

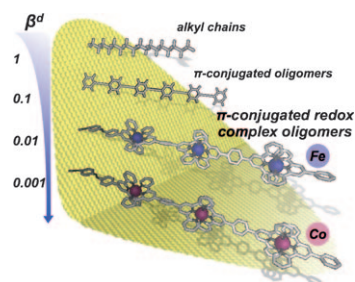


## Electron Transport

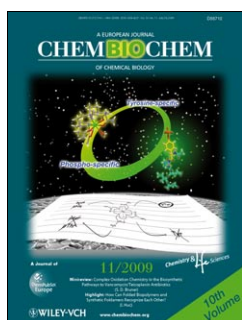
Y. Nishimori, K. Kanaizuka, T. Kurita, T. Nagatsu, Y. Segawa, F. Toshimitsu, S. Muratsugu, M. Utsuno, S. Kume, M. Murata, H. Nishihara\*

Superior Electron-Transport Ability of  $\pi$ -Conjugated Redox Molecular Wires Prepared by the Stepwise Coordination Method on a Surface

**Hop around the block:**  $\pi$ -Conjugated redox complex molecular wires that have been constructed on a gold surface through a convenient stepwise ligand–metal coordination method have been shown to exhibit high long-range electron-transport abilities. This transport is caused by facile sequential electron hopping between neighboring metal–complex units within the wire.



Chem. Asian J.  
DOI: 10.1002/asia.200900072

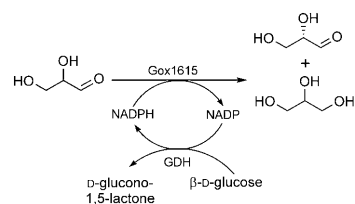


## Enzyme Catalysis

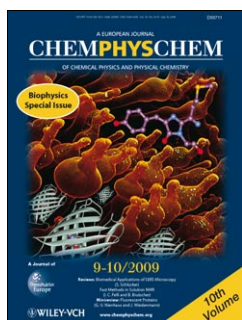
N. Richter, M. Neumann, A. Liese, R. Wohlgenuth, T. Eggert, W. Hummel\*

Characterisation of a Recombinant NADP-Dependent Glycerol Dehydrogenase from *Gluconobacter oxydans* and its Application in the Production of L-Glyceraldehyde

**It's elementary, dear Watson:** We describe the characterisation of a NADP-dependent glycerol dehydrogenase from *Gluconobacter oxydans* (Gox1615), and show that the enzyme can be applied in the kinetic resolution of glyceraldehydes (see scheme), which is a versatile chiral building block in the production of fine chemicals, pharmaceuticals and natural products.



ChemBioChem  
DOI: 10.1002/cbic.200900193

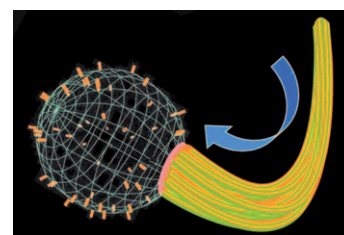


## Biological Membranes

C. Amatore,\* A. I. Oleinick, O. V. Klymenko, I. Svir\*

Theory of Long-Range Diffusion of Proteins on a Spherical Biological Membrane: Application to Protein Cluster Formation and Actin-Comet Tail Growth

**Diffusional recruitment of proteins:** Classical Brownian motion analysis describes the long-range movements of biomolecules on a spherical biological membrane. This protein diffusion process is prerequisite for the assembly of proteins which then cooperatively catalyze the polymerization of actin monomers to sustain the growth of actin tails (see picture).



ChemPhysChem  
DOI: 10.1002/cphc.200900176

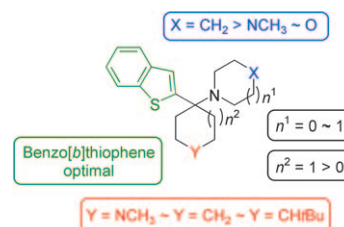


## Drug Discovery

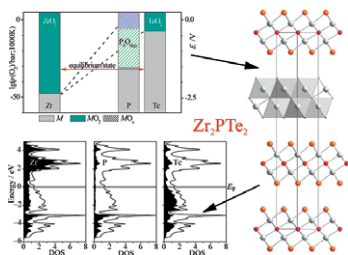
S. Patterson, D. C. Jones, E. J. Shanks, J. A. Frearson, I. H. Gilbert, P. G. Wyatt, A. H. Fairlamb\*

Synthesis and Evaluation of 1-(1-(Benzo[b]thiophen-2-yl)cyclohexyl)piperidine (BTCP) Analogues as Inhibitors of Trypanothione Reductase

**Antiparasitic agents:** 32 analogues of the phencyclidine analogue BTCP were synthesised and their inhibitory activities against *Trypanosoma brucei* trypanothione reductase, a genetically validated drug target in the *T. brucei* parasite were evaluated. The most promising analogues were evaluated further against bloodstream *T. brucei*.



ChemMedChem  
DOI: 10.1002/cmdc.200900098



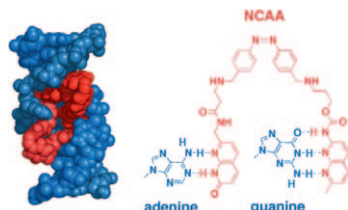
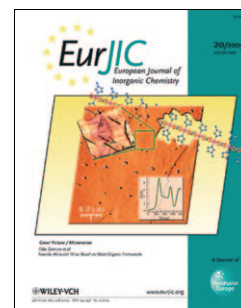
*Eur. J. Inorg. Chem.*  
DOI: 10.1002/ejic.200900346

## Phosphide Tellurides

K. Tschulik, M. Ruck, M. Binnewies, E. Milke, S. Hoffmann, W. Schnelle, B. P. T. Fokwa, M. Gilleßen, P. Schmidt\*

Chemistry and Physical Properties of the Phosphide Telluride  $\text{Zr}_2\text{PTe}_2$

The synthesis of  $\text{Zr}_2\text{PTe}_2$  was accomplished by either a solid-state reaction from the elements or by a thermite-type reaction of Zr and  $\text{Te}_8\text{O}_{10}(\text{PO}_4)_4$ . Crystals were grown by chemical vapour transport by using iodine. The compound exhibits metallic behaviour and temperature-independent Pauli paramagnetism.



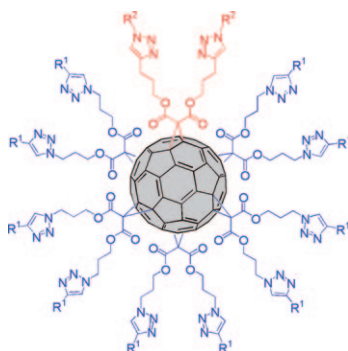
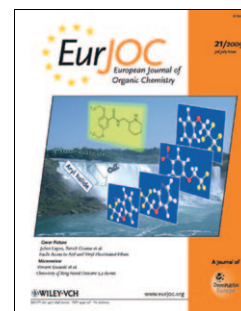
*Eur. J. Org. Chem.*  
DOI: 10.1002/ejoc.200900323

## Photoswitchable DNA-Binding Ligand

C. Dohno, T. Yamamoto, K. Nakatani\*

Photoswitchable Unsymmetrical Ligand for DNA Hetero-Mismatches

We have established an efficient synthetic route for photoswitchable DNA-binding ligands incorporating two different base-recognition elements. A novel photoswitchable DNA-binding ligand, **NCAA** (naphthyridine-carbamate-azaquinolone-functionalized azobenzene), recognizes DNA duplexes containing a CAG/CAG sequence, and the binding is reversibly controlled by external light stimuli.



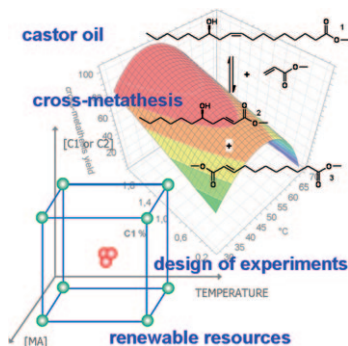
*Chem. Eur. J.*  
DOI: 10.1002/chem.200901291

## Fullerene Chemistry

J. Iehl, J.-F. Nierengarten\*

A Click-Click Approach for the Preparation of Functionalized [5:1]-Hexaadducts of  $\text{C}_{60}$

**Successive attachment:** The paper describes a  $\text{C}_{60}$  hexaadduct bearing ten azides and two TMS-protected alkyne groups allowing the successive attachment of ten alkyne building blocks (in blue) and two azide units (in red) via successive click reactions.



*ChemSusChem*  
DOI: 10.1002/cssc.200900091

## Synthetic Methods

T. T. Ho, T. Jacobs, M. A. R. Meier\*

A Design-of-Experiments Approach for the Optimization and Understanding of the Cross-Metathesis Reaction of Methyl Ricinoleate with Methyl Acrylate

**A design-of-experiments approach for the study of cross-metathesis reactions** with castor-oil-derived renewable resources reveals an interesting temperature response of the studied metathesis catalysts and provides optimized results for the synthesis of two new renewable platform chemicals.

