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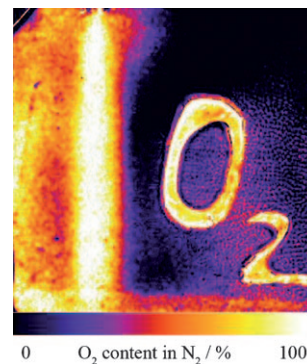


## Oxygen Detection

X. D. Wang, R. J. Meier, M. Link, O. S. Wolfbeis\*

### Photographing Oxygen Distribution

**O<sub>2</sub>, where are you?** The spatial distribution of oxygen can be imaged with a conventional digital camera by making use of a specially designed fluorescent sensor film containing a quenchable red-emitting probe for oxygen along with a green-emitting reference fluorophore. The technique exploits the RGB channels involved in digital photography (see picture) to deliver a simple method for quantitative sensing and imaging of this important species.



*Angew. Chem. Int. Ed.*  
DOI: [10.1002/anie.201001305](https://doi.org/10.1002/anie.201001305)

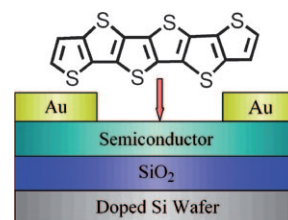


## Thin-Film Transistors

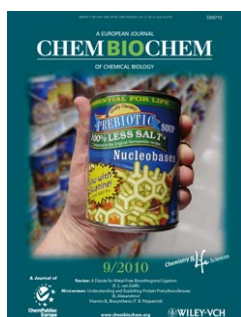
Y. Liu, X. Sun, C.-a. Di, Y. Liu,\* C. Du, K. Lu, S. Ye, G. Yu

### Hexathienoacene: Synthesis, Characterization, and Thin-Film Transistors

**A new linear six thiophene-fused system** of hexathienoacene (HTA) has been synthesized, which has also been compared with pentathienoacene (PTA) in terms of optical, electrochemical properties, and charge-transfer properties of organic semiconductors. The experimental data are all in line with the theoretical studies. The highest mobility of  $0.06 \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$  with a current on/off ratio of  $10^5$  on *n*-octadecyltrichlorosilane (OTS)-treated SiO<sub>2</sub>/Si substrates have been achieved.



*Chem. Asian J.*  
DOI: [10.1002/asia.201000001](https://doi.org/10.1002/asia.201000001)

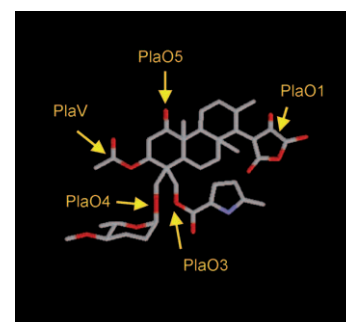


## Natural Products

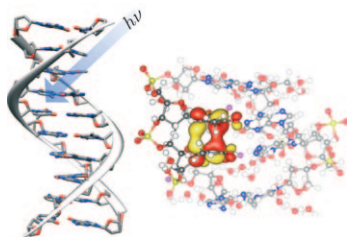
M. Daum, H.-J. Schnell, S. Herrmann, A. Günther, R. Murillo, R. Müller, P. Biesel, M. Müller, A. Bechthold\*

### Functions of Genes and Enzymes Involved in Phenalinolactone Biosynthesis

**New insights into phenalinolactone biosynthesis:** The biosynthesis of phenalinolactone requires the activity of several tailoring enzymes. Our studies now open the door to understanding the entire biosynthesis of a highly decorated terpenoid.



*ChemBioChem*  
DOI: [10.1002/cbic.201000117](https://doi.org/10.1002/cbic.201000117)



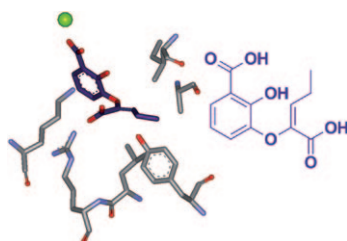
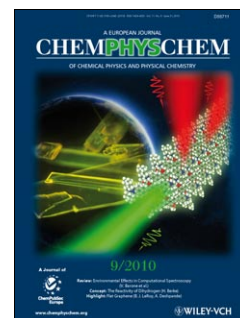
ChemPhysChem  
DOI: 10.1002/cphc.201000081

### DNA Photodamage

S. Rössle, J. Friedrichs, I. Frank\*

#### The Formation of DNA Photodamage: The Role of Exciton Localization

**The amazing photostability of DNA:** The location of the exciton contributes strongly to the low quantum yield of the formation of the cyclobutane pyrimidine dimer (CPD damage). Density functional calculations of DNA oligomers (see picture) demonstrate how exciton localization on a pair of pyrimidine bases is connected to their relative orientation at the time of excitation.



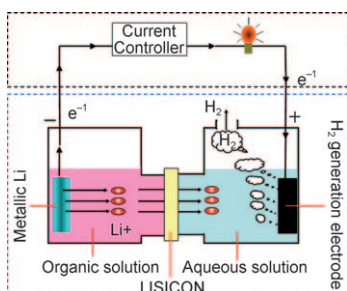
ChemMedChem  
DOI: 10.1002/cmdc.201000137

### Treating Tuberculosis

A. Manos-Turvey, E. M. M. Bulloch, P. J. Rutledge, E. N. Baker, J. S. Lott, R. J. Payne\*

#### Inhibition Studies of Mycobacterium tuberculosis Salicylate Synthase (MbtI)

**Salicylate synthase catalyzes** the first committed step in the biosynthesis of mycobactin, an iron-chelating siderophore essential for the survival of *Mycobacterium tuberculosis*, the etiological agent of tuberculosis (TB). The first inhibitors of *M. tuberculosis* salicylate synthase (MbtI), designed to mimic the substrate (chorismate) and intermediate (isochorismate) of the enzyme, were prepared with a view to the development of new TB therapies.



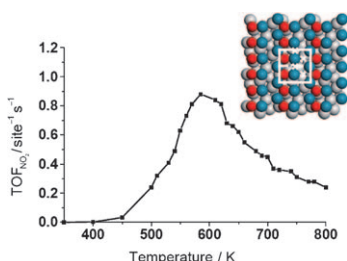
ChemSusChem  
DOI: 10.1002/cssc.201000049

### Fuel Cells

Y. Wang, H. Li, P. He, H. Zhou\*

#### Controllable Hydrogen Generation from Water

**The Lith'ing Daylights:** The direct chemical reaction between lithium and water is employed as a controllable electrochemical reaction in a lithium–water cell to generate H<sub>2</sub> gas. The hydrogen generation can be easily controlled by adjusting the current density of the external circuit or discharge time. Lithium-metal production using solar energy and controllable hydrogen generation from such electrochemical cells may provide a new avenue for sustainable hydrogen generation.



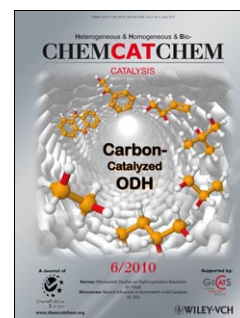
ChemCatChem  
DOI: 10.1002/cctc.201000006

### Kinetic Simulations

J. Jelic, K. Reuter,\* R. Meyer\*

#### The Role of Surface Oxides in NO<sub>x</sub> Storage Reduction Catalysts

**Monte Carlo or bust:** First-principles kinetic Monte Carlo simulations are used to examine NO oxidation over Pd(101)/Pd(100). Under typical conditions for NO oxidation in a NO<sub>x</sub> storage reduction system (600 K, 10<sup>5</sup> Pa O<sub>2</sub>, 100 Pa NO), turnover frequencies are comparable to those of Pt(111) surfaces, implying that the surface oxide is similar in reactivity to an oxygen-covered metal surface.



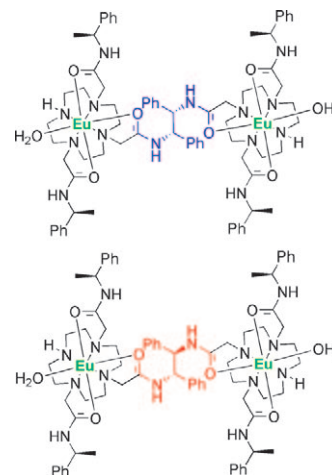


## Dinuclear Lanthanide Complexes

B. S. Murray, D. Parker,\* C. M. G. dos Santos, R. D. Peacock

### Synthesis, Chirality and Complexation Phenomena of Two Diastereoisomeric Dinuclear Lanthanide(III) Complexes

Complexes of  $\text{Ln}^{\text{III}}$  ( $\text{Ln} = \text{Eu}, \text{Tb}, \text{Yb}$ ) with diastereomeric ditopic ligands reveal differing anion binding profiles; circularly polarised luminescence studies of Eu systems show significant differences in the local helicity at the metal centre.



*Eur. J. Inorg. Chem.*

DOI: 10.1002/ejic.201000243

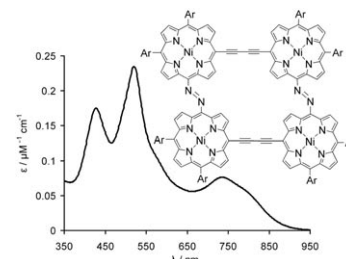


## Azo/Butadiyne Porphyrin Tetramer

B. Bašić, J. C. McMurtrie, D. P. Arnold\*

### A Cyclic Porphyrin Tetramer Linked by Azo and Butadiyne Bridges

A porphyrin tetramer in which the porphyrin units are linked alternately by azo and butadiyne bridges has been prepared. The electronic absorption spectrum implies strong electronic interaction between the porphyrin units.



*Eur. J. Org. Chem.*

DOI: 10.1002/ejoc.201000388

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