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die Artikel mit einem Klick direkt aufrufen, ansonsten sind sie durch Eingabe der DOIs über Wiley Online Library leicht online zugänglich.

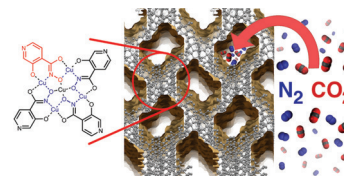


### Gas Adsorption

C. Atzeri, L. Marchiò, C. Y. Chow, J. W. Kampf, V. L. Pecoraro,\* M. Tegoni\*

Design of 2D Porous Coordination Polymers Based on Metallacrown Units

**Permanently porous metallacrowns:** Metallacrowns have been exploited for the first time as tailored building blocks for the construction of new (porous) coordination polymers. Metallacrowns are metal-rich complexes that have exhibited excellent properties in magnetism and luminescence. Benefiting from high-interest metallacrown building blocks in the synthesis of MOFs can unfold a whole new class of functional materials (see figure).



Chem. Eur. J.  
DOI: 10.1002/chem.201600562

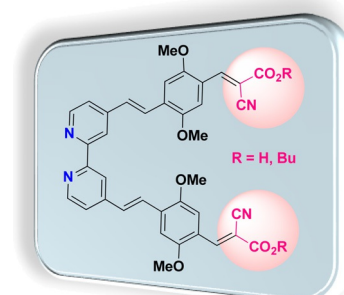


### Bipyridines

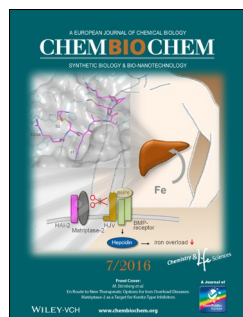
A. Fingerhut, Y. Wu, A. Kahnt,\* J. Bachmann,\* S. B. Tsogoeva\*

Synthesis and Electrochemical and Photophysical Characterization of New 4,4'- $\pi$ -Conjugated 2,2'-Bipyridines that are End-Capped with Cyanoacrylic Acid/Ester Groups

**The fantastic 4,4':** The electrochemical and photophysical properties of new 4,4'-disubstituted 2,2'-bipyridines with extended  $\pi$  systems and cyanoacrylic acid or cyanoacrylic acid ester anchoring groups make them promising candidates to build up inorganic–organic hybrid photosensitizers for the sensitization of metal-oxide semiconductors (e.g., TiO<sub>2</sub> nanoparticles and/or nanotubes).



Chem. Asian J.  
DOI: 10.1002/asia.201501324

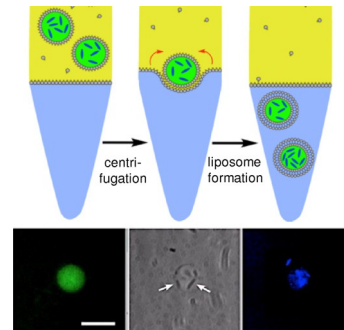


### Synthetic Biology

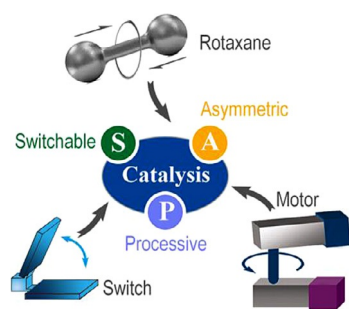
S. Chowdhuri, C. M. Cole, N. K. Devaraj\*

Encapsulation of Living Cells within Giant Phospholipid Liposomes Formed by the Inverse-Emulsion Technique

**Entrapped:** We demonstrate a straightforward way of encapsulating bacteria and yeast in high densities within giant phospholipid vesicles by utilizing the inverse-phase emulsion method. These liposomes can preserve the encapsulated bacterium's viability against external protease degradation and harsh biological environments, while maintaining biocompatibility and biodegradability.



ChemBioChem  
DOI: 10.1002/cbic.201500643



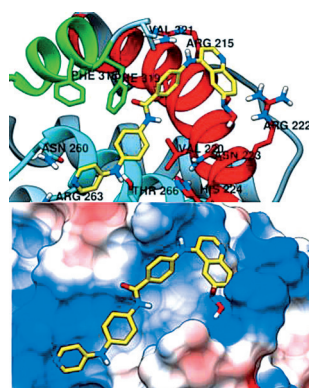
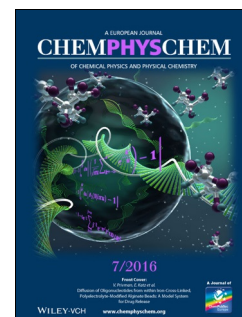
ChemPhysChem  
DOI: 10.1002/cphc.201501063

## Molecular Machines

T. Pan, J. Liu\*

## Catalysts Encapsulated in Molecular Machines

**Incorporating control:** The unique stimulus-responsive feature of molecular machines endows traditional catalysts with dynamic properties. Molecular switches, rotaxanes, and motors are utilized as scaffolds to construct switchable, stereoselective, and processive catalysts (see figure).



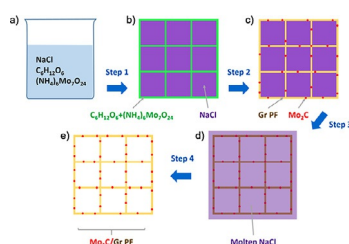
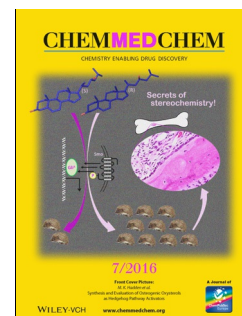
ChemMedChem  
DOI: 10.1002/cmdc.201500488

## Anticancer Agents

A. M. Beekman, M. A. O'Connell, L. A. Howell\*

## Identification of Small-Molecule Inhibitors of the Antiapoptotic Protein Myeloid Cell Leukemia-1 (Mcl-1)

**Breaking up the party:** Overexpression of the antiapoptosis Bcl-2 protein family members is commonly observed in cancers, with myeloid cell leukemia-1 (Mcl-1) often being responsible for resistance to radio and chemotherapy. Exploiting the Mcl-1 selective apoptosis regulating protein Noxa, novel small molecules capable of modulating Mcl-1 are identified and evaluated.



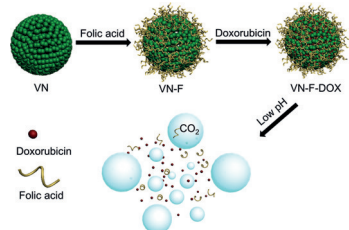
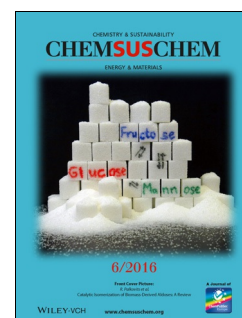
ChemSusChem  
DOI: 10.1002/cssc.201501595

## Hydrogen Generation

J. Wang, H. Xia, Z. Peng, C. Lv, L. Jin, Y. Zhao, Z. Huang,\* C. Zhang\*

## Graphene Porous Foam Loaded with Molybdenum Carbide Nanoparticle Electro catalyst for Effective Hydrogen Generation

**Foam party:** We report the facile synthesis of graphene porous foam (Gr PF) loaded with homogeneously dispersed molybdenum carbide nanoparticles ( $\text{Mo}_2\text{C}$ ) and its effective catalytic activity in the hydrogen evolution reaction. The performance compares favorably to that of other  $\text{Mo}_2\text{C}$  nanostructures both in acidic basic solution with long-term stability in the water electrolysis.



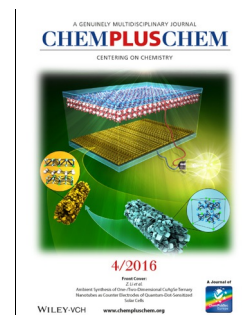
ChemPlusChem  
DOI: 10.1002/cplu.201500515

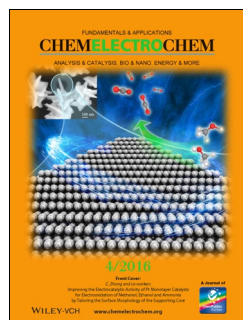
## Drug Delivery

A. Wang, Y. Yang,\* X. Zhang, X. Liu, W. Cui, J. Li\*

## Gelatin-Assisted Synthesis of Vaterite Nanoparticles with Higher Surface Area and Porosity as Anticancer Drug Containers In Vitro

**Holey vaterite nanoparticles!** Porous vaterite nanoparticles (VNs) fabricated with gelatin assistance displayed high surface area and improved stability in aqueous solution. Their application as doxorubicin containers and their therapeutic efficacy against cancer cells were investigated in vitro. The vaterite nanoparticles prove to be excellent containers for anticancer drugs after modification by folic acid.



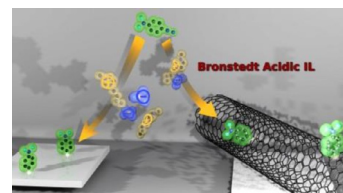


### Carbon Materials

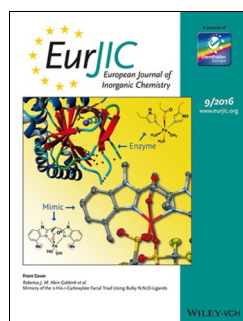
J. Carvalho Padilha, J.-M. Noël, J.-F. Bergamini, J. Rault-Berthelot, C. Lagrost\*

Functionalization of Carbon Materials by Reduction of Diazonium Cations Produced in Situ in a Brønsted Acidic Ionic Liquid

**Carbon nanotubes** and carbon plane surfaces are chemically or electrochemically grafted in a one-pot strategy by combining the specific properties of an acidic imidazolium ionic liquid and the versatility of the diazonium chemistry. Particularly easy to operate, this route exhibits appealing self-limiting and self-patching properties, making it highly valuable to design soft composites.



ChemElectroChem  
DOI: 10.1002/celc.201500434

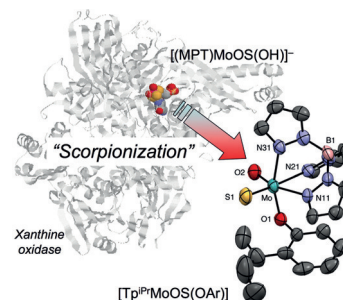


### Enzyme Models

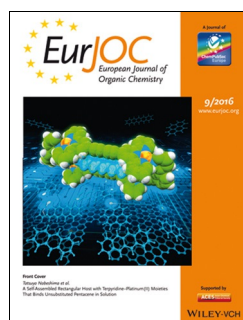
C. G. Young\*

Scorpionate Complexes as Models for Molybdenum Enzymes

The study of molybdenum scorpionate complexes has greatly informed our understanding of the geometric and electronic structures, chemical and spectroscopic properties and mechanisms of action of Mo and W enzymes. This microreview focuses on the biologically relevant oxido- and sulfido-Mo(VI,V,IV) chemistry of hydrotris-(R<sub>1/2</sub>-pyrazolyl)borate and related heteroscorpionate ligands.



Eur. J. Inorg. Chem.  
DOI: 10.1002/ejic.201501387

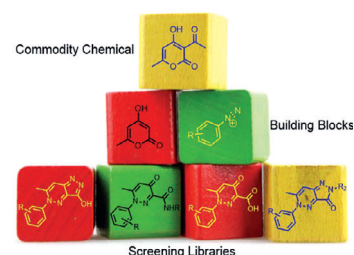


### Flow Chemistry

P. Filipponi, I. R. Baxendale\*

The Generation of a Library of Bromodomain-Containing Protein Modulators Expedited by Continuous Flow Synthesis

A sequence that uses flow chemistry to enable rapid access and assembly of key building blocks to expedite library generation in a medicinal chemistry program is presented. Emphasis is placed upon the handling of solids and suspensions in flow to improve work-up, isolation and purification.



Eur. J. Org. Chem.  
DOI: 10.1002/ejoc.201600222

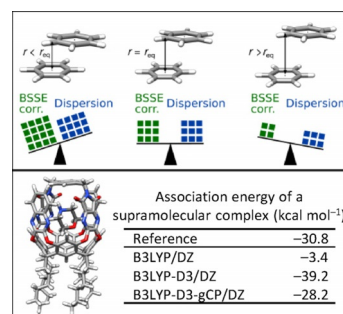


### Computational Chemistry

R. Sure, J. G. Brandenburg, S. Grimme\*

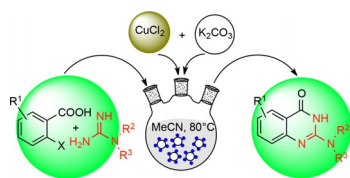
Small Atomic Orbital Basis Set First-Principles Quantum Chemical Methods for Large Molecular and Periodic Systems: A Critical Analysis of Error Sources

**Don't rely on error compensation!** Despite the large computational resources nowadays, Hartree-Fock or density functional theory (DFT) calculations are often carried out with small double-zeta atomic orbital basis sets. The main resulting error sources are missing London dispersion and basis set superposition error. This Review shows that one should not rely on fortunate compensation of errors and provides an overview of existing methods and discusses their accuracy for large systems.



ChemistryOpen  
DOI: 10.1002/open.201500192





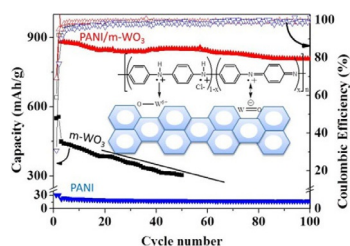
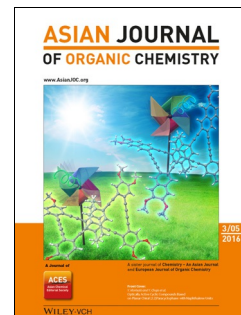
Asian J. Org. Chem.  
DOI: 10.1002/ajoc.201600113

## Heterogeneous Chemistry

M. S. Thakur, O. S. Nyal, V. Bhatt, S. Sharma, N. Kumar\*

Rapid and Efficient Cascade Synthesis of 2-Amino-4(3H)-quinazolinones over an In Situ-Generated Heterogeneous  $\text{CuCO}_3\text{-K}_2\text{CO}_3$  Nanocomposite

A green, recyclable, in situ generated, heterogeneous  $\text{CuCO}_3\text{-K}_2\text{CO}_3$  nanocomposite-catalyzed cascade reaction between 2-halobenzoic acids and guanidines is described for the synthesis of 2-amino-4(3H)-quinazolinones. The reaction is rapid and proceeds efficiently in air without the addition of a ligand or additive. This protocol is equally applicable to amidines for the synthesis of 2-alkyl- and 2-phenyl-4(3H)-quinazolinones.



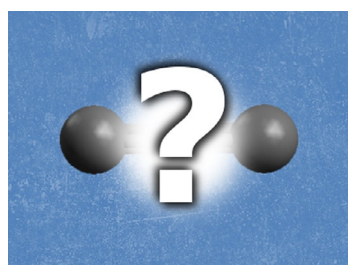
ChemNanoMat  
DOI: 10.1002/cnma.201500208

## Energy Storage

B. Li, X. Li, W. Li,\* Y. Wang, E. Uchaker, Y. Pei, X. Cao, S. Li, B. Huang, G. Cao\*

Mesoporous Tungsten Trioxide Polyaniline Nanocomposite as an Anode Material for High-Performance Lithium-Ion Batteries

A nanocomposite of polyaniline (PANI) and mesoporous tungsten trioxide ( $\text{m-WO}_3$ ) was synthesized. The unique PANI coating layer and the chemical interaction between PANI and  $\text{m-WO}_3$  can significantly improve the electrochemical performance of the nanocomposite.



ChemViews magazine  
DOI: 10.1002/chemv.201600022

## Theoretical Chemistry

A. Deveson, D. Cremer, G. Frenking, M. Piris, S. Shaik

Why Does  $\text{C}_2$  Cause so Many Problems?

The bonding situation in the humble, small  $\text{C}_2$  molecule has been the subject of controversial discussions. Professors Dieter Cremer, Gernot Frenking, Mario Piris, and Sason Shaik explain their opinion on the topic and why it is so important.

