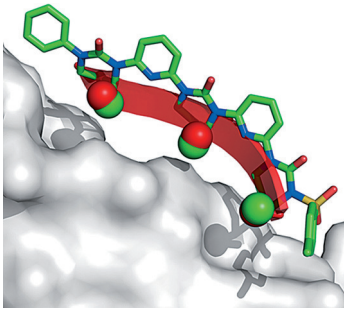
Auf diesen Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Protein–Protein Interactions

T. Yamashita, P. C. Knipe, N. Busschaert, S. Thompson,* A. D. Hamilton*

A Modular Synthesis of Conformationally Preorganised Extended β-Strand Peptidomimetics

A promising strategy for mediating protein–protein interactions is the use of non-peptidic mimics of secondary structural protein elements. It is shown that iterative coupling of pre-formed monomers bearing side-chain mimics allows rapid oligomer assembly. These scaffolds accurately reproduce the recognition domain of several amino acid residues of a β-strand (see figure).



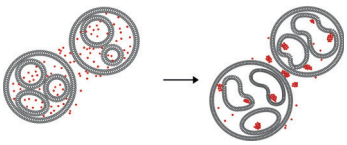
Chem. Eur. J.
DOI: **10.1002/chem.201501366**

Structure Determination

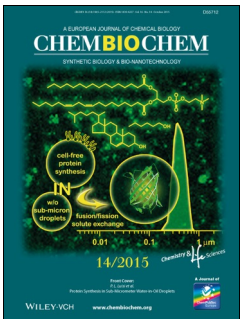
C.-I. Yang, B. N. F. Tsai, S.-J. Huang, T.-Y. Wang, H.-C. Tai,* J. C. C. Chan*

Aggregation of Beta-Amyloid Peptides Proximal to Zwitterionic Lipid Bilayers

Consensus of form: One of the hallmarks of Alzheimer's disease is the deposition of amyloid plaques, which consist of β-amyloid (Aβ) peptides in fibrillar states. The bilayer membranes formed by zwitterionic phosphatidylcholine/phosphatidylethanolamine lipids do not affect the molecular structure of the aggregates of Aβ peptides.



Chem. Asian J.
DOI: **10.1002/asia.201500482**

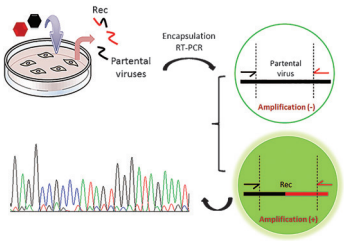


Virus Amplification

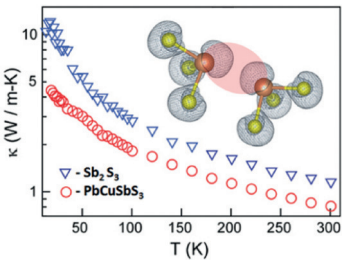
Y. Tao, A. Rotem, H. Zhang, S. K. Cockrell, S. A. Koehler, C. B. Chang, L. W. Ung, P. G. Cantalupo, Y. Ren, J. S. Lin, A. B. Feldman, C. E. Wobus, J. M. Pipas, D. A. Weitz*

Artifact-Free Quantification and Sequencing of Rare Recombinant Viruses by Using Drop-Based Microfluidics

Artifact-free RNA amplification: single viral RNA templates produced from a co-infected culture are encapsulated into picoliter drops with a one-step RT-PCR cocktail. A fluorescent dye in the cocktail identifies drops containing potential recombinant amplicons, which are sorted based on fluorescence, followed by Sanger sequencing.



ChemBioChem
DOI: **10.1002/cbic.201500384**



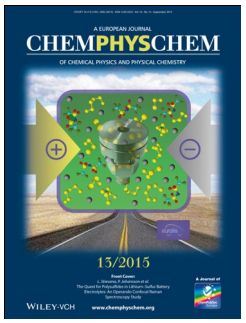
Stereochemistry

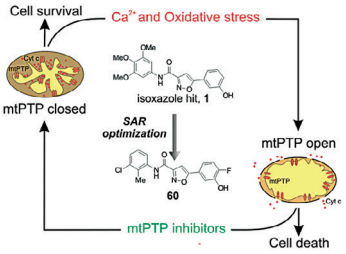
Y. Dong, A. R. Khabibullin, K. Wei, J. R. Salvador, G. S. Nolas,* L. M. Woods*

Bournonite $PbCuSbS_3$: Stereochemically Active Lone-Pair Electrons that Induce Low Thermal Conductivity

How low can you go? Stereochemically active lone-pair s^2 electrons play an important role in limiting phonon transport in chalcogenides, such as bournonite and stibnite. The measured low thermal conductivity is explained in terms of anharmonic processes, due to electrostatic repulsive interactions between neighboring s^2 electronic clouds within a distorted coordination environment.

ChemPhysChem
DOI: **10.1002/cphc.201500476**





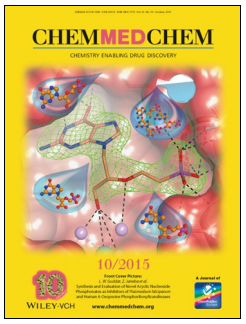
Drug Discovery

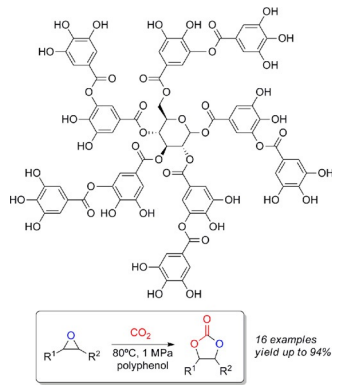
S. Roy, J. Šileikytė, M. Schiavone, B. Neuenswander, F. Argenton, J. Aubé, M. P. Hedrick, T. D. Y. Chung, M. A. Forte,* P. Bernardi,* F. J. Schoenen*

Discovery, Synthesis, and Optimization of Diarylisoxazole-3-carboxamides as Potent Inhibitors of the Mitochondrial Permeability Transition Pore

Stop the pore: Prolonged Ca^{2+}-dependent opening of the mitochondrial permeability transition pore (mtPTP) causes cell death. Herein we describe the discovery of novel small-molecule mtPTP inhibitors with picomolar activity in in vitro assays and high in vivo efficacy in a zebrafish model of muscular dystrophies.

ChemMedChem
DOI: **10.1002/cmdc.201500284**





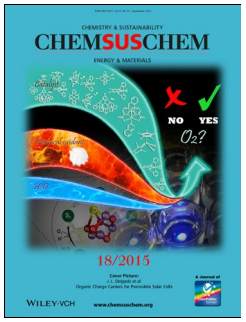
Carbon Dioxide Chemistry

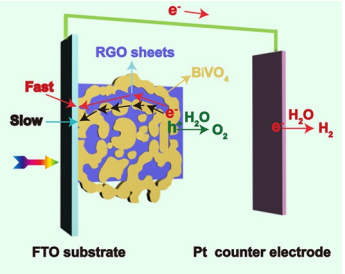
S. Sopeña, G. Fiorani, C. Martín, A. W. Kleij*

Highly Efficient Organocatalyzed Conversion of Oxiranes and CO_2 into Organic Carbonates

Two to tango: A highly efficient binary catalyst system is reported that consists of the naturally occurring polyphenol tannic acid and a suitable nucleophile additive. This two-component catalyst is highly active towards the formation of organic carbonates at very low loadings of the polyphenol, and the maximum turnover frequency (TOF) exceeds 200 h^{-1}. The high reactivity of the tannic acid is ascribed to the high local concentration of polyphenol units.

ChemSusChem
DOI: **10.1002/cssc.201500710**





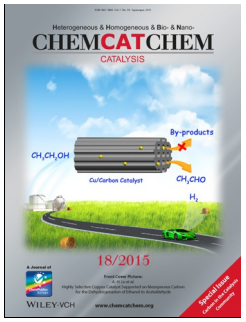
Water Oxidation

Y. Hu, Y. Su, H. Huang, Q. Qian, Z. Guan, J. Feng, Z. Li,* Z. Zou

Enhancement of Photoelectrochemical Performance in Water Oxidation over Bismuth Vanadate Photoanodes by Incorporation with Reduced Graphene Oxide

Change the channel: Reduced graphene oxide (RGO) sheets with excellent electronic conductivity are introduced to bismuth vanadate photoanode films to provide an effective channel for electron transport. The proposed mechanism of charge transport for the reduced graphene oxide–bismuth vanadate photoelectrode under irradiation is depicted. FTO = Fluorine-doped tin oxide.

ChemCatChem
DOI: **10.1002/cctc.201500485**

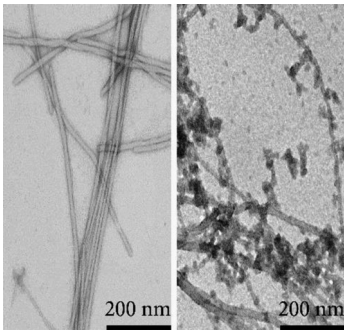


Fiborous Proteins

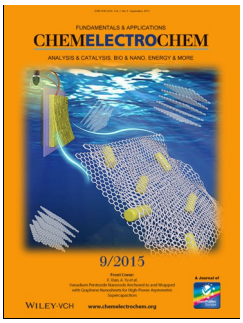
M. Kaur, S. Roberts, J. Healy, L. Domigan, M. Vasudevamurthy, J. A. Gerrard,* L. Sasso*

Crystallin Nanofibrils: A Functionalizable Nanoscaffold with Broad Applications Manufactured from Waste

Form and function: Functional crystallin protein nanofibrils have been prepared by immobilization of active enzymes through a versatile glutaraldehyde-based approach (see figure). The immobilized enzymes exhibit better thermostability and reusability properties than the free enzymes. Application of the functionalized protein nanofibrils in a biosensing platform has been shown.



ChemPlusChem
DOI: **10.1002/cplu.201500033**

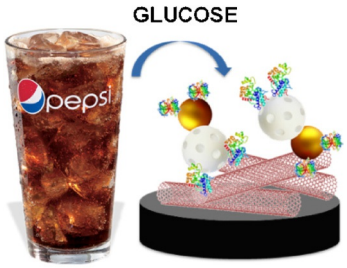


Biosensors

A. Boujakhrout, E. Sánchez, P. Díez, A. Sánchez, P. Martínez-Ruiz, C. Parrado, J. M. Pingarrón,* R. Villalonga*

Single-Walled Carbon Nanotubes/Au–Mesoporous Silica Janus Nanoparticles as Building Blocks for the Preparation of a Bienzyme Biosensor

Soda sensors: A sensitive amperometric biosensor for glucose is prepared by using novel Janus Au–mesoporous silica nanoparticles as building blocks for the toposelective co-immobilization of redox enzymes and single-walled carbon-nanotube-modified electrodes are utilized as a transducer interface.



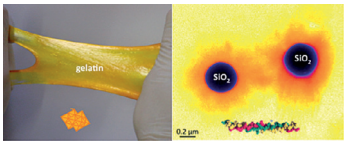
ChemElectroChem
DOI: **10.1002/celc.201500244**

Bioinorganic Interfaces

H. Voisin, C. Aimé, T. Coradin*

Understanding and Tuning Bioinorganic Interfaces for the Design of Bionanocomposites

Understanding and controlling interfacial interactions between biological molecules – from lipids to proteins – and inorganic nano-objects, polyoxometallates and colloids allows the synthesis of bionanocomposites with applications in biotechnology and biomedicine.



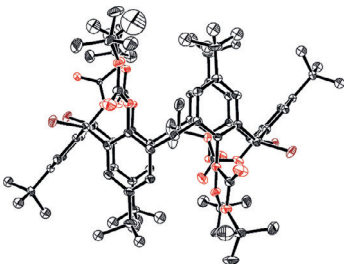
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201500403**

Intramolecular Guest Exchange

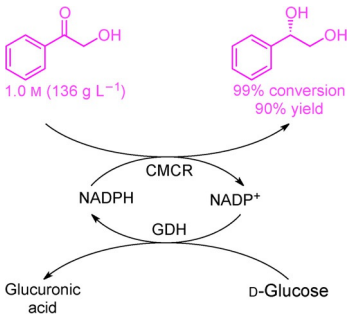
A. Leader, N. Itzhak, B. Bogoslavsky, S. E. Biali*

Calix[6]arene Functionalized at Four Bridges: Conformation and Intramolecular Guest Exchange

Tetrabromocalix[6]arene **3** underoges an intramolecular guest exchange process involving the unique self-included Boc group and the Boc group on the oppiiosite ring (Boc = *tert*-butoxycarbonyl).



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201500873**



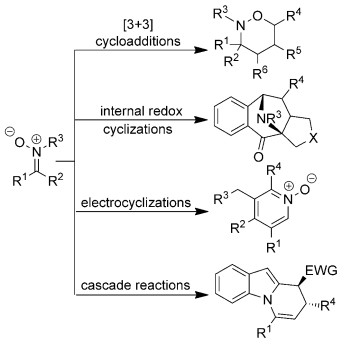
ChemistryOpen
DOI: **10.1002/open.201500045**

Biocatalysis

X. Chen, T. Mei, Y. Cui, Q. Chen, X. Liu, J. Feng, Q. Wu, D. Zhu*

Highly Efficient Synthesis of Optically Pure (*S*)-1-phenyl-1,2-ethanediol by a Self-Sufficient Whole Cell Biocatalyst

Self-sufficient catalysis! Lyophilized recombinant *Escherichia coli* coexpressing *Candida magnolia* carbonyl reductase (CMCR) and glucose dehydrogenase (GDH) genes served as an effective self-sufficient biocatalyst for the reduction of α-hydroxy acetophenones at high substrate concentrations. The products were isolated with high yield and excellent optical purity, offering a practical biocatalytic method for the preparation of vicinal diols.



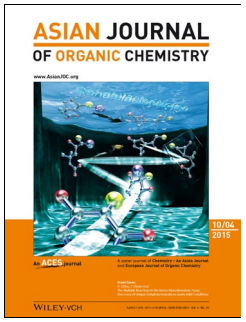
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201500211**

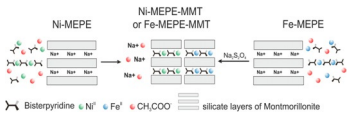
Heterocycles

L. L. Anderson*

Diverse Applications of Nitrones for the Synthesis of Heterocyclic Compounds

Good nit-rone: Nitrones are versatile reagents that undergo a variety of transformations for the synthesis of a diverse array of heterocyclic compounds. Although best known for their [3+2]-dipolar cycloaddition reactivity, the breadth of heterocycle synthesis accessible through nitrone intermediates includes a much broader scope of transformations, which have been highlighted in this Focus Review to showcase the diverse applications of nitrone reactivity to heterocycle synthesis.





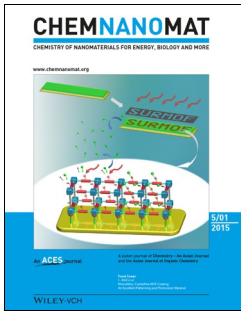
ChemNanoMat
DOI: **10.1002/cnma.201500065**

Polyelectrolytes

M. F. Geist, C. S. Peyratout, D. G. Kurth*

Intercalation of Nickel(II) and Iron(II) Metallosupramolecular Polyelectrolytes in Montmorillonite: Nanocomposites and their Electrorheological Properties

Between the lines: Nanocomposites obtained from montmorillonite and metallosupramolecular polyelectrolytes (MEPE) with Fe^{II} and Ni^{II} are prepared by an aqueous intercalation reaction and compared. The intercalation of Fe-MEPE makes a removal of Fe_2O_3 traces in montmorillonite necessary. Additional electrorheological measurements reveal a distinctive ER effect for both nanocomposites.



ChemViews magazine
DOI: **10.1002/chemv.201500080**

Chemical Societies

V. Köster

First Female President of the Hungarian Chemical Society

Professor Livia Simon Sarkadi, newly re-elected president of the Hungarian Chemical Society (HCS), talked to Vera Köster for *ChemViews Magazine* about the small but successful chemistry community in Hungary, her experience in society work, and the lives and careers of women in chemistry.