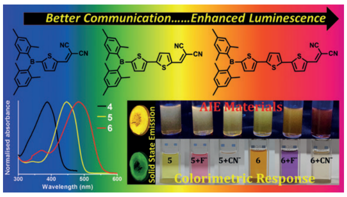
Auf diesen Seiten weisen wir auf wichtige aktuelle Beiträge in unseren Schwesterzeitschriften hin. Wenn Sie die Seiten online lesen, dann können Sie die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

Fluorescent Sensors

G. R. Kumar, S. K. Sarkar, P. Thilagar*

Aggregation-Induced Emission and Sensing Characteristics of Triarylborane–Oligothiophene–Dicyanovinyl Triads

Hazard detectors: The design and synthesis of a series of triarylborane–oligothiophene–dicyanovinyl triads **4**–**6** (A–D–A’) is reported (see figure). The optical properties of **4**–**6** were elegantly modulated by judiciously varying the number of thiophenyl spacer between the acceptors. Compounds **5** and **6** are AIE active and also exhibit significant luminescence in a PMMA matrix. Filter paper strips coated with compounds **5** and **6** can detect F^- and CN^- in aqueous media with different colorimetric responses.



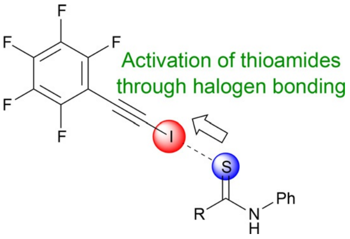
Chem. Eur. J.
DOI: **10.1002/chem.201603349**

Halogen Bonding Catalysis

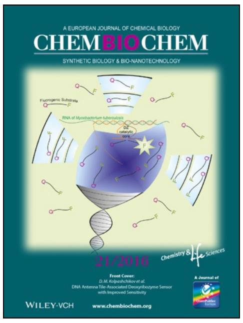
A. Matsuzawa,* S. Takeuchi, K. Sugita*

Iodoalkyne-Based Catalyst-Mediated Activation of Thioamides through Halogen Bonding

Building relationships: An iodoalkyne bearing a pentafluorophenyl group was found to be effective in the catalytic activation of thioamides through halogen bonding. The thus activated thioamides reacted with 2-aminophenol to produce benzoxazoles in good yield. Mechanistic studies provided concrete evidence that this catalytic activation is based on halogen bonding.



Chem. Asian J.
DOI: **10.1002/asia.201601130**

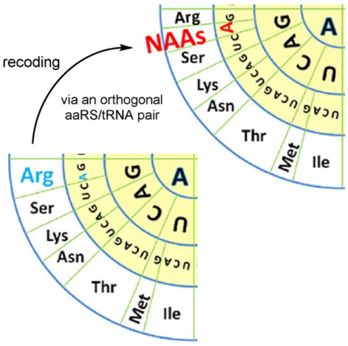


Genetic Code Expansion

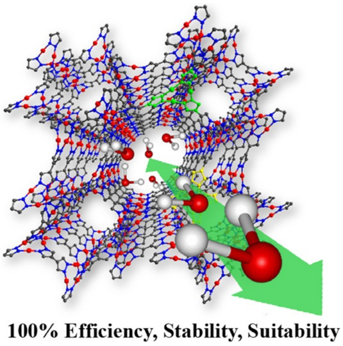
Y. Wang,* M.-L. Tsao

Reassigning Sense Codon AGA to Encode Noncanonical Amino Acids in *Escherichia coli*

Teaching an old codon new tricks: AGA, a codon originally coding for arginine, was altered to encode noncanonical amino acids by introducing a newly evolved aminoacyl–tRNA synthetase/tRNA pair in *E. coli*. The success of this new method provides options for future expansion of the genetic code.



ChemBioChem
DOI: **10.1002/cbic.201600448**



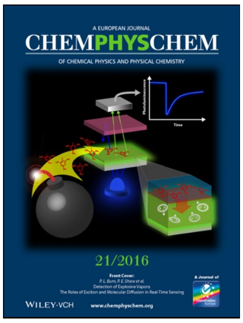
ChemPhysChem
DOI: **10.1002/cphc.201600567**

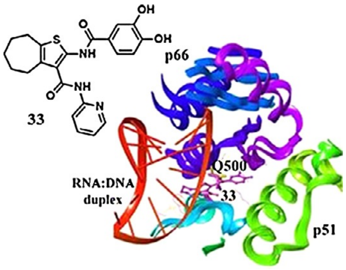
Metal–Organic Frameworks

Y. Grosu,* M. Li, Y.-L. Peng, D. Luo, D. Li, A. Faik, J.-M. Nedelec, J.-P. Grolier

A Highly Stable Nonhysteretic {Cu_2(tebpz) MOF + water} Molecular Spring

Spring loaded: A molecular spring (MS) system formed by a highly hydrophobic metal–organic framework (MOF) and water (see figure) with exceptional stability, efficiency, and operating pressure is reported. This is the first MS having such a combination of properties and the first nonhysteretic MOF-based heterogeneous lyophobic system. Mechanical and thermal characteristics of the MS are presented.





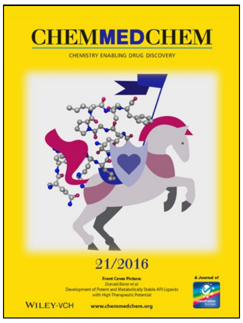
ChemMedChem
DOI: **10.1002/cmdc.201600015**

Antiviral Agents

A. Corona, J. Desantis, S. Massari, S. Distinto, T. Masaoka, S. Sabatini, F. Esposito, G. Manfroni, E. Maccioni, V. Cecchetti, C. Pannecouque, S. F. J. Le Grice, E. Tramontano,* O. Tabarrini*

Studies on Cycloheptathiophene-3-carboxamide Derivatives as Allosteric HIV-1 Ribonuclease H Inhibitors

A site to see: By screening an in-house library of cycloheptathiophene-3-carboxamide derivatives and synthesizing a new series of analogues, catechol derivative **33** was identified as a nanomolar inhibitor of HIV-1 RNase H. Mechanistic studies suggest its interaction with an innovative allosteric site entailing p66 residue Q500, a key residue for the binding of reverse transcriptase to the RNA:DNA duplex substrate.



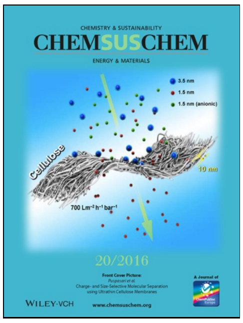
ChemSusChem
DOI: **10.1002/cssc.201600697**

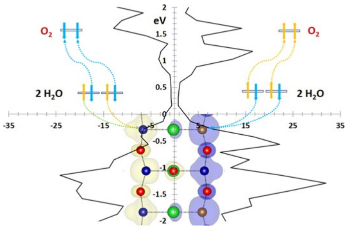
Hydrogen Evolution

M. Iguchi, Y. Himeda, Y. Manaka, H. Kawanami*

Development of an Iridium-Based Catalyst for High-Pressure Evolution of Hydrogen from Formic Acid

Robust recycle: A highly durable and recyclable Ir catalyst containing a 4,7-dihydroxy-1,10-phenanthroline ligand was developed for high-pressure gas evolution under 100 MPa by dehydrogenation of formic acid. Simple filtration can recover 94% of the catalyst after the reaction and it can be successfully recycled over 10 times without deactivation.





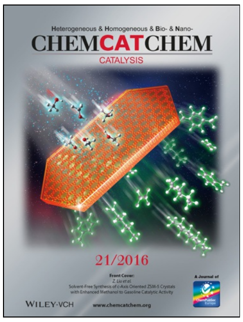
ChemCatChem
DOI: **10.1002/cctc.201600611**

Electrocatalysis

T. Lim, J. W. Niemantsverdriet, J. Gracia*

Layered Antiferromagnetic Ordering in the Most Active Perovskite Catalysts for the Oxygen Evolution Reaction

Lining up for reaction: An in-depth ab initio study of the magnetic structure within the most active perovskites for the oxygen evolution reaction is presented. In all cases, the ground state exhibits an extended antiferromagnetic coupling in the unit cell. Layered antiparallel alignment of the magnetic moments appears to be related to their electrocatalytic activity.

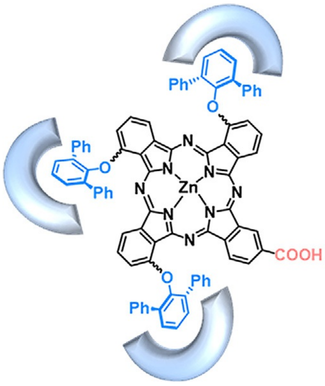


Solar Cells

L. Tejerina, M. V. Martínez-Díaz,* M. K. Nazeeruddin,* M. Grätzel, T. Torres*

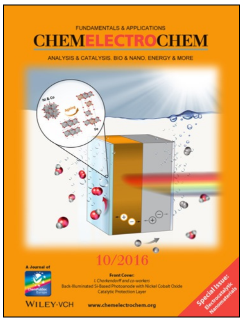
Role of the Bulky Aryloxy Group at the Non-Peripheral Position of Phthalocyanines for Dye Sensitized Solar Cells

A selective performance: Photovoltaic performance of carboxyZnPc substituted with bulky semiflexible aryloxy groups at the non-peripheral positions (see structure) is clearly influenced by the steric hindrance of the substituents with respect to the semiconducting surface. Thus, regioisomers with substituents oriented towards the carboxylic acid anchoring group turn out to have lower adsorption densities, and, consequently, lower short-circuit photocurrents (J_{sc}) and efficiencies.



ChemPlusChem

DOI: **10.1002/cplu.201600325**

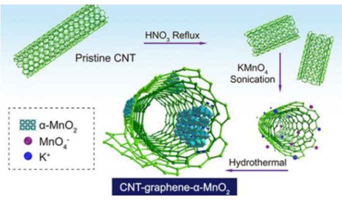


Oxygen Reduction Reaction

G. Chen, J. Sunarso, Y. Zhu, J. Yu, Y. Zhong, W. Zhou,* Z. Shao*

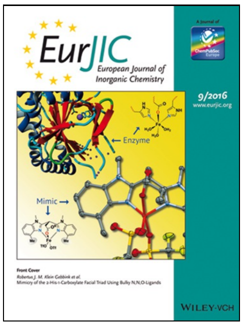
Highly Active Carbon/α-MnO_2 Hybrid Oxygen Reduction Reaction Electrocatalysts

Hybrid catalysts: A carbon nanotube (CNT)–graphene–α-MnO_2 hybrid, in which the MnO_2 nanosheets were deposited on the interior and exterior surfaces of the CNT channels, was synthesized. The hybrid displayed comparable oxygen reduction reaction activity and superior stability relative to Pt/C in alkaline solution.



ChemElectroChem

DOI: **10.1002/celc.201600433**

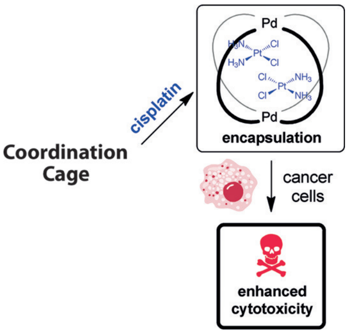


Molecular Cages for Drug Delivery

F. Kaiser, A. Schmidt, W. Heydenreuter, P. J. Altmann, A. Casini, S. A. Sieber, F. E. Kühn*

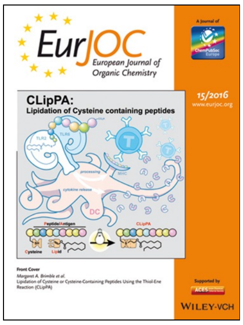
Self-Assembled Palladium and Platinum Coordination Cages: Photophysical Studies and Anticancer Activity

New, nontoxic, self-assembled M_2L_4 coordination cages are synthesized from highly fluorescent ligands. The cages are able to encapsulate the anticancer drug cisplatin and enhance its cytotoxicity towards cancer cells.



Eur. J. Inorg. Chem.

DOI: **10.1002/ejic.201600811**

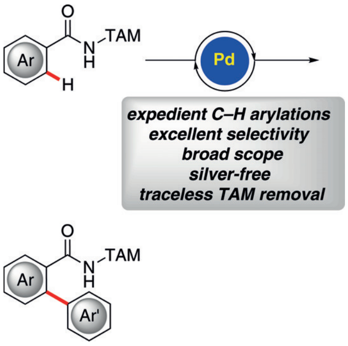


C–H Activation

D. Santrač, S. Cella, W. Wang, L. Ackermann*

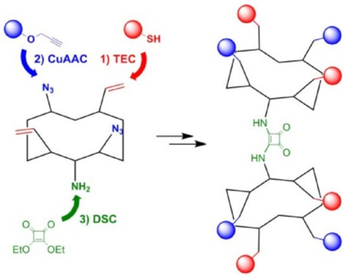
Palladium-Catalyzed C–H Arylation of Amides by Triazole Assistance

Palladium-catalyzed C–H arylations of benzamides were accomplished with the assistance of removable triazole amines (TAMs). This operationally simple protocol proceeded under silverfree reaction conditions and is characterized by having an ample substrate scope and broad functional group tolerance.



Eur. J. Org. Chem.

DOI: **10.1002/ejoc.201601045**



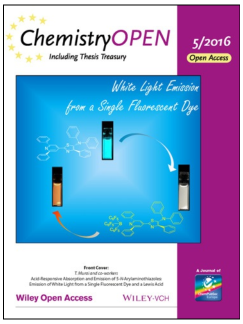
ChemistryOpen
DOI: **10.1002/open.201600062**

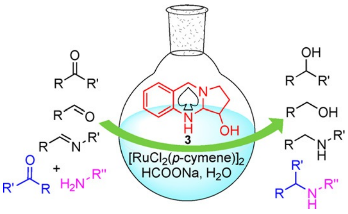
Glycoclusters

G. C. Daskhan, C. Pifferi, O. Renaudet*

Synthesis of a New Series of Sialylated Homo- and Heterovalent Glycoclusters by using Orthogonal Ligations

Extending molecular diversity: A straightforward convergent protocol based on orthogonal chemoselective ligations is described to generate heteromultivalency in a controlled manner. Copper-catalyzed azide–alkyne cycloaddition (CuAAC) and thiol-ene coupling (TEC) are first used to functionalize cyclopeptide scaffolds with propargyl and thiol glycosides to generate tetravalent heteroglycoclusters with 2:2 combinations of sugars. In addition, these compounds can be easily (hetero)dimerized by pH-dependent sequential coupling with diethyl squarate to afford various octavalent structures.





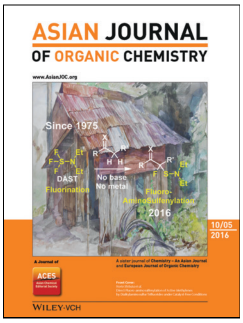
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201600384**

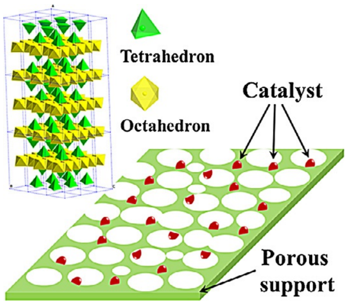
Metal–Ligand Catalysis

S. Sharma, M. Kumar, O. S. Nayal, M. S. Thakur, V. Bhatt, N. Kumar, B. Singh,* U. Sharma*

Designing Vasicine-Derived Ligands and Their Application for Ruthenium-Catalyzed Transfer Hydrogenation Reactions in Water: Synthesis of Amines and Alcohols

Natural product derived ligands: Six quinazoline ligands were synthesized by starting from vasicine and vasicinone. The **3**/$[RuCl_2(p\text{-cymene})]_2$ catalytic system was assessed for its use in the ruthenium-catalyzed transfer hydrogenation reaction of aldehydes, ketones, and imines as well as the reductive amination of carbonyl compounds with anilines. Good to excellent catalytic activity was shown in water with sodium formate as the hydrogen source.





ChemNanoMat
DOI: **10.1002/cnma.201600204**

Metal Oxide Nanocrystals

Z. Feng, W. Bao, X. Xu, X. Ma, J. Zhan,* Y. Yin*

Heteroepitaxial Growth of Well-Dispersed Co_3O_4 Nanocatalysts on Porous ZnO Nanoplates via Successive Hydrothermal Deposition

A unique successive hydrothermal deposition method has been developed for the heteroepitaxial growth of well-dispersed crystalline Co_3O_4 nanoparticles on single-crystalline porous ZnO nanoplates toward an efficient Co_3O_4/ZnO nanocomposite catalyst.

ChemViews magazine
DOI: **10.1002/chemv.201600082**

Water Splitting

K. Lawrence, Q. Wang

Photoelectrochemical Cells for Water Splitting

In “Behind the Science”, *ChemViews Magazine* gives readers a peek behind the scenes of a research article. This time, Kate Lawrence, *ChemElectroChem*, talks to Qing Wang, National University of Singapore, about his recent article on modifying photoelectrochemical cells to allow them to perform water splitting. This reaction is a key part of a potential hydrogen economy.