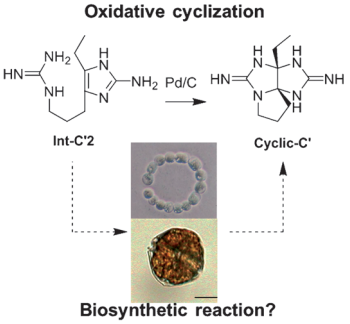
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Natural Products

S. Tsuchiya, Y. Cho, K. Konoki, K. Nagasawa, Y. Oshima, M. Yotsu-Yamashita*

Synthesis of a Tricyclic Bisguanidine Compound Structurally Related to Saxitoxin and its Identification in Paralytic Shellfish Toxin-Producing Microorganisms

You know that you're toxic: Direct conversion of Int-C′2, a biosynthetic intermediate of saxitoxin (STX), into a tricyclic bisguanidine compound (Cyclic-C′), which is structurally related to STX, was achieved through oxidative cyclization catalyzed by Pd/C under basic conditions in air (see scheme). By using HPLC-MS analysis, Cyclic-C′ was also identified in the paralytic shellfish toxin (PST)-producing microorganisms, suggesting that Cyclic-C′ is involved in biosynthesis of PSTs.



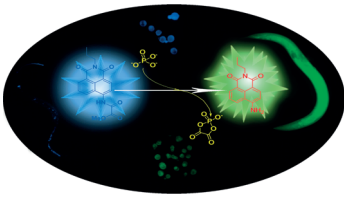
Chem. Eur. J.
DOI: **10.1002/chem.201500064**

Fluorescent Probes

J. F. Zhang,* L. E. Guo, T. N. Zang, Y. L. Duan, X. Y. Liu, Z. Yang, P. Verwilst, K. Luo, G. K. Wang, J. F. Kou, Y. Zhou,* J. S. Kim*

Highly Selective In Vivo Imaging of Endogenous/Exogenous Phosphate Ion over ATP and PP_i

Nothing but phosphate: A chemodosimeter was designed to function as a highly selective phosphate ion (P_i) sensor, showing a 91-fold ratiometric fluorescence enhancement. The probe successfully visualized exogenous and endogenous apyrase-catalyzed P_i generation and was the first probe able to trace the generation and enrichment of P_i through hemichannel closure in Sf9 cells.



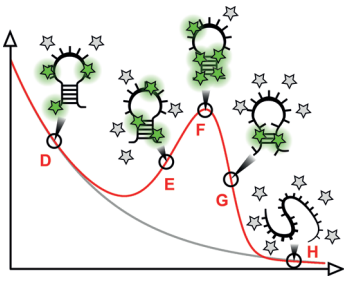
Chem. Asian J.
DOI: **10.1002/asia.201500091**

RNA Structure

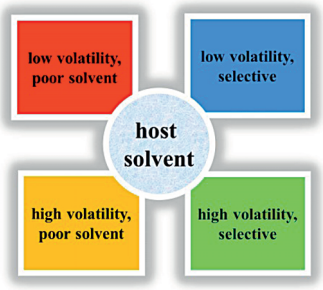
R. Silvers, H. Keller, H. Schwalbe,* M. Hengesbach*

Differential Scanning Fluorimetry for Monitoring RNA Stability

A glowing method to test the strength of RNA: We present a novel method to analyze the stability of virtually any structured RNA in a highly parallel fashion. Using a fluorescent reporter dye, we characterized the stabilizing effects of ions, polyamines, and riboswitch ligands.



ChemBioChem
DOI: **10.1002/cbic.201500046**



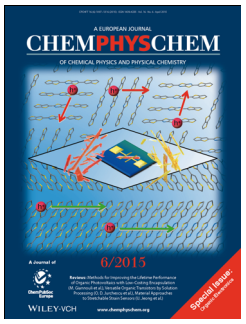
ChemPhysChem
DOI: **10.1002/cphc.201402734**

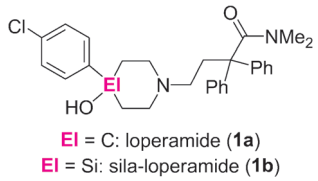
Photovoltaics

F. Machui,* P. Maisch, I. Burgués-Ceballos, S. Langner, J. Krantz, T. Ameri, C. J. Brabec

Classification of Additives for Organic Photovoltaic Devices

Top of the class: A system for classifying additives for processing organic photovoltaic devices according to the fundamental mechanism by which they influence microstructure formation from solution is suggested. The major parameters used for their classification are solubility and drying kinetics. Both are discussed in detail, the consequences on processing are analyzed and a general mechanism to classify the impact of additives on the structure formation is suggested.





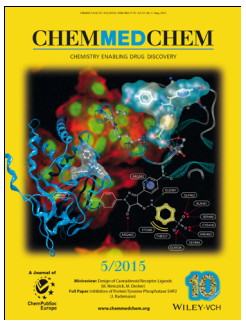
ChemMedChem
DOI: **10.1002/cmdc.201500040**

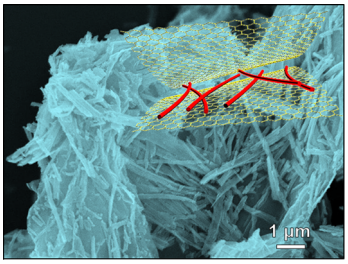
Drug Design

M. Geyer, E. Wellner, U. Jurva, S. Saloman, D. Armstrong, R. Tacke*

Can Silicon Make an Excellent Drug Even Better? An in vitro and in vivo Head-to-Head Comparison between Loperamide and Its Silicon Analogue Sila-Loperamide

Carbon/silicon switch: Sila-loperamide (**1b**), a silicon analogue of the opioid receptor agonist loperamide (**1a**), was synthesized. A head-to-head comparison of the in vitro pharmacodynamics and pharmacokinetics and the in vivo pharmacokinetics of **1a** and **1b** revealed that the C/Si switch strategy is a smart choice to modulate potency, efficacy, stability, and metabolic fate.





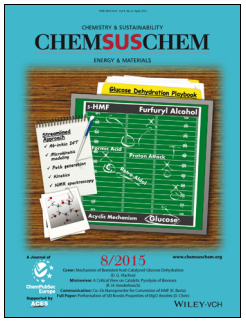
ChemSusChem
DOI: **10.1002/cssc.201500123**

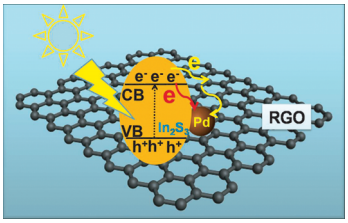
Batteries

J. G. Kim, Y. Kim, Y. Noh, W. B. Kim*

$MnCo_2O_4$ Nanowires Anchored on Reduced Graphene Oxide Sheets as Effective Bifunctional Catalysts for Li–O_2 Battery Cathodes

Between the nanosheets: A hybrid composite system of $MnCo_2O_4$ nanowires (MCO NWs) anchored on reduced graphene oxide (RGO) nanosheets is prepared for the bifunctional catalyst of a Li–O_2 battery cathode. A Li–O_2 battery with the MCO@RGO catalyst has high long-term durability and high energy density and could be a promising O_2 cathode system for next-generation Li–O_2 batteries.





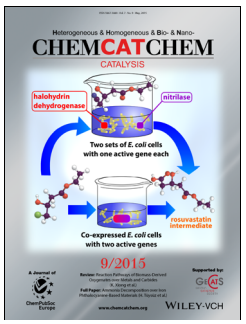
ChemCatChem
DOI: **10.1002/cctc.201500009**

Photocatalysts

X. Li, N. Zhang, Y.-J. Xu*

Promoting Visible-Light Photocatalysis with Palladium Species as Cocatalyst

Duality is part of life: Ternary In_2S_3–(reduced graphene oxide–palladium) composites show enhanced visible-light photoactivity with the introduction of palladium nanoparticles, which act as dual cocatalyst with reduced graphene oxide.

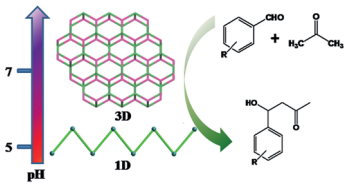


Metal–Organic Frameworks

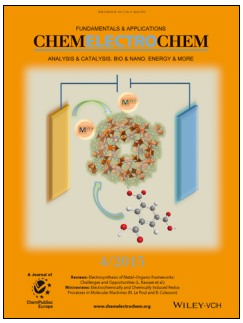
R. Sen,* D. Saha, S. Koner, D. Mal, P. Brandão, Z. Lin*

pH-Tuned Modulation of 1D Chain to 3D Metal–Organic Framework: Synthesis, Structure and Their Useful Application in the Heterogeneous Claisen–Schmidt Reaction

Multidimensional: Two novel magnesium-containing metal–organic frameworks (MOFs) have been synthesized by using magnesium ions and pyridine-2,3-dicarboxylic acid in a medium at different pH values. They have a 1D chain or 3D framework structure and catalyze the Claisen–Schmidt reaction efficiently (see scheme).



ChemPlusChem
DOI: **10.1002/cplu.201402340**



Electrocatalysis

K. Elumeeva, J. Ren, M. Antonietti, T.-P. Fellinger*

High Surface Iron/Cobalt-Containing Nitrogen-Doped Carbon Aerogels as Non-Precious Advanced Electrocatalysts for Oxygen Reduction

Do we need Pt? A one-step sol–gel route towards self-supported non-precious metal electrocatalysts with high surface area and optimal mass transport porosity is presented. The Fe- and Co-based materials favorably catalyze the oxygen reduction reaction.

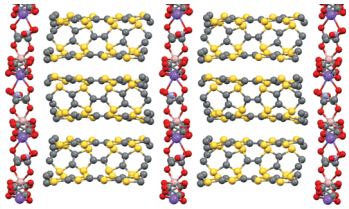
ChemElectroChem
DOI: **10.1002/celc.201402364**

Chiral Molecular Conductors

L. Martin,* H. Akutsu, P. N. Horton, M. B. Hursthouse, R. W. Harrington, W. Clegg

Chiral Radical-Cation Salts of BEDT-TTF Containing a Single Enantiomer of Tris(oxalato)aluminate(III) and -chromate(III)

The use of a chiral electrolyte has produced two new chiral radical-cation salts of BEDT-TTF from racemic ammonium tris(oxalato)aluminate(III) and -chromate. One of the salts has a non-stoichiometric composition of 0.11 electrons per molecule doped to the band-insulating donor layer.



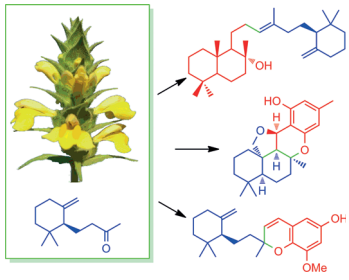
Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201500092**

Natural Products

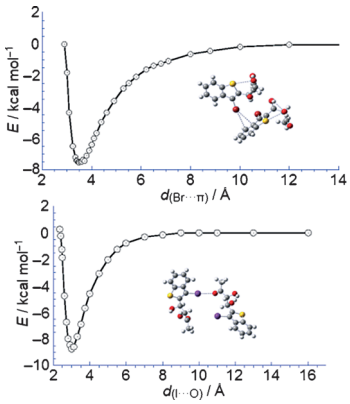
A. Castillo, L. Silva, D. Briones, J. F. Quílez del Moral,* A. F. Barrero*

Collective Synthesis of Natural Products Sharing the Dihydro-γ-Ionone Core

The expedient enantioselective synthesis of several natural products from a common precursor, (+)-3,4-dihydro-γ-ionone, is described. The production of this natural compound in multigram scale from the extract *Bellardia trixago* is the basis of this approach.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201500208**



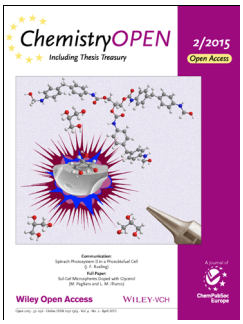
ChemistryOpen
DOI: **10.1002/open.201402087**

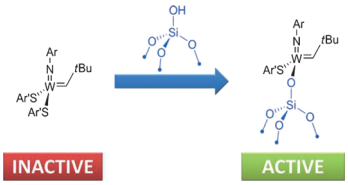
Computational Chemistry

E. Cadoni,* G. Ferino, P. Pitzanti, F. Secci, C. Fattuoni, F. Nicolò, G. Bruno*

Halogen and Hydrogen Bonding Benzothiophene Diol Derivatives: A Study Using ab initio Calculations and X-Ray Crystal Structure Measurements

Halogen be thy bond: X-ray crystal structures and ab initio calculations reveal that bromo- (top) and iodobenzothiophene diols (bottom) can generate intermolecular interactions with π electrons and/or with oxygen atoms through halogen bonding.





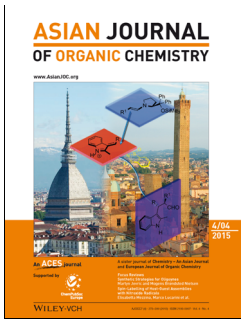
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201500038**

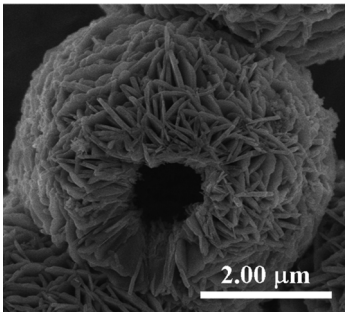
Metathesis

F. Allouche, V. Mougel, C. Copéret*

Activating Thiolate-Based Imidoalkylidene Tungsten(VI) Metathesis Catalysts by Grafting onto Silica

One S is better than two: Grafting of bis-thiolate imidoalkylidene tungsten(VI) onto silica increases the alkene metathesis catalytic performance drastically by desymetrizing the metal center.





ChemNanoMat
DOI: **10.1002/cnma.201400013**

Heterogeneous Catalysis

L. Qi, B. Cheng, W. Ho,* G. Liu, J. Yu*

Hierarchical Pt/NiO Hollow Microspheres with Enhanced Catalytic Performance

Hierarchical Pt/NiO composite hollow spheres exhibit high catalytic activity and recyclability for formaldehyde decomposition in air at room temperature mainly due to their large specific surface area and hierarchical bimodal macro-mesoporous structures, which facilitate formaldehyde adsorption and Pt-dispersion, enable fast diffusion and transport of gas molecules, and ensure the accessibility of the active sites.

ChemViews magazine
DOI: **10.1002/chemv.201500022**

Forensic Chemistry

K. Roth

The Chemistry of a (Nearly) Perfect Murder

In Agatha Christie's very first crime novel, "The Mysterious Affair at Styles", the murderer hatches a devilish plan – but is thwarted by general chemistry knowledge. Find out how calculating the solubility of strychnine bromide can ruin an airtight alibi in *ChemViews Magazine*.