

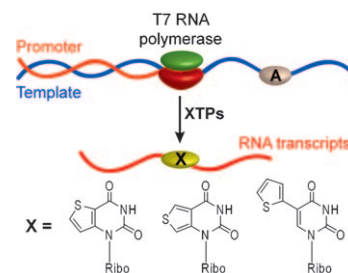


## Emissive Nucleosides

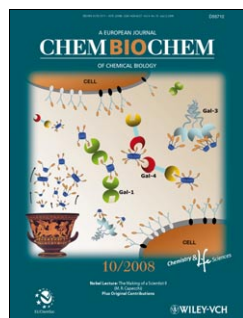
S. G. Srivatsan, Y. Tor\*

Enzymatic Incorporation of Emissive Pyrimidine Ribonucleotides

**Making an emission:** T7 RNA polymerase incorporates a series of thiophene-modified uridine triphosphate (UTP) analogues to generate emissive RNA transcripts. Labeling experiments suggested that the enzyme frequently pauses at the incorporation position and, when incorporation does take place, T7 RNA polymerase fails to elongate the modified oligonucleotides and yields aborted transcripts. TPs = triphosphates.



Chem. Asian J.  
DOI: 10.1002/asia.200800370

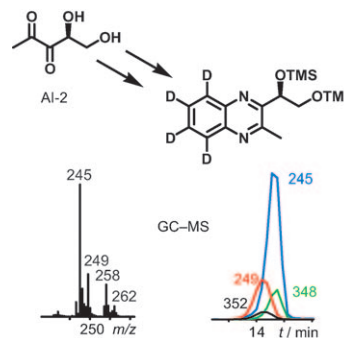


## Quorum Sensing

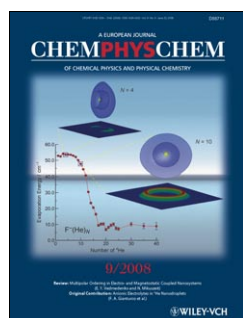
V. Thiel, R. Vilchez, H. Sztajer, I. Wagner-Döbler, S. Schulz\*

Identification, Quantification, and Determination of the Absolute Configuration of the Bacterial Quorum-Sensing Signal Autoinducer-2 by Gas Chromatography–Mass Spectrometry

**Sensing the signal:** A gas chromatography–mass spectrometry (GC–MS) method for the analysis of the quorum-sensing autoinducer-2 is described. It allows, for the first time, the direct analysis and accurate determination of this highly water soluble signaling compound, which exists in complex equilibria. The application on the caries-causing bacterium *Streptococcus mutans* is described.



ChemBioChem  
DOI: 10.1002/cbic.200800606

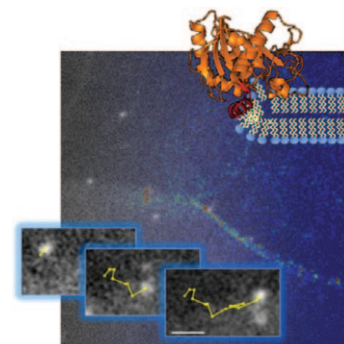


## Enzymes

S. Rocha, J. A. Hutchison, K. Peneva, A. Herrmann, K. Müllen, M. Skjöt, C. I. Jørgensen, A. Svendsen, F. C. De Schryver, J. Hofkens,\* H. Uji-i\*

Linking Phospholipase Mobility to Activity by Single-Molecule Wide-Field Microscopy

**Single Enzymes at Work:** Single-particle tracking is used to follow the diffusion of individual phospholipase enzymes acting on phospholipid bilayers, while simultaneously visualising local structural changes to those layers (see image). By comparison with related enzymes with different behaviour, the diffusive motions of the enzyme can be linked to different stages in its catalytic cycle.



ChemPhysChem  
DOI: 10.1002/cphc.200800537

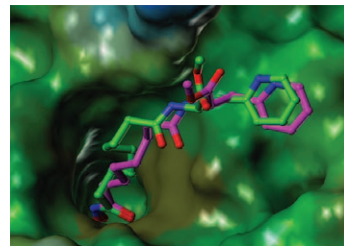


## Antitumor Agents

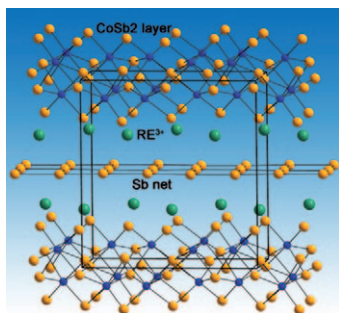
S. Schäfer, L. Saunders, S. Schlimme, V. Valkov, J. M. Wagner, F. Kratz, W. Sippl, E. Verdin, M. Jung\*

Pyridylalanine-Containing Hydroxamic Acids as Selective HDAC6 Inhibitors

**Pyridylalanine inhibitors** of histone deacetylase (HDAC) have been synthesized that show selectivity for the isoform HDAC6 over HDAC1 in vitro. This selectivity was also identified in cancer cells by analyzing tubulin versus histone acetylation. The compounds show decreased intrinsic cytotoxicity relative to pan-HDAC inhibitors, but show anti-proliferative synergy with the proteasome inhibitor bortezomib.



ChemMedChem  
DOI: 10.1002/cmdc.200800196



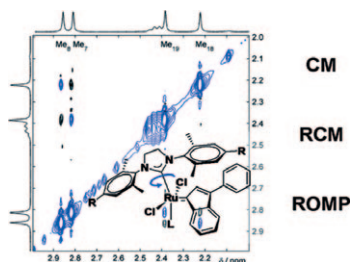
Eur. J. Inorg. Chem.  
DOI: 10.1002/ejic.200800836

### Rare-Earth Cobalt Antimonides

W.-Z. Cai, L.-M. Wu, L.-H. Li, L. Chen\*

Syntheses, Structures, and Theoretical Studies of New Ternary Antimonides  $\beta$ -RECoSb<sub>3</sub> (RE = La–Nd, Sm)

Five new ternary cobalt antimonides  $\beta$ -RECoSb<sub>3</sub> (RE = La–Nd, Sm) have been synthesized and characterized. The structural relationship among parent,  $\alpha$ - and  $\beta$ -type of RE<sub>3</sub>Sb<sub>3</sub> has been elucidated. The TB-LMTO calculations revealed that LaCoSb<sub>3</sub> is an anisotropic metal and no spin-polarization occurred around the Fermi level.



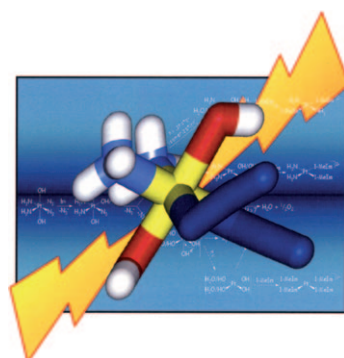
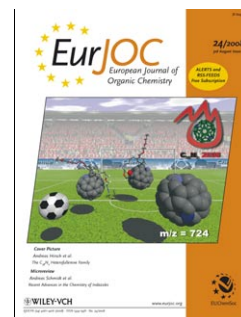
Eur. J. Org. Chem.  
DOI: 10.1002/ejoc.200800973

### Olefin Metathesis

S. Monsaert, E. De Canck, R. Drozdak, P. Van Der Voort, F. Verpoort,\* J. C. Martins,\* P. M. S. Hendrickx

Indenylidene Complexes of Ruthenium Bearing NHC Ligands – Structure Elucidation and Performance as Catalysts for Olefin Metathesis

The performance of six 2<sup>nd</sup>-generation indenylidene catalysts with formula Cl<sub>2</sub>Ru(NHC)(L)(3-phenylinden-1-ylidene), where NHC is SIMES (R = Me) or SIMe (R = H) and L is PCy<sub>3</sub>, PPh<sub>3</sub> or Py is reported, with complete NMR assignments and characterization of the rotameric behavior in solution. The results highlight the influence of N-aryl substitution patterns on the catalytic activity.



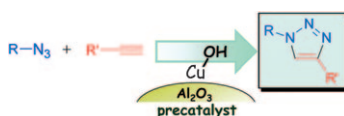
Chem. Eur. J.  
DOI: 10.1002/chem.200802206

### Bioinorganic Chemistry

H. I. A. Phillips, L. Ronconi, P. J. Sadler\*

Photoinduced Reactions of *cis,trans,cis*-[Pt<sup>IV</sup>(N<sub>3</sub>)<sub>2</sub>(OH)<sub>2</sub>(NH<sub>3</sub>)<sub>2</sub>] with 1-Methylimidazole

**Lighting up new platinum anticancer complexes**—Photoactivation of a platinum(IV) diazo anticancer complex in the presence of a derivative of imidazole, an important constituent of biomolecules, gives surprising photoproducts, including a tetrakis imidazole platinum(II) adduct, together with free azide, dioxygen and ammonia.



ChemSusChem  
DOI: 10.1002/cssc.200800202

### Heterogeneous Catalysis

T. Katayama, K. Kamata, K. Yamaguchi, N. Mizuno\*

A Supported Copper Hydroxide as an Efficient, Ligand-free, and Heterogeneous Precatalyst for 1,3-Dipolar Cycloadditions of Organic Azides to Terminal Alkynes

**Click together:** The supported copper hydroxide Cu(OH)<sub>x</sub>/Al<sub>2</sub>O<sub>3</sub> acts as an efficient heterogeneous precatalyst for the 1,3-dipolar cycloaddition of organic azides to terminal alkynes (click chemistry). The recovered Cu(OH)<sub>x</sub>/Al<sub>2</sub>O<sub>3</sub> retains its high activity and can be reused.

