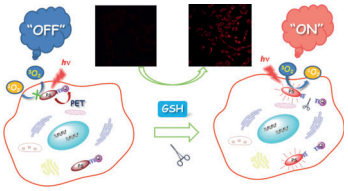
Auf diesen Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Photosensitizers

H. He, P.-C. Lo,* D. K. P. Ng*

A Glutathione-Activated Phthalocyanine-Based Photosensitizer for Photodynamic Therapy

Light therapy: Fluorescence emission and reactive oxygen species generation are greatly enhanced in a molecular phthalocyanine-quencher system upon interaction with glutathione (see figure). Its activation has also been demonstrated in vivo.



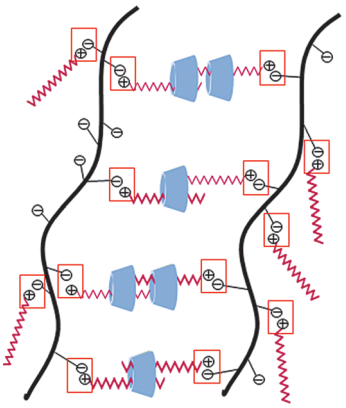
Chem. Eur. J.
DOI: **10.1002/chem.201400001**

Supramolecular Chemistry

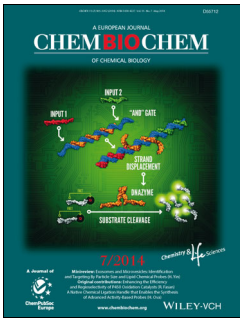
L. Szente, I. Puskás, K. Csabai, É. Fenyvesi*

Supramolecular Proteoglycan Aggregate Mimics: Cyclodextrin-Assisted Biodegradable Polymer Assemblies for Electrostatic-Driven Drug Delivery

Drug deal: Self-assembled, noncovalent polymeric biodegradable materials mimicking proteoglycan aggregates in their structure are synthesized and loaded with both hydrophilic and lipophilic model drugs as well as with bovine serum albumin. The release of the entrapped drugs from the supramolecular matrices is controlled by electrostatic interactions with the cations in the surrounding media and by biodegradation.



Chem. Asian J.
DOI: **10.1002/asia.201301391**

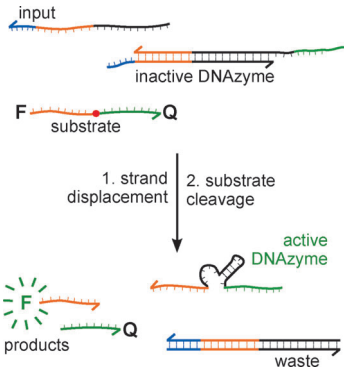


DNA Logic Gates

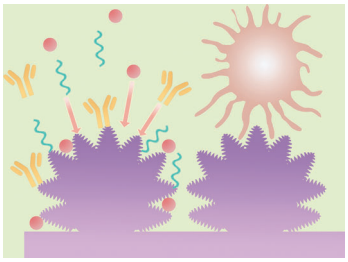
C. W. Brown, III, M. R. Lakin, D. Stefanovic,* S. W. Graves*

Catalytic Molecular Logic Devices by DNAzyme Displacement

Catalytic control: We demonstrate a simple, programmable method for controlling the catalytic activity of DNAzymes using DNA strand displacement reactions. This work broadens the impact of strand displacement logic devices by using the rich range of biochemical reactions catalyzed by DNAzymes as outputs.



ChemBioChem
DOI: **10.1002/cbic.201400047**



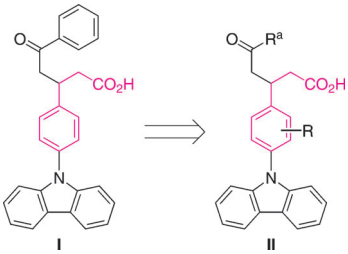
ChemPhysChem
DOI: **10.1002/cphc.201301230**

Fractal Structures

P. Zhang, S. Wang*

Designing Fractal Nanostructured Biointerfaces for Biomedical Applications

Facing forward: Fractal structures offer a unique "fractal contact mode" that guarantees the efficient working of organisms with an optimized style. Fractal nanostructured biointerfaces show great potential for the ultrasensitive detection of various disease-relevant biomarkers, such as microRNA, cancer antigen 125, and breast cancer cells, from unpurified cell lysates and the blood of patients.



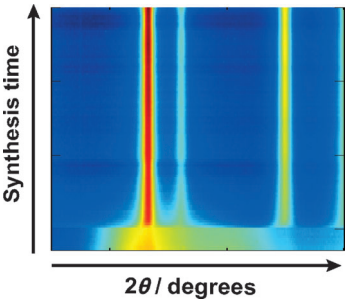
ChemMedChem
DOI: **10.1002/cmdc.201400007**

Antidiabetic Agents

Y.-B. Tang, J.-Z. Liu, S.-E. Zhang, X. Du, F. Nie, J.-Y. Tian, F. Ye, K. Huang, J.-P. Hu, Y. Li, Z. Xiao*

3-Phenylpropanoic Acid-Based Phosphotyrosine (pTyr) Mimetics: Hit Evolution to a Novel Orally Active Protein Tyrosine Phosphatase 1B (PTP1B) Inhibitor

A sincere form of flattery: A novel protein tyrosine phosphatase 1B (PTP1B) inhibitor with a 3-phenylpropanoic acid moiety as a phosphotyrosine (pTyr) mimetic was optimized to provide an orally active lead compound with an IC_{50} value of 0.40 μM against PTP1B and more notably that displayed significant in vivo activity in a murine insulin resistance model.



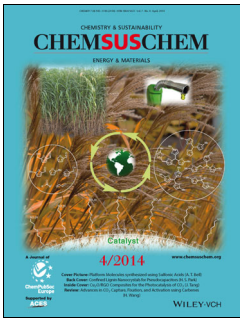
ChemSusChem
DOI: **10.1002/cssc.201301042**

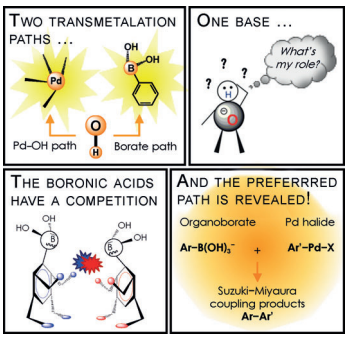
Energy Materials

K. M. Ø. Jensen, C. Tyrsted, M. Bremholm, B. B. Iversen*

In Situ Studies of Solvothermal Synthesis of Energy Materials

In the thick of it: In situ X-ray and neutron studies of solvothermal and hydrothermal reactions can yield new information on the synthesis of energy material and map the structure–synthesis relationship. Various approaches to in situ powder diffraction and total scattering are reviewed. This review discusses experimental methods as well as strategies for data analysis and highlights the chemical insights that can be obtained from in situ experiments.





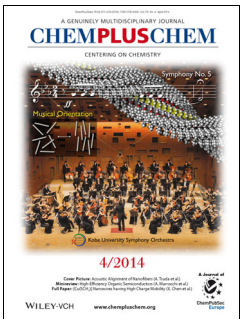
ChemCatChem
DOI: **10.1002/cctc.201301080**

Cross-Coupling

C. F. R. A. C. Lima,* A. S. M. C. Rodrigues, V. L. M. Silva, A. M. S. Silva, L. M. N. B. F. Santos*

Role of the Base and Control of Selectivity in the Suzuki–Miyaura Cross-Coupling Reaction

Follow the organoborate road: Competition Suzuki–Miyaura reactions between two boronic acids with different pK_a values reveal the link between acid–base chemistry and the reaction catalytic cycle. The results reveal that the borate path is the preferred route for transmetalation and thus confirm the role of the base in the reaction mechanism.

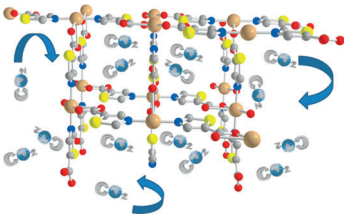


Carbon Dioxide Capture

A. Rossin,* G. Tuci, G. Giambastiani, M. Peruzzini

1D and 2D Thiazole-Based Copper(II) Coordination Polymers: Synthesis and Applications in Carbon Dioxide Capture

Attraction at first sight: Copper(II) thiazole-based coordination polymers have been prepared and characterized; their network dimensionality can be tuned from 1D to 2D through the introduction of specific functional groups on the organic spacers. In one case, a 3D supramolecular scaffold was obtained; the related permanent porosity led to efficient CO_2 physical storage at ambient temperature and pressure, which made the material suitable for CO_2 capture in post-combustion flue gas (see figure).



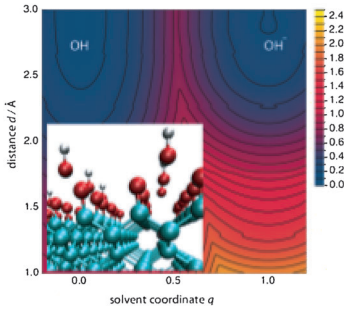
ChemPlusChem
DOI: **10.1002/cplu.201300360**

Electrode Materials

P. M. Quaino,* W. Schmickler

Oxygen-Terminated Diamond Electrodes in Alkaline Media: Structure and OH Generation

Not only a girl's best friend: Boron-doped diamond is important as an electrode material. Oxygen-terminated diamonds and the kinetics of OH generation in alkaline solutions on this type of surface are studied theoretically; this allows detailed structure and energetics characterization of the systems, as well as an understanding of the reaction dynamics that proceed in an outer-sphere mode.



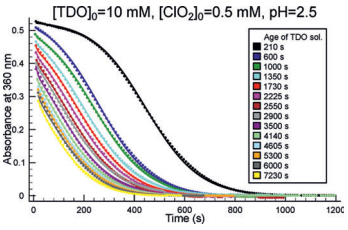
ChemElectroChem
DOI: **10.1002/celc.201300200**

Tautomerism of Thiourea Dioxide

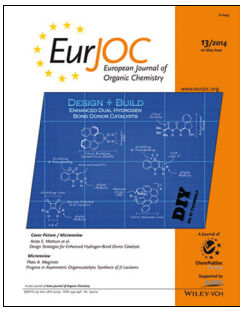
G. Csekő, Y. Hu, Y. Song, T. R. Kégl, Q. Gao,* S. V. Makarov,* A. K. Horváth*

Kinetic Evidence of Tautomerism of Thiourea Dioxide in Aqueous Acidic Solutions

Kinetic evidence of the tautomerism of thiourea dioxide in aqueous acidic solutions is reported. The reactivity of the two tautomeric forms towards ClO_2 significantly differs in rate and also in mechanistic aspects. Whereas aminoiminomethanesulfinic acid reacts with ClO_2 in a second-order process, the reaction of its tautomeric form, thiourea dioxide, with ClO_2 displays autocatalysis.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201400059**

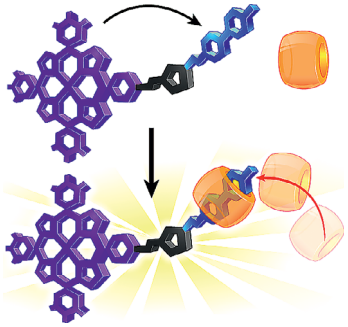


Supramolecular Chemistry

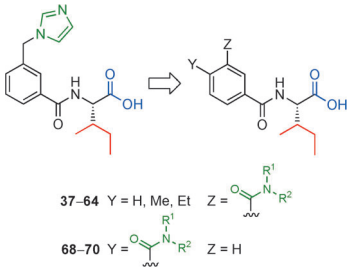
M. Fathalla, N. L. Strutt, J. C. Barnes, C. L. Stern, C. Ke, J. F. Stoddart*

Fluorescence Enhancement of a Porphyrin–Viologen Dyad by Pseudorotaxane Formation with Cucurbit[7]uril

The electron-transfer processes within a donor–acceptor dyad can be readily controlled through the formation of a pseudorotaxane between a viologen acceptor and cucurbit[7]uril.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201402018**



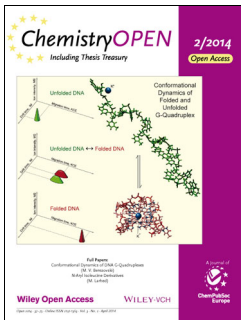
ChemistryOpen
DOI: **10.1002/open.201300040**

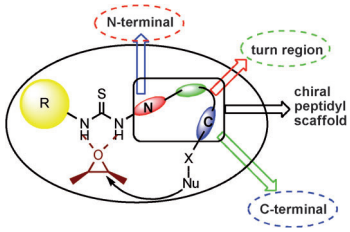
Medicinal Chemistry

M. Behrends, C. Wallinder, A. Wieckowska, M.-O. Guimond, A. Hallberg, N. Gallo-Payet, M. Larhed*

N-Aryl Isoleucine Derivatives as Angiotensin II AT_2 Receptor Ligands

Human not pig receptors! A series of benzamide substituted *N*-aryl isoleucine derivatives targeting the human AT_2R have been synthesized. In this series, ligands with K_i values down to the single digit micromolar range have been identified. The presented data emphasize the importance of using human receptors in drug discovery programs.





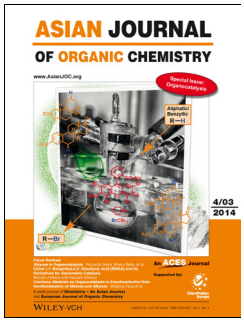
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201402040**

Supramolecular Chemistry

S. S. Chimni,* V. Kumar, N. Bala

Design of Peptidyl Thiourea Derivatives as Organocatalysts for the Asymmetric Ring Opening of *meso*-Stilbene Oxides

Stilbene, not has-been: The design and synthesis of chiral peptidyl thiourea organocatalysts for asymmetric ring opening of *cis*-stilbene oxides with *N*-phenylpiperazines is reported. Chiral β-amino alcohols are obtained in up to 95% *ee* after crystallization. The configuration at the N-terminal residue of the peptidyl thiourea organocatalyst affects the stereochemical outcome of the reaction.



ChemViews magazine
DOI: **10.1002/chemv.201400020**

Crystal Structures

Guess the Mineral

To mark the International Year of Crystallography (IYCr), ChemViews & Chemie in Unserer Zeit have started a new quiz that involves guessing the name of a mineral with the help of an image and some hints. The first mineral is found in Outokumpu in Finland and forms monoclinic prismatic crystals of the space group *C*2/*c*.