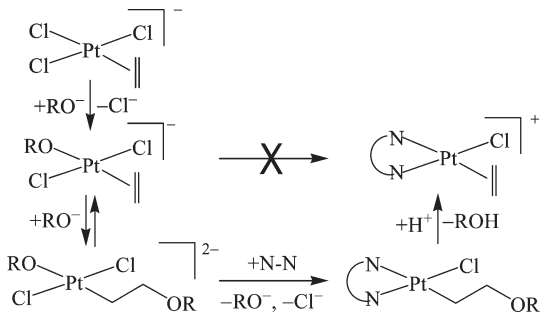
The unexpected reactivity of Zeise's anion in strong basic medium discloses new substitution patterns at the platinum centre

Michele Benedetti, Francesco P. Fanizzi,*
Luciana Maresca* and Giovanni Natile

Zeise's anion in strongly basic hydroxylated solvents undergoes unprecedented nucleophilic addition of OR^- (R = H, Me, Et) to the η^2-ethene giving stable organometallic species the protonolysis of which offers a versatile route to cationic square planar $[PtCl(\eta^2\text{-}C_2H_4)(N\text{–}N)]^+$ complexes.



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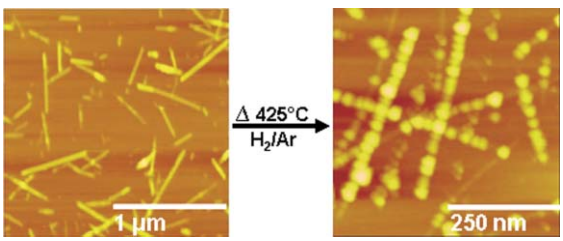
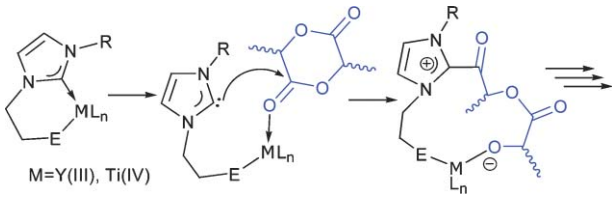
From ribbons to nanodot arrays: nanopattern design through reductive annealing

Palaniappan Arumugam, Samuel S. Shinozaki,
Ruomiao Wang, Guangzhao Mao and
Stephanie L. Brock*

1-D arrays of nickel arsenide nanoparticles can be generated by reduction of nickel arsenate nanoscrolls. This methodology may be suitable for generation of periodic and aperiodic patterns of nanoparticles.

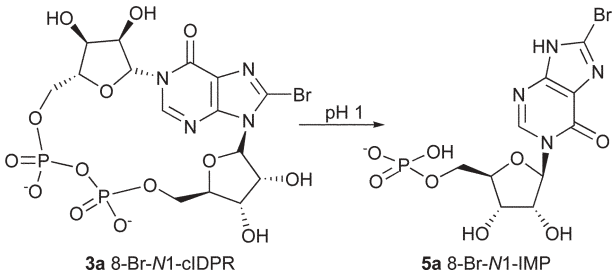




Bifunctional yttrium(III) and titanium(IV) NHC catalysts for lactide polymerisation

Dipti Patel, Stephen T. Liddle, Shaheed A. Mungur, Mark Rodden, Alexander J. Blake and Polly L. Arnold*

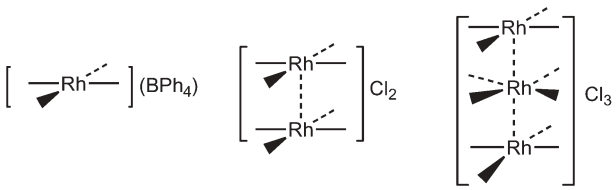
Lewis acidic Y(III) and Ti(IV) derivatives of anionic, metal-tethered carbenes apparently act as bifunctional catalysts for the polymerisation of D,L-lactide, using both Lewis acid and base functionalities to initiate ring opening; the alcohol- and amino-functionalised carbene ligands provide models for the first insertion step, and display metal-free polymerisation catalysis to generate polylactic acid.



Unusual entry to the novel 8-halo-*N*1-ribosyl hypoxanthine system by degradation of a cyclic adenosine-5′-diphosphate ribose analogue

Christelle Moreau, Timothy J. Woodman and Barry V. L. Potter*

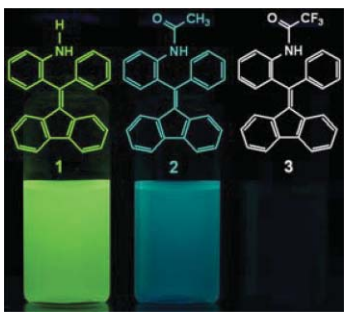
Cyclic 8-bromo-inosine-5′-diphosphate ribose (8-Br-*N*1-cIDPR) was cleanly degraded to give 8-bromo-*N*1-ribosyl hypoxanthine 5′-monophosphate (8-Br-*N*1-IMP), a novel class of mononucleotide, as the sole product.



Variation in crystallization conditions allows the isolation of trimeric as well as dimeric and monomeric forms of $[(\text{alkyl isocyanide})_4\text{Rh}^{\text{I}}]^+$

Ngon T. Tran, Jay R. Stork, David Pham, Marilyn M. Olmstead, James C. Fettinger and Alan L. Balch*

A trimeric form of $[(\text{RCN})_4\text{Rh}^{\text{I}}]^+$ has been isolated for the first time along with crystals containing dimeric and monomeric versions of the cation.



Tunable aggregation-induced emission of diphenyldibenzofulvenes

Hui Tong, Yongqiang Dong, Matthias Häußler, Jacky W. Y. Lam, Herman H.-Y. Sung, Ian D. Williams, Jingzhi Sun and Ben Zhong Tang*

Aggregation-induced emission of fulvene is tunable by molecular engineering and morphological variation: thus **1** and **2** can be induced to emit by aggregation in aqueous media, but **3** cannot; and crystalline aggregates emit stronger, bluer lights than their amorphous counterparts.

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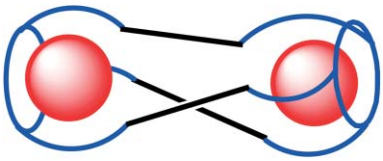

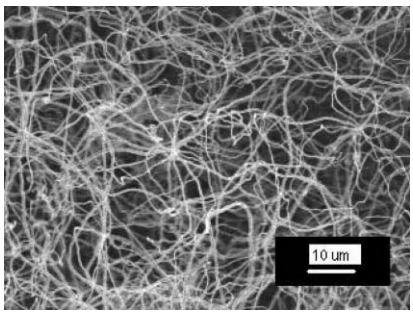

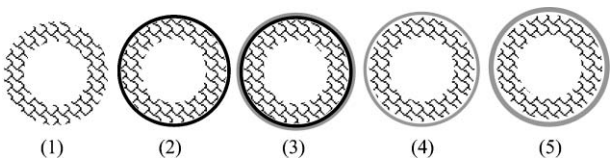

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